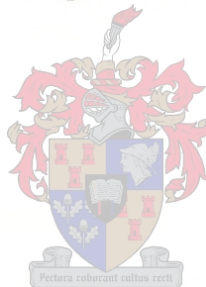


**The relationship of SOC to well-being and
its effect on the perception of a selected
number of work characteristics**

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**Thesis presented in partial fulfilment of the requirements
for the degree of Master of Arts at the University of
Stellenbosch.**

Study Leader: Dr HD Vos

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

SUMMARY

Many Black nurses who originally come from previously disadvantaged communities find themselves at present in relatively senior positions. The reality is, however, that many of these employees are still residing in residential areas where transformation and changes are still very limited and progress hardly noticeable. Such employees experience the stressful world of nursing on the one hand while on the other hand they also have to battle with the realities of the legacy of Apartheid. These may include aspects such as financial burdens, long distances from work, poor public transport, high crime rates in their communities and schools that are yet to improve standards.

There are still Black South Africans, amongst them Black nursing sisters, who have to battle with these problems daily, in addition to having to cope with occupational stressors. One would assume then that they may be experiencing a large degree of strain and burnout.

This research was therefore concerned with those nurses who remain productive and efficient in their work by overcoming constant occupational and non-occupational demands and stressors. Not all nurses, however, experience ill health due to stressors. There are nurses who do cope well.

Two research questions were investigated with reference to the above: (a) Why some Black nursing sisters appear to cope better than others; and (b) What the role of Sense of Coherence (SOC) is as a coping resource.

The study therefore investigated the statistical relationship between (a) SOC and well-being and (b) the effect that SOC has on the perception of a selected number of work characteristics.

Significant Pearson Correlations were found between SOC and psychosomatic strain symptoms and burnout frequency. No significant relationship was found between SOC and burnout intensity. A significant relationship was found between SOC and work demands, as well as SOC and career rewards. Findings further indicate that no significant relationship was found between organisational climate, leadership relations, influence at work, time pressures and adverse factors in the work environment.

Two-way ANOVAs indicate that no significant main effect exists in respect of SOC on psychosomatic strain symptoms. The study also indicates that a significant main effect exists for SOC on burnout frequency, whereas no significant main effect exists for SOC on burnout intensity.

No significant interaction effect exists between SOC and age on psychosomatic strain symptoms, burnout frequency and burnout intensity. A significant interaction

effect exists between SOC and education level on burnout intensity, while there is no significant interaction effect between SOC and educational level on psychosomatic strain symptoms and burnout frequency.

A significant main effect exists for SOC on the perception of leadership relations, influence at work and career rewards. Findings further indicate that no significant main effect exists for SOC on the perception of: organisational climate, time pressures, work demands and adverse factors in the work environment.

No significant interaction effect exists between SOC and age on the perception of organisational climate, influence at work, work demands, time pressures, career rewards, leadership relations and adverse factors in the work environment.

Results indicate that no significant interaction effect exists between SOC and educational level on the perception of organisational climate, influence at work, work demands, time pressures, career rewards, leadership relations and adverse factors in the work environment.

The results thus indicate that a positive correlation exists between SOC and well-being.

OPSOMMING

Talle verpleegters uit voorheen benadeelde gebiede, bevind hulself huidiglik in relatiewe senior posisies.

Die werklikheid is egter dat hierdie werknemers nog steeds onder andere in woongebiede bly waar transformasie en verandering gering is en algemene vordering nie waarneembaar is nie. Hierdie werknemers ondervind die stresvolle omstandighede van verpleging eendersyds en andersyds voer hulle 'n stryd teen die nalatenskap van apartheid.

Dit kan aspekte soos finansiële probleme, lang afstande van hul werkplek, publieke vervoer, hoë misdadafsyfers in hul gemeenskappe asook skole waar die opvoedkundige standarde nog aangespreek moet word, insluit.

Daar is nog talle Swart Suid-Afrikaners, Swart verpleegsters onder andere wat daaglik met hierdie probleme die stryd voer met 'n langsame veranderingsproses, terwyl hulle ook met talle stressors in hul beroepe te make het. Dit kan dus aanvaar word dat hierdie persone 'n groot mate van stres en uitbranding ondervind.

Hierdie navorsing het te make met daardie groep verpleegsters wat produktief en bekwaam in hul werk bly funksioneer het, weens die feit dat hulle hierdie voordurende beroeps-en nie-beroeps vereistes en stressors suksesvol die hoof kan

bied. Nie al die verpleegsters se geestegesondheid word dus deur genoemde stresfaktore benadeel nie en kan deurgaans effektief funksioneer.

Twee navorsings-vraagstukke is met betrekking tot bogenoemde Suid-Afrikaanse realiteit ondersoek: (a) Waarom sommige Swart verpleegsters die stressors in hul beroeps-en lewensomstandighede beter as ander hanteer en (b) Watter rol speel koherensiebewing ("SOC") as 'n stresshantering meganisme.

Die studie het (a) die verhouding tussen koherensiebewing en werknemer welsyn en (b) die rol van koherensiebewing ("SOC") as 'n meganisme vir die hantering van stres, nagevors.

Beduidende Pearson Korrelasies tussen koherensiebewing, psigosomatiese stresssimptome en die frekwensie van uitbranding is gevind. Geen beduidende verband is tussen koherensiebewing, werkseise en loopbaanbelonings gevind nie. Die resultate dui verder aan dat daar geen beduidende verband tussen organisatoriese klimaat, leierskap verhoudings, invloed by die werk, tydsdruk, en nadelige faktore in die werksomgewing bestaan nie.

Twee-rigting variansie ontledings dui egter aan dat daar geen beduidende hoof effek tussen koherensiebewing en psigosomatiese stresssimptome bestaan nie. Die studie dui ook op 'n beduidende hoof effek tussen koherensiebewing en die

frekwensie van uitbranding. Geen beduidende hoof effek is tussen koherensiebelewing en uitbranding intensiteit gevind.

Geen beduidende interaksie effek bestaan tussen koherensiebelewing en ouderdom op psigomatiese stressimptome, frekwensie van uitbranding en uitbrandings intensiteit nie. 'n Beduidende interaksie effek bestaan tussen koherensiebelewing en opvoedkundige kwalifikasie op uitbranding intensiteit, terwyl daar geen interaksie effek bestaan tussen psigomatiese stressimptome en frekwensie van uitbranding nie.

'n Beduidende hoof effek ten opsigte van koherensiebelewing op die persepsie van leierskap-verhoudings, invloede by die werk, en loopbaanbelonings is gevind. Die navorsing dui verder daarop dat geen betekenisvolle hoof effek bestaan ten opsigte van koherensiebelewing op die persepsie van organisatoriese klimaat, tydsdruk, werksvereistes en nadelige faktore in die werksomgewing nie.

'n Statisties beduidende hoof effek ten opsigte van koherensiebelewing op die persepsie van leierskap-verhoudings, invloede by die werk, en loopbaanbelonings, bestaan.

Geen beduidende interaksie effek bestaan tussen koherensiebelewing en ouderdom op die persepsie van organisatoriese klimaat, invloed by die werk, werkseise, tydsdruk, loopbaanbelonings, leierskap-verhoudings en nadelige faktore in die werksomgewing nie.

Resultate toon geen statisties beduidende interaksie effek tussen koherensiebelewing en opvoedkundige kwalifikasie op die persepsie van organisatoriese klimaat, invloede by die werk, werkseise, tydsdruk, loopbaanbelonings, leierskap-verhoudings en nadelige faktore by die werk nie.

Die resultate dui derhalwe op 'n positiewe verband tussen koherensiebelewing en werknemerwelstand.

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TABLE OF CONTENTS

TABLE OF CONTENTS	i
LIST OF TABLES	vi
LIST OF FIGURES	viii
CHAPTER 1: INTRODUCTION	1
1 INTRODUCTION	1
1.1 Research Problem	1
1.2 Research Question	3
2 WELL-BEING AND WORK CHARACTERISTICS	6
3 RESEARCH GOALS	6
4 SUMMARY	7
CHAPTER 2: LITERATURE REVIEW	9
1 INTRODUCTION	9
2 PREVIOUSLY DISADVANTAGED COMMUNITIES	9
3 CHANGING WORKFORCE	11
4 BACKGROUND TO NURSING	12
4.1 Burnout defined	13
4.2 Sources of stress	14
5 PATHOGENIC AND SALUTOGENIC PARADIGMS	15
5.1 The salutogenic paradigm	16
5.2 The pathogenic paradigm	17

5.3	A comparison between the pathogenic and salutogenic orientation	18
5.4	Summary of salutogenesis orientation	21
5.5	Salutogenesis and stressors	22
6	WELL-BEING AND WORK CHARACTERISTICS	24
6.1	Occupational Stressors	24
6.2	Occupational well-being	25
7	SENSE OF COHERENCE	27
7.1	Generalised resistance resources (GRRs)	27
7.2	Constructs related to salutogenesis	29
7.2.1	Hardiness	29
7.2.2	Potency	31
7.2.3	Stamina	31
7.2.4	Learned resourcefulness	31
7.3	Definition of SOC	33
7.3.1	SOC components	33
7.3.2	Characteristics of SOC	35
7.3.3	Boundaries	37
8	SOC AND WORK	38
8.1	The role of SOC as a health resource at work	40
8.2	Mediating and moderating role of SOC	42
8.3	Mediating role of SOC in work life	42
8.4	Moderating role of SOC in work life	43
8.5	Limitations of research on SOC	47

9	EFFECTS ON HEALTH	49
9.1	Strong SOC and health outcomes	49
9.2	Weak SOC and health outcomes	50
10	RESEARCH QUESTION	51
11	SUMMARY	53
	CHAPTER 3: RESEARCH DESIGN	56
1	INTRODUCTION	56
2	MEASURING INSTRUMENTS	61
2.1	Biographical Data	62
2.2	Sense of Coherence	62
2.2.1	Characteristics of the Orientation to Life Questionnaire scale	63
2.3	Well-being at work	64
2.3.1	Strain measure	64
2.3.1.1	Characteristics of strain measure	65
2.3.2	Burnout	65
2.3.2.1	Characteristics of MBI scales	66
2.4	Work characteristics	67
2.4.1	Characteristics of work characteristics questionnaire	69
3	SAMPLING	70
4	STATISTICAL ANALYSIS	73
5	SUMMARY	77
	CHAPTER 4: RESULTS	78
1	INTRODUCTION	78

2	FINDINGS OF THE PRESENT STUDY	79
2.1	Relationships between well-being variables	79
2.2	Work characteristics	92
3	SUMMARY	99
	CHAPTER 5: DISCUSSION	103
1	INTRODUCTION	103
2	SOC AND OCCUPATIONAL WELL-BEING	104
2.1	Relationship of SOC with psychosomatic symptoms and burnout	104
2.2	The relationship between SOC and the perception of a selected number of work characteristics	105
3	MAIN EFFECTS OF SOC	106
3.1	Psychosomatic strain symptoms	106
3.2	Burnout	107
3.3	Perception of work characteristics	107
4	INTERACTION EFFECTS OF SOC ON WELL-BEING	111
5	INTERACTION EFFECTS OF SOC ON THE PERCEPTION OF WORK CHARACTERISTICS	114
5.1	SOC and age interaction effect	114
5.2	Interaction effect of SOC and education on the perception of work characteristics	115
6	SUMMARY	117
	CHAPTER 6: CONCLUSION AND IMPLICATIONS	120
1	INTRODUCTION	120

1.1	Overview	120
1.1.1	Research Problem	120
1.1.2	Analysis	121
1.1.3	Findings	121
2	LIMITATIONS	124
2.1	Sample	124
2.2	Data collection	125
2.3	Questionnaire responses	125
3	FUTURE RESEARCH	128
3.1	Main/Interaction effect	128
3.2	The relationship between education level and SOC	128
3.3	Inclusion of non-occupational stressors	128
3.4	Coping with organisational change	129
3.5	Longitudinal research design	129
4	IMPLICATIONS FOR PRESENT AND FUTURE PRACTICES	130
4.1	Selection and placement	130
4.2	Connection between SOC, work characteristics and well-being	130
4.3	Influence of organisations on employees	130
5	SUMMARY	131
	REFERENCES	133
	APPENDIX A	144
	Appendix A: Letter to the participants and the questionnaire	144

LIST OF TABLES

Table 1: Total labour force by population group	12
Table 2: Means and standard deviations for the initial sample	72
Table 3: Mean and standard deviation for the final sample	72
Table 4: Frequency table of SOC scores	73
Table 5: Means and standard deviations of SOC groups	74
Table 6: Correlational results between SOC and well-being ,and the work characteristics	75
Table 7: Correlations between SOC, strain and burnout	80
Table 8: Correlational relationship between SOC and work characteristics	81
Table 9: Mean scores for the main effect of SOC on psychosomatic strain	83
Table 10: Summary ANOVA table of SOC and age on psychosomatic strain	84
Table 11: Descriptive statistics for SOC and age on psychosomatic strain	84
Table 12: Summary ANOVA table for the interaction effect of SOC and education on psychosomatic strain symptoms	85
Table 13: Mean scores for the interaction effect of SOC and education on psychosomatic strain	86
Table 14: The main effect of SOC on burnout frequency	87
Table 15: Summary ANOVA table of the interaction effect between SOC and age on burnout frequency	88
Table 16: Descriptive statistics for SOC and age on burnout frequency	88
Table 17: Mean scores for the main effect of SOC on burnout intensity	90

Table 18: Mean scores for the main effect of SOC on the perception of leadership relations	93
Table 19: Means for the main effect of SOC on the perception of work demands	95
Table 20: Mean scores for career rewards	95
Table 21: Main scores for the main effect of SOC on the perception of adverse factors in the work environment	97
Table 22: Means of the interaction effect between SOC and age on organisational climate	98

LIST OF FIGURES

Figure 1: Relationships between variables	52
Figure 2: Relationship between the studies variables	57
Figure 3: Interaction effect for SOC and education on burnout intensity	91
Figure 4: The main effect of SOC on influence at work	94
Figure 5: Main effect of SOC on the perception of career rewards	96

CHAPTER ONE

1 INTRODUCTION

1.1 Research problem

Studying occupational stress in the field of nursing is important in South Africa because nurses make up a large portion of the health care sector and they are capable of playing a major role in transforming it. South African nurses operate at a primary, secondary and tertiary level of health care, administering care to patients, and they have contact with families and communities (Basson & van der Merwe, cited in Levert, Lucas & Ortlepp, 2000). Working in such a stressful environment every day would no doubt have effects on their health (emotional, psychological and physical).

The concept of stress amongst nurses has been researched since the 1950s by those interested in health, stress and coping. Their job is particularly stressful and emotionally draining, as they play a crucial role in the management and administration of care to hospital patients (Levert et al., 2000).

The most common sources of stress for nurses could be considered inherent in the nursing role. These generally include high work loads, poor support, role conflict and role ambiguity (Cross & Fallon, in Levert et al., 2000). They find themselves having to cope with work overload and demands being made on extremely limited resources while they often may not be given the support required. At times they may experience

a degree of uncertainty with regard to the scope of their individual responsibility in patient care (Levert et al., 2000).

As in many other work environments, stress encountered because of the intrinsic characteristics of the particular career field, such as in nursing, may be extended, owing to the present day political situation. Many employees who originally come from previously disadvantaged communities find themselves at present in relatively senior positions at present.

The reality is, however, that many of these employees are still residing in residential areas where the transformation and changes are still very limited and progress hardly noticeable. Such employees experience the (stressful) world of nursing on the one hand while they also have to battle with the realities of the legacy of Apartheid. These may include aspects such as financial burdens, long distances from work, poor public transport, high crime rates in their communities, schools that are yet to improve their standards, etc.

Since the 1994 elections there has been an effort to improve these conditions, but progress has been slow. There are still Black South Africans, amongst them nursing sisters, who have to battle with these problems daily, because of the gradual change process, in addition to those stressors in their work environment. One would assume then that they may be experiencing a large degree of strain (as a result of occupational and non-occupational life stressors) as well as burnout (due to

occupational stressors). Burnout is defined as a syndrome of emotional exhaustion, depersonalisation and reduced personal accomplishment which occurs among people who do some form of people work (Maslach & Jackson, 1981; Schutte, Toppinen, Kalimo & Schaufeli, 2000).

1.2 Research question

This research is concerned with those who remain productive and efficient in their work by overcoming constant occupational and non-occupational demands and stressors.

Not all nurses, however, experience ill health due to these stressors. There are nurses who do cope well and are more positive about their abilities in respect of work demands and tasks, even though they too are bombarded by daily stressors in the work and nonwork environments. These women do manage to stay well and appear to experience less stress.

The research question that needs to be answered relates to the factors/characteristics which set the well-adjusted nurses apart from those who are less well adjusted. The latter seem to experience a range of physical and psychological reactions to tensions experienced in their work place. Various studies have addressed this question, including studies that focused on personality traits as pathogenic or risk factors (e.g. Type A behaviour pattern, depression, anxiety) as well as those assumed to contribute to maintaining the well-being of the individual (e.g.

self-efficacy, hardiness) (Feldt, 2000). Lazarus and Folkman (1984) suggested that coping and appraisal are influenced by individual differences in psychological vulnerability, in personal resources and capacities, and in commitments and values. Individual differences (e.g. neuroticism, flexibility, and internal control) have also been found to act as moderators of stress-strain relations, and these effects may be mediated through appraisal and coping processes.

With reference to the above, two interrelated research questions are posed:

- (a) Why some Black Nursing Sisters appear to cope better than others even though they experience similar occupational stressors and have similar non-occupational (previously disadvantaged) backgrounds;
- (b) What the role of Sense of Coherence (SOC) is as a coping resource.

Antonovsky (1987) proposed the salutogenic model, of which the sense of coherence (SOC) construct is central. SOC refers to a global orientation to one's internal and external environments, which is hypothesised to be a determinant of the individual's location and movement on the health ease/dis-ease continuum.

Antonovsky (1987) distinguishes between individuals with a strong SOC and a weak SOC. The person with a strong SOC is more likely to: (a) define stimuli as nonstressors, (b) assume that he/she can adapt automatically to the demand, (c)

perceive a stressor as benign or as of little consequence for their life, and (d) experience emotions of sadness, fear, pain, guilt, grief and worry, which often provide a motivational basis for action. In contrast, the individual with a weak SOC is more likely to: (a) experience tension with the potential of its transformation into stress, (b) perceive the stress as a danger to their well-being, (c) experience diffuse emotions (anxiety, rage, shame, despair, abandonment and bewilderment), and (d) cope by means of defense mechanisms (Antonovsky, 1987).

A person identified as having a stronger sense of coherence is more likely to be flexible about selecting a coping strategy, and increasing his/her odds of selecting the most appropriate strategy, whereas, a person identified as having a weaker SOC is inflexible when selecting his/her coping strategy, and decreasing his/her odds of selecting an appropriate strategy. He/She is likely to perceive stressors as unmanageable, and thus more likely to view stressors as negative (Antonovsky, 1987).

Past research has indicated that a strong SOC can be associated with well-being in work-related settings as in other life contexts. SOC permits the individual to make cognitive sense of the workplace, perceive his/her work as consisting of manageable demands with which they are able to cope, believing that they are worthy of investing the energy in (Antonovsky, 1987).

2 WELL-BEING AND WORK CHARACTERISTICS

Links between work stressors and health (physical and psychological) are well established (Levert et al., 2000). "Work stressors are environmental factors at work that lead to individual strains" (Beehr, Jex, Stacy & Murray, 2000, p.391). For example, it is reported that job strain (job dissatisfaction, depression, psychosomatic symptoms) and burnout is significantly higher in jobs that combine high workload demands with low decision latitude. Other job characteristics also associated with strain and burnout are job insecurity, physical exertion, lack of social support and hazard exposure (Landsbergis, 1988). Dollard, Winefield, Winefield & de Jonge (2000) found social support to positively relate to job satisfaction and decreases in burnout and experiences of strain. It is therefore evident that job characteristics have an impact on the physical, psychological and social well-being of the employee.

3 RESEARCH GOALS

In relation to the above mentioned points, the following research goals were set for this investigation: (a) to investigate the association between SOC and well-being (failure to experience burnout and psychosomatic symptoms) amongst Black nurses, and (b) whether SOC has a main/interaction effect on the perception of a selected number of work characteristics.

4 SUMMARY

The concept of stress has been researched in nursing literature since the 1950s. Their job is stressful and emotionally draining because they play a crucial role in the management and administration of care in hospitals (Levert et al., 2000).

They have to cope with work overload and demands on extremely limited resources. Often the support that creates a friendly and helpful environment is not given. At times they even experience a degree of uncertainty with regard to the scope of their individual responsibility (Levert et al., 2000). As a result of working in such a stressful environment every day, they experience various problems associated with stress. These may be emotional, psychological and physical.

Not all nurses, however, react to these stressors in the same way. Some of them do cope well with occupational and non-occupational demands and are more confident about their abilities to meet them although they are exposed to the same stressors.

Antonovsky (1987) proposed the concept of Sense of Coherence to explain why some individuals cope better than others with stressors. The person with a stronger SOC is more likely to maintain a sense of well-being than a person with a weaker SOC.

With reference to the above, two interrelated research questions are posed: (a) Why some Black Nursing Sisters appear to cope better than others even though they experience similar occupational stressors and have similar non-occupational (previously disadvantaged) backgrounds; (b) What the role of SOC is as a coping resource. In addition to these research questions the following research goals were set: (a) to investigate the association between SOC and the experience of burnout and psychosomatic symptoms amongst Black nurses, and (b) whether SOC has a main/interaction effect on the perception of a selected number of work characteristics.

In chapter two the relevant literature is briefly reviewed, particularly, Antonovsky's (1987) SOC construct, the related components, and literature on stress, occupational stress and the effect of stressors on health. The research methodology is discussed in chapter three. In chapter four the research results are presented and outlined. Further discussion with regard to these findings will take place in chapter five. In chapter six, an overview of this study is presented. In addition to this the limitations of the research are outlined. Recommendations for future research are suggested, as well as the implications of the findings of this study.

CHAPTER 2

LITERATURE REVIEW

1 INTRODUCTION

This chapter discusses the research related to the research question as stated in chapter one. Firstly, information is provided on the previously disadvantaged communities and the changes that are taking place in the labour force as a result of the 1994 elections. This provides a background to the problems that Black nurses may have had to overcome to reach the point in their career at which they now find themselves. Secondly, salutogenesis and pathogenesis are discussed, since they serve as the theoretical point of departure for this research. Thirdly, the link between well-being and work characteristics are discussed. This is done in relation to occupational stressors which nurses experience as a result of the nursing role. Fourthly, sense of coherence is discussed in more detail as well as its effect on well-being in the work environment. The effect that SOC has on health is also discussed. Lastly, the research question is stated and a summary is provided of the literature chapter.

2 PREVIOUSLY DISADVANTAGED COMMUNITIES

The majority of Black nurses who now find themselves in relatively senior positions as nursing sisters have been exposed to detrimental socio-economic conditions which were caused by the previous Apartheid system in the country.

An inferior and non-compulsory education system devised for Blacks under the policy of Apartheid has resulted in alarming inequalities (Finnemore, 1997). Education and training were extremely patriarchal which resulted, amongst others, in women being channelled into lower-paying unskilled jobs and feminised professions, for example nursing and teaching, as well as achieving lower educational qualifications (Finnemore, 1997; Lemmer, 1989).

Although South Africa has roads, harbours, water and electricity supplies as well as telecommunication networks that are far more superior to other developing countries, there are significant disparities in the provision of these services. These disparities existed between previously white suburbs and business areas in cities and those of townships and rural areas. The provision of basic services became a primary aim after the 1994 elections. The past policies and the Group Areas Act contributed to many workers living long distances from their workplaces. The costs of transport for these workers have also escalated as subsidies on public transport have in recent years been reduced by the government. The taxi industry, which provides a major source of transport, is fraught with problems. Intense competition between taxi associations has led to serious disputes over routes, fares and ranks. Commuters are therefore seriously affected by the disputes. Long distances and dependence on unreliable transport do not provide for a productive workforce (Finnemore, 1997).

Due to past racist and gender discriminatory policies and planning deficiencies, a large housing shortfall exists. Past government policies have only made provision for

home loans to government employees who were considered breadwinners. Married women were disregarded (Finnemore, 1997).

Poor access to housing had severe consequences. Firstly, employees often lived in overcrowded, small homes lacking basic amenities such as water, sanitation and electricity, placing considerable pressure on their family and social lives. Secondly, transmission of contagious diseases such as tuberculosis, hepatitis B, sexually transmitted diseases and measles flourished in such circumstances, affecting the health of employees and their children (Finnemore, 1997).

Minimal preventative community services were provided for the Black population in townships and some of the major health problems experienced by employees were tuberculosis, HIV (Human Immunodeficiency Virus), cancer and alcoholism (Finnemore, 1997).

Regardless of the undesirable conditions to which many Black nurses were exposed and still are, there are some who appear to cope. They therefore experience less physical and psychological symptoms related to stress.

3 CHANGING WORKFORCE

One of the major results of the 1994 elections in South Africa was a change in the composition of labour. The workforce is presently comprised of more women and is more representative of all races (Schreuder & Theron, 1997).

It is predicted that in contrast to the position in 1991, Blacks will constitute 77.3% of the labour force in 2011 against 68.8 %, Whites 11.8 % against 18.0 %, Coloureds 8.5 % against 10.3 % and Asians 2.4 % against 2.9 %. These predictions are represented in Table 1. It is also expected that the female labour force will grow faster than the male group. The average growth rate per year to 2011 is estimated as 3.2 % for women and only 2.4 % for men (Schreuder & Theron, 1997).

Table 1 Total labour force by population group

Race	1991	2011
Blacks	68.8	77.3
Whites	18.00	11.8
Coloureds	10.3	8.5
Asians	2.9	2.4

(Schreuder & Theron, 1997)

4 BACKGROUND TO NURSING

The job of nursing is regarded as particularly stressful and emotionally draining (Schaufeli & Janczur, cited in Levert et al., 2000). Nurses play a major role in the management and administration of care for hospital patients and have the most direct contact with them (Sammur, cited in Levert et al., 2000).

Helping people who experience major life problems constitutes a major challenge to many health care providers. Such work may be rewarding, for example when patients

recover after being cared for (Maslach, cited in Bakker, Schaufeli, Sixma, Bosveld & van Dierendonck, 2000). Unfortunately, health care providers are often confronted with patients who do not follow advice, and who may even be manipulative (Cherness, cited in Bakker et al., 2000). This situation may progress into a chronic disequilibrium, where caregivers feel that they are contributing more and receiving less from this interaction. Burnout is a response to the chronic stress of dealing with people, particularly when they are troubled or have problems (Bakker et al., 2000).

4.1 Burnout defined

Burnout could be defined as a syndrome of emotional exhaustion, depersonalisation and reduced personal accomplishment which occurs among people who do some form of people work (Maslach & Jackson, 1981; Schutte et al., 2000). Emotional exhaustion is the key aspect of the syndrome and refers to feelings of being over-extended, and drained from one's emotional resources (Bernier, 1998; Kalliath, O'Driscoll, Gillespie & Bluedorn, 2000; Maslach & Jackson, 1981). Depersonalisation refers to negative feelings towards other people. Reduced personal accomplishment refers to a decline in one's feelings of competence and a tendency to evaluate oneself negatively in respect of one's work with other people (Schutte et al., 2000).

4.2 Sources of stress

The most common sources of stress are similar for all nurses irrespective of type of ward or nursing speciality and appears to be inherent in the nursing role. These factors include a high workload, poor collegial support, role conflict and role ambiguity (Levert et al., 2000). Role conflict, ambiguity and overload frequently have been studied as antecedents of occupational stress (Motowidlo, Packard & Manning, 1986).

Workload refers to unavoidable and unnecessary demands on limited resources, many tasks to perform in a given time period, demands on standards and support, and demands created by resource problems (Landsbergis, 1988; Levert et al., 2000; Posner, Lester & Leitner, 1984).

Poor collegial support has often been linked to stress and burnout in nurses. It has been found though that burnout decreases in settings conducive to teamwork, because colleagues are viewed as friendly and helpful, and management as supportive (Landsbergis, 1988; Levert et al., 2000).

Role conflict and role ambiguity has been found to be problematic in hospital settings. The role of nurses places them in a position where multiple and conflicting demands are imposed on them by medical and administrative staff who create dual lines of authority (Levert et al., 2000). This is further aggravated by limited open expression of views or joint problem solving (Landsbergis, 1988).

Furthermore, conflict also exists between the instrumental and goal-orientated demands of getting the patient well and providing emotional and therapeutic support (Levert et al., 2000). Role ambiguity refers to a lack of clarity about the objective of the job or the scope of the individual's responsibilities (Rizzo, House & Lirtzman, 1970).

5 PATHOGENIC AND SALUTOGENIC PARADIGMS

Psychology has generally functioned on a paradigm of pathogenic thinking as a means of approach to understanding well-being, stress and coping (Strümpfer, 1990). The pathological orientation seeks to explain why people get sick and why they enter a given disease category. Such information is then used to develop methods of combating and preventing diseases (Antonovsky, 1987; Strümpfer, 1990).

The salutogenic paradigm, which emphasises the origins of health or wellness, asks the question why some people remain well even though they experience the same or similar stressors as those who become ill. Salutogenesis may answer these questions and provide an opportunity for hypothesis generation as opposed to the hypothesis confirmation which the pathogenic approach encourages (Antonovsky, 1987).

5.1 The salutogenic paradigm

Antonovsky's (1987) conceptual model of Sense of Coherence originated in observations of the health status of female concentration camp survivors in the 1970's. He was amazed by these women's good health even though they had these experiences in a concentration camp (Feldt, 2000).

Although health status was the prime dependent variable, data was also collected on well-being, coping, mood tone, role satisfaction and family relations. The data showed camp survivors to be more poorly adjusted than their control groups. However, a considerable number were found to be well-adapted. These findings went beyond health as usually construed. They covered strength to deal with general concerns, like finances, and satisfaction with family roles, friends and colleagues (Strümpfer, 1995).

In his second book, Antonovsky, as cited in Strümpfer (1995), reported a study that served as the first step in the operationalisation of his construct 'sense of coherence' (SOC) which underpins his theory of salutogenesis. Interview protocols were classified as representing strong, moderate and weak SOC and the two extreme groups were investigated further.

It was from these observations that he developed the salutogenic model. The salutogenic model explained the conditions that predict well-being under conditions

of adversity, when circumstances indicate that illness should set in. The salutogenic model tries to explain health, well-being and effective coping strategies amongst those individuals who remains healthy under stressful situations (Feldt, 2000). Antonovsky (1987) refers to this group of people as the “deviant case”.

5.2 The pathogenic paradigm

The pathogenic paradigm is characterised by the following principles. Observing these principles allows researchers to find different answers to those which they would find if they were to observe the salutogenic perspective.

Firstly, the pathogenic orientation is generally directed at finding the reason why people are predisposed to specific disease entities and become ill. This understanding is then used to find ways of preventing and combating these diseases. Secondly, the assumption that disease is caused by physical, biochemical, microbiological and psychosocial agents are central in the pathogenic paradigm. More emphasis is on multifactorial determination, generally in terms of risk factors. Thirdly, fundamental to the pathogenic paradigm, is the concept of homeostasis which implies that the normal state of the human organisms is in a relatively constant condition, which is maintained by various complex interacting regulatory mechanisms. Homeostasis can be disrupted by pathogens and stressors and if the regulatory mechanisms do not function adequately, disease sets in (Antonovsky, 1987; Antonovsky & Bernstein, 1986; Strümpfer, 1990).

5.3 A comparison between the pathogenic and salutogenic orientations

Antonovsky (1987) demonstrates that the bulk of research in stress and coping is dominated by pathogenic principles (investigating factors that affect physical and psychological breakdown). A bias to investigate pathology rather than health exists. This often leads to a number of negative consequences.

These consequences include the following:

- The dependent variable in these studies is the presence or absence of a specific disease. If health is not simply the absence of disease, then by using health measures as dependent variables rather than illness measures, different answers would be yielded.
- In focusing on a specific disease as dependent variable, other diseases may be excluded as a consequence of the stress situation under investigation.
- If the dependent variable is disease, then the independent variables are also seen as pathogenic in nature (Antonovsky, 1987).
- The pathogenic orientation does not investigate the person who seeks out stressful situations and regards them as a challenge (Antonovsky, 1986; Antonovsky, 1987; Antonovsky & Bernstein, 1986).

In contrast, the salutogenic paradigm is characterised by the following principles.

Firstly, the fundamental assumption of heterostasis, disorder, and pressure toward increasing entropy as the prototypical characteristic of the living organism, is held. This is in contrast to the pathogenic paradigm which claims that the system is occasionally disregulated although it is self-regulatory (Antonovsky, 1987).

Secondly, Antonovsky (1987) refers to a health ease/dis-ease continuum. At any point in any individual life he/she is located on this continuum. It may either be more towards the health-ease end or the dis-ease pole of this continuum. This approach does not guarantee problem solution of the stressors of people's lives but at the very least it leads to a more profound understanding and knowledge of the prerequisites for moving toward the healthy end of the continuum.

Thirdly, the salutogenic orientation in contrast to the pathogenic paradigm leads one to think in terms of factors promoting movement toward the healthy end of the continuum. These are often different factors. The question most often asked in this field is how one copes with a given stressor, rather than what factors not only act as buffers, but contribute directly to health (Antonovsky, 1987).

Fourthly, the pathogenic orientation invariably sees stressors as pathogenic, as risk factors that at best can be reduced, or buffered. In the salutogenic orientation, stressors are seen as neutral, salutogenic or pathogenic (Antonovsky, 1987). This depends largely on the appraisal of the stressor by the individual. In other words, it is

not the demand itself that is a stressor, it is the individual's subjective perception that determines whether the demand is classified as a stressor (Ben-Sira, 1985).

Fifthly, the pathogenist is content with hypothesis confirmation; the salutogenicist, without disclaiming the importance of what has been learned, looks at the deviant case. For example, the individuals who cope better than others do with stressors (Antonovsky, 1987).

To illustrate the purpose of these approaches the study by Shekelle and others, cited in Antonovsky (1987) is discussed. According to this study depression, as measured by the Minnesota Multiphasic Personality Inventory, is predictive of cancer mortality. Data from a longitudinal study indicated that subjects who had been classified as depressed were more than twice as likely to die of cancer as the nondepressed. The relative risks of the two groups are significantly different; 7.1% and 3.4%, respectively. Of the 379 men defined as depressed, the great majority did not die of cancer or other causes. Thus the deviant case, as is so often true, is in the majority. The question that arises is what protected them? Once such a question was asked, they could begin to generate hypotheses to explain salutogenesis and develop methodologies to test these hypotheses (Antonovsky, 1987).

5.4 Summary of salutogenesis orientation

A summary of the salutogenic orientation is as follows. It derives from the fundamental postulate that heterostasis, senescence, and increasing entropy are core characteristics of all living organisms.

- It leads to the rejection of the dichotomous classification of individuals as healthy or diseased but rather focuses on their location on a multidimensional health ease/dis-ease continuum.
- It prevents focusing solely on the etiology of a given disease rather than taking into account the total story of a human being, including his or her sickness.
- Instead of focusing on stressors, the focus is on coping resources.
- Stressors are viewed as omnipresent and their consequences are not necessarily viewed as pathogenic but possibly salutary. This is contingent on the perceived character of the stressor and successful resolution of tension.
- Instead of looking for magic solutions, the search is for sources of negative entropy that may facilitate active adaptation of the organism to the environment.

- The salutogenic orientation takes us beyond the inquiry by always looking at the deviant cases found in such inquiry (Antonovsky, 1987).

Although these two paradigms ask different questions, these two approaches complement each other. It is important that research directed at the discovery of pathogens and the effects of stressors continue to aid in the development of cures for diseases. While at the same time it is important for the formalisation of a body of knowledge to be formed about the possibility of “living with stressors” and the possibility of salutary outcomes. Acceptance of both views could therefore be considered vital when attempting to develop a means of ensuring wellness in the individual (Antonovsky, 1987; Strümpfer, 1990).

5.5 Salutogenesis and stressors

“Both lay people and professionals are inclined to equate stress with rather unusual and extreme circumstances” (Strümpfer, 1990, p.266). However, Antonovsky (1987) states that the very nature of human existence ensures the omnipresence of stressors, indicating that it is not a rare occurrence experienced by a select few but a daily occurrence experienced by the majority of the population.

Fried, cited in Strümpfer (1990) introduced a three-fold classification of stress. It ranges from catastrophic stress (which results from disasters and which affects entire regions or populations), to acute stress (which is the consequence of crises or stressful events which affect individuals or populations with an urgency that

necessitates immediate responses), to endemic demands, threats or deprivations, frequently small in scale and embedded in daily events. These events cumulate and summate to produce increased strain and alteration of social behaviour in the person.

Confronting a stressor results in a state of tension with which the individual must deal. An individual may follow the following coping process. In the first stage of appraisal, a stimulus is defined as a stressor. The person with a strong SOC is likely in the second stage of appraisal to define the stressor as benign or even as a welcome challenge, confident that it will be handled well. Salutary emotions should be the outcome. In the third stage of appraisal the problem is defined. A person with a strong SOC is cognitively and emotionally capable of ordering the nature of the problem and willing to confront it. In this stage, generalised resistance resources (GRRs) play a dual role. Generalised resistance resources provide (a) life experiences that reinforce SOC and (b) they can be regarded as potential resources. A person with a strong SOC is likely to have a variety of GRRs at his/her disposal. The fourth stage is reappraisal. A person with a strong SOC is open to feedback and the possibility of corrective action (Antonovsky, 1987; Feldt, 2000).

Since the effect of the stressors on individuals depends on their subjective appraisal of the stressor, their perception of the GRRs available to them, as well as the strength of their SOC, the effect of stressors cannot be predicted. The outcome may therefore be pathological, salutary or neutral (Antonovsky, 1987).

6 WELL-BEING AND WORK CHARACTERISTICS

6.1 Occupational stressors

The link between stressful work environments and health (psychological and physical) are well established (Beehr et al., 2000; Levert et al., 2000). "Work stressors are environmental factors at work that lead to individual strains - aversive and potentially harmful reactions of the individual" (Beehr et al., 2000, p.391). Most commonly researched job stressors are considered 'chronic', e.g., role conflict and role ambiguity. They are considered chronic because they are regarded as constant for an employee. Despite the focus of chronic stressors, there have also been studies of shorter-term stressors (events or acute stressors) (Beehr et al., 2000). An example of acute stressors is a nurse's first encounter with a patient (Eden, cited in Beehr et al., 2000).

Chronic stressors are usually conceptualised and measured generically (i.e. same for all jobs), while measures of events or acute stressors tend to be more job-specific, both conceptually and operationally. Further, while the acute stressors are more time-limited in their presentation as stimuli in the worker's environment, their effect (strains) may last longer (Beehr et al., 2000).

Because of differences between acute and chronic stressors, they may differ in their relations with individual strains and performance. Stressors that are more job specific (whether chronic or acute) may have the greatest impact on individual strains and

performance, because they are most salient to employees in a particular job (Beehr et al., 2000).

Strains may incorporate anxiety, depression, frustration and psychosomatic symptoms. Job stressors have been linked to organisational outcomes or employee behaviours important to the employer: absenteeism, turnover and performance (Beehr et al., 2000).

Beehr et al. (2000) however suggest that the relations between stressors and performance should be considered tentative for the following two reasons. Firstly, the use of performance as a criterion in stress studies has been rare. Much of the research examining relations between stressors and performance has come from the human factors literature. This literature has however focused on physical, not psychosocial stressors. Secondly, job performance is multifaceted, and therefore, different stressors may have different effects, depending on the performance criterion measure employed.

6.2 Occupational well-being

In a study of occupation stress among health care workers, Landsbergis (1988) found that reported strain and burnout were significantly higher in jobs that combined high workload demands with low decision latitude. Low decision latitude has been described in various ways including feeling unable to influence administrative decisions, and physicians, ineffective voice on patient care decisions, underutilisation

of skills and abilities, no open expression of views or joint problem-solving, and little say about career development, classification and assignments (Landsbergis, 1988).

Motowidlo, Packard and Manning, cited in Narayanan, Menon and Spector (1999) who used techniques of open-ended descriptions of stress related episodes in their study with nurses, found work overload, interpersonal conflict and lack of support to be major stressors. According to Kanungo (1980), nurses belonging to the highly stressed group showed a higher level of social need satisfaction, than those in the lower stress group.

Studies in health care have shown that decision authority, learning opportunities and dialogue between employees and supervisors and between colleagues are extremely important in promoting health and in avoiding health problems and burnout.

It is reported that a supportive organisational climate (open expression of views and joint problem solving) was associated with work group cohesiveness, job satisfaction and less stress (Mikkelsen, Saksvik & Landsbergis, 2000).

Given the complex etiology of illness, measures of stress could possibly only explain about 10 % of the variance (Semmer, cited in Levert et al., 2000). Other factors must clearly play a role. For example, the individual's subjective perception of the stressor determines whether the demand is classified as a stressor. Subjective perception of

successful coping determines the extent to which illness is avoided. Failure to cope with a stressor leads to failure to prevent the impact of the stressor (Ben-Sira, 1995).

From the above discussion it is evident that occupational well-being is linked to work characteristics. There are, however, factors such as individual characteristics that appear to affect well-being.

7 SENSE OF COHERENCE

7.1 Generalised resistance resources (GRRs)

One undergoes life situations or experiences with specific characteristics. Over a period these experiences generate a way of seeing one's world. This generalised perceptual-emotional way of viewing one's internal and external environments is called SOC (Antonovsky, 1986, 1987; Antonovsky & Sagy, 1986). Generalised Resistance Resources (GRRs) create life experiences which are consistent, allow the individual to exercise influence over it, have a good load balance, and result in and reinforce a strong SOC (Antonovsky, 1987).

The experiences must be consistent, continuous, and explicable. Unpredictable and uncontrollable experiences may constrain the development of a strong SOC (Anson, Rosenzweig & Shwarzmann, 1993). Demands must fit the person, and neither overload nor underload the person. The individual must believe he/she is capable of influencing his/her life experiences (Antonovsky, 1987; Antonovsky & Sagy, 1986).

The range of GRRs include:

- physical and biochemical GRRs, like immunosuppressors,
- artefactual-material GRRs, for example wealth that leads to purchasing food and clothing,
- cognitive GRRs, mainly knowledge-intelligence, contingent on education, which includes skills, but also knowledge,
- emotional GRRs of ego identity,
- coping strategies, general plans of action for overcoming stressors,
- interpersonal-relational GRRs, for example social support (work and nonwork) and commitment,
- macro-sociocultural GRRs (likely solutions provided by culture and social structure of any particular society), which may include religion (Strümpfer, 1990).

GRRs which may promote salutogenic strengths for some may well not be the case for others (Cooper & Payne, 1991). GRRs co-ordinate with the three SOC components (comprehensibility, manageability and meaningfulness) for the person to

determine whether they appraise stressors as distressors, eustressors or neutral (Antonovsky, 1987; Antonovsky & Sagy, 1986).

7.2 Constructs related to salutogenesis

According to Antonovsky (1987,p.13) "thinking salutogenically not only opens the way for, but compels us to devote our energies to the formulation and advancement of a theory of coping". This new paradigm which emphasizes the origins of health or wellness have a number of constructs related to it, although they have developed separately. These include: "sense of coherence" Antonovsky (1987) referred to in Chapter 1, "personality hardiness" Kobasa (1979, 1982), "potency" (Ben-Sira, 1985) and "learned resourcefulness" (Rosenbaum, cited in Antonovsky, 1987). These concepts according to Antonovsky (cited in Feldt, 2000), can be grouped under the concept of "salutogenic strength". They are generalised personality dispositions which are studied in relation to successful coping, managing stress and staying well (Antonovsky, 1987). These constructs contribute, by means of the ability to cope successfully, to health maintenance in the individual (Feldt, 2000). An outline of these constructs is provided since they are not central to this research, but central to this paradigm.

7.2.1 Hardiness

Personality-based hardiness is seen as a composite of three inextricably intertwined components: commitment, control, and challenge. These three components can be explained as follows:

Commitment Persons high in commitment tend to involve themselves in whatever they are doing, rather than perform in an alienated manner. Commitment is the ability to believe in the truth, importance, and value of who one is and what one is doing. These persons have the tendency to involve themselves fully in the situations of life including work, family, interpersonal relationships, and social institutions and have an overall sense of purpose (Antonovsky, 1987; Kobasa, 1979,1982; Kobasa, Hilker & Maddi, 1979).

Control Individuals believe and act as if they can influence the events of their experience, rather than being powerless in the face of outside forces. This component encourages individuals to search for reasons that something is happening with an emphasis on their role and responsibility contributing to the specific outcome. They believe in their capability to act effectively on their own (Antonovsky, 1987; Kobasa, 1982; Kobasa et al., 1979).

Challenge Persons high in challenge regard life changes to be the norm rather than the exception, and regard these changes as an opportunity for growth rather than a threat to their security. An individual high on the challenge component, views the disruption associated with the occurrence of a stressful life event as an opportunity and incentive for personal growth and a challenge. The individual is characterised by openness, cognitive flexibility, and tolerance of ambiguity (Antonovsky, 1987; Kobasa, 1982; Kobasa, Maddi & Courington, 1981).

7.2.2 Potency

Potency refers to "...a person's enduring confidence in his/her own capacities as well as confidence in and commitment to his/her social environment, which is perceived as being characterised by a basic meaningful and predictable order and by a reliable and just distribution of rewards" (Ben-Sira, 1985, p.399). Potency is seen as a mechanism that prevents the tension, which follows occasional inadequate coping, from turning into a lasting stress and is the outcome of past experiences of successful coping, whereas weak potency results from a history of unsuccessful coping experiences (Ben-Sira, 1985).

7.2.3 Stamina

Stamina refers to physical and mental strength to resist or withstand disease, fatigue, or hardship (endurance) (Thomas, 1981). Research shows that stamina has a high positive correlation with education, robust past health, a perception of hard times as challenges, and a perception of supportive interactions with friends and family (Thomas, cited in Antonovsky, 1987).

7.2.4 Learned resourcefulness

Learned resourcefulness is not a personality trait, but a personality repertoire that is a set of complex behaviours, cognitions and affects that are in constant interaction with a person's physical and social environment. It is evoked by many situations which also provide the basis for further learning. In Rosenbaum's model, all coping with

stressful events calls for attempts at self- control. The learned resourcefulness thus provides a basis for further learning; it is a source of information for judgements of self-efficacy in coping (Rosenbaum, cited in Antonovsky, 1987).

It is suggested that low-resourceful persons judge themselves as inefficacious in coping with emotional strains and difficult tasks. As a consequence they tend to dwell more on their deficiencies than on the task, which may result in learned helplessness (Garner & Mercer, 1989). High resourceful persons, on the other hand, judge themselves more efficacious in dealing with emotional and task demands and are, as a consequence, more likely to continue with self-regulation (Rosenbaum, cited in Antonovsky, 1987).

These constructs are important because their primary concern is with the maintenance and enhancement of wellness, in addition to the prevention and treatment of illness. Firstly, learned helplessness differs from other types of resources in at least two aspects: (a) its homeostasis-restoring rather than demand-responding effect; and (b) its delayed activation. This tension-resolving mechanism is activated by the initial failure of the resources in meeting a demand. It differs from SOC since it is neither a resource mobilising nor a stress avoiding mechanism. Secondly, the concept potency, though corresponding greatly in definition to Antonovsky's Coherence, and Kobasa et al.'s hardiness, does not have the global and pervasive nature which Antonovsky attributed to the SOC. Thirdly, stamina challenges the belief that mind and body are separate entities (Ben-Sira, 1985).

Thomas (1981) proposes the kaleidoscope model, which is rooted in psychobiology that attests that many genetic and environmental factors enter into the equation. The persistence of good health, or development of disease, depends on the particular configuration of factors in a given individual at a given time.

7.3 Definition of SOC

Antonovsky (1987,p.37) defines SOC as: "... a global orientation that expresses the extent to which one has a pervasive enduring, though dynamic, feeling of confidence that (a) stimuli deriving from one's internal and external environments are structural predictable and explicable, (b) the resources are available to one to meet the demands posed by these stimuli, and (c) these demands are challenges worthy of investment and engagement." The world is seen to a greater or lesser extent as comprehensible (the cognitive component), manageable (the instrumental component) and meaningful (the motivational component) (Antonovsky, 1986, 1987).

7.3.1 SOC components

Antonovsky's (1987) SOC-construct consists of three components: (a) comprehensibility, (b) manageability, and (c) meaningfulness.

Comprehensibility refers to the extent to which stimuli deriving from one's internal and external environments are perceived as structured predictable, and explicable (Antonovsky, 1987). Their perceptions must make cognitive sense to the individual (Antonovsky, 1987; Strümpfer, 1990).

Manageability refers to the extent to which the person perceives the events of his/her life as experiences that they are able to cope with and that there are resources at their disposal which are adequate to meet the demands posed by the stimuli (Antonovsky, 1986,1987).

The meaningfulness component of the SOC refers to the extent to which one feels that life makes sense emotionally. That at least some of the problems and demands posed by living are worth investing energy in; are worthy of commitment and engagement; are challenges that are welcome rather than burdens that one would much rather do without (Antonovsky, 1987; Bishop, 1993).

The meaningfulness component is the most central component of the SOC construct because of its motivational element. For example, a person high on both comprehensibility and manageability components will believe they understand the situation and have the resources at their disposal to ensure the successful resolution of the problem. If the individual has a weak sense of meaningfulness, he/she may not be motivated to understand the problem and lose his/her interest and ability to utilise resources to resolve the problem (Feldt, 2000).

Individuals who are low on comprehensibility and manageability but high on meaningfulness, are more likely to engage in activities to ensure understanding of

the problem and search for the resources most likely to solve the problem (Feldt, 2000).

A 29-item questionnaire referred to as the Orientation to Life Questionnaire of which 13-items constitute a short form was developed by Antonovsky to measure SOC (Strümpfer, 1990). It was designed to be a culture free instrument for measuring SOC. Antonovsky (1987) claimed a high SOC score can be obtained in any cultural setting. He believed that to believe stressors can be comprehended and managed and found to be meaningful are always culturally acceptable. To obtain a high SOC score on the scale the individual is not required to understand specific content-laden criteria to determine comprehensibility, manageability, or meaningfulness (Feldt, 2000).

7.3.2 Characteristics of SOC

A crucial feature of SOC is that it is hypothesised as a stable dispositional orientation of personality. The sense of manageability begins to develop in children as a result of parental responses to their actions. When entering young adulthood, the person has a tentative level of SOC. After age 30 SOC is expected to remain relatively stable, as the individual has made major commitments in his/her life e.g. marriage, work, style of life and social roles. These provide a stable set of life experiences which ensures the establishment of SOC (Antonovsky, 1987; Feldt, 2000).

Lazarus and Folkman (1984) pointed out that one of the difficulties created by a highly global overarching concept about human beliefs such as a sense of coherence is that it implies a monolithic pattern of beliefs at the same time. A global concept like the SOC suggests an image of a person with a unified or consistent belief system, which may be more fiction than fact. Global terms are oversimplified and ignore the complex and changing relationship between people and their environment.

Antonovsky (1987) indicated however, that by saying SOC is stable, enduring and pervasive in adulthood does not mean that it is immutable. He emphasised the dynamic nature of SOC because of major changes in an individual's GRRs, for example unemployment. Sudden changes in life may on the other hand strengthen the SOC of the person. In later adulthood, the person returns to a mean level, whereas changes in SOC among young adults with a less developed SOC, may be long-lasting (Antonovsky, 1987; Feldt, 2000).

Further investigations are needed to explore whether SOC and its three components represent a stable disposition. Factors such as age and unemployment are hypothesised to affect the stability of and changes in SOC and require close attention (Feldt, 2000). According to Feldt (2000), Structural Equation modelling in assessing the stability of mean changes in SOC is highly recommended in analysing the stability of the constructs in longitudinal data. This method allows the investigation of the constructs as latent variables and produces error-free stability coefficients for those constructs.

SOC is also considered a health resource, not a coping style. Persons are not dependent on one type of coping resource or style (Antonovsky, 1993). They should be flexible enough to change their coping style and type of resource after they have appraised the stressor in question as positive or negative. A person with a strong SOC is more likely to cope in situationally appropriate ways and utilise the potential resistance resources because they perceive the stimuli as comprehensible, meaningful and manageable (Feldt, 1997). Successful coping then, depends on the SOC as a whole and not on one particular component of this orientation (Antonovsky, 1987).

Because Antonovsky focuses on the factors (GRRs) that contribute to resistance to stress, it differs from other theories such as Lazarus & Folkman (1984) because they refer to resources that an individual employs in order to cope. This difference in orientation presents itself in Antonovsky's inclusion of coping as a resistance resource whereas Lazarus & Folkman see coping as a process that evolves from resources. Antonovsky thus sees resources as buffers of stress, whereas Lazarus view them as factors that precede and influence coping, which mediates stress (Lazarus & Folkman, 1984).

7.3.3 Boundaries

People do not always see their entire world as coherent. As a result boundaries are set, outside of which comprehensibility, manageability and meaningfulness are of

little importance to the individual. Four spheres which cannot be excluded if the person is to maintain a strong SOC are (a) their inner feelings, (b) immediate interpersonal relations, (c) major activity (work), and (d) existential issues (death, inevitable failures, conflict, isolation) (Strümpfer, 1990).

Flexibility about life areas included within significant boundaries helps a person with a strong SOC maintain his/her view of the situation as coherent. By sensing the demands of a given area as becoming less comprehensible and manageable, they can temporarily exclude it from their set boundaries. While decreasing these boundaries, they are capable of including new experiences which encourages maintenance of their SOC (Antonovsky, 1987; Antonovsky & Sagy, 1986; Strümpfer, 1990).

8 SOC AND WORK

Since the largest portion of the waking hours of adults are spent in the workplace, it is a dominant source of external as well as internal stimulation to be comprehended, managed and made meaningful (Strümpfer, 1990).

A person with a strong SOC would thus be capable of:

- making cognitive sense of the workplace, perceiving its stimulation as clear, ordered, structured, consistent and information as predictable (Strümpfer, 1990).

- Perceiving his/her work as consisting of experiences that are bearable with which he/she can cope, using both organisational resources or personal resources (Strümpfer, 1990).
- making emotional and motivational sense of work demands as welcome challenges, worthy of engaging in and investing his/her energies. Antonovsky (1987) identifies commitment as the overarching interpersonal resistance to stressors. The committed persons are thought to be able to persist at their work even when stress mounts to precarious levels. Through commitment to work and previous attempts at coping with successful outcomes they have come to know various social, interpersonal and material resources that enhance stress management. These experiences may become work-related GRRs that will strengthen the SOC further. It is thus important that industrial/organisational psychologists should introduce the concept into their thinking (Strümpfer, 1990).

This approach makes a few assumptions about the individual. Firstly, the person has to have the capacity to integrate the information, to make emotional and cognitive sense of its complexities, to bear with some confusion and attempts to formulate plans of action nonetheless. These plans that have to be carried out require resources (motivational, emotional, cognitive and instrumental - personal and social) (Cooper & Payne, 1991). People of lower social class are likely to encounter more adverse experiences, fewer supportive experiences, and to be less in control of their

environment. Brown & Harris (1978) found higher cases of disorder in working-class women than in women of higher social class (Cooper & Payne, 1991).

Secondly, individuals may have the ability to alter the environment in which they live, particularly the social environment; thus differences in level of social support may be a function of differences in social skills, affiliative tendencies and neuroticism (Cooper & Payne, 1991).

8.1 The role of SOC as a health resource at work

Dana, cited in Strümpfer (1990), found that the SOC scale correlated negatively with intensity of stressful job events, psychological health, as well as positively with job satisfaction and with general well-being. SOC moderated between qualitative workload and the measure of psychological health as well as between subjective job stress and job satisfaction, with relationships occurring only in the low-SOC subgroup.

Fritz, cited in Strümpfer (1990), found SOC negatively related to two stressors, role ambiguity and role conflict. The health related outcomes of somatic complaints and depression showed negative correlations but a positive general health rating. The work-related outcomes of job satisfaction and life satisfaction correlated positively with SOC.

A study by Geyser & Theron (2000), found no meaningful difference between workers with a low and a high SOC, satisfaction with promotion, company policy,

reward, co-workers, independence, moral values, supervision-human, supervision - technical and physical work conditions. From this study the following can be deduced:

- it is important to workers with a high and a low SOC to have the opportunity to develop in their work
- that organisational policies and procedures are applied equitably
- that employees are rewarded for work
- to be satisfied with their social interaction between themselves and co-workers
- to be self-sufficient and make independent decisions
- to do work that does not interfere with their moral principles
- that there is a positive, constructive attitude towards subordinates
- that methods, the condition of equipment, work space and the layout of the workplace are suitable.

In contrast, Levert et al. (2000) found SOC and work load to contribute significantly to emotional exhaustion and depersonalisation. It appeared that nurses with a strong SOC and a manageable work load will be less likely to experience emotional exhaustion and depersonalisation.

Absenteeism has also been related to perceived stressful characteristics of work such as work demands, job insecurity, overload and boredom. Female employees with a weak SOC have been found to be more unstable in terms of sickness and

absence than their female colleagues with a strong SOC. A weak SOC has thus been related to low subjective well-being (Kivimäki, Vahtera, Thomson, Griffiths, Cox & Pentti, 1997; Söderfeldt, Söderfeldt, Ohlson, Theorell & Jones, 2000).

8.2 Mediating and moderating role of SOC

It is relatively clear that a strong SOC can be assumed to be positively associated with well-being in work-related settings as in other life contexts. An abundance of GRRs will have consequences not only for the emergence of a strong SOC, and therefore health, but for other areas of well-being too. It may function in two different ways, one possibility is that the SOC has a direct effect on health such that people with a higher SOC would in general experience better health. Alternatively, the conceptualisation of a sense of coherence as a GRR suggests that it may act as a buffer against the effects of stress. This implies an interaction between the SOC and life stress such that life stress would have more deleterious effects on the health of a person with a low sense of coherence than would be the case for a person with a high SOC (Bishop, 1993; Smith & Meyers, 1997).

8.3 Mediating role of SOC in work life

In a mediating relationship a GRR has a direct effect on health (Flannery & Flannery, 1990; Smith & Meyers, 1997). The mediator of a particular relationship is a variable which transmits the effect of one variable to the other (Feldt, 2000).

The relation of SOC to occupational well-being has received an increasing amount of attention. Findings have been consistent, indicating that employees with a stronger SOC have better occupational well-being (Gilbar, cited in Feldt, 2000). Influence at work, good load-balance and good social relations in the workplace are the central work characteristics that Antonovsky (1987) believed to serve as GRRs for an employee and strengthens the SOC (Feldt, 2000).

SOC is believed to operate as a mediator variable between psychosocial work characteristics and well-being at work. For example, a strong SOC has been found to be linked to high job satisfaction, and a weak SOC is related to anxiety and depression symptoms at work (Tolonen, cited in Feldt, 2000). A strong SOC is also found to be negatively associated with burnout (Gilbar, cited in Feldt, 2000).

Differences in work characteristics may therefore cause differences in SOC, which in turn, may affect the quality of health and well-being outcomes (Feldt, 2000).

8.4 Moderating role of SOC in work life

Although SOC is shown to play a mediating role in the relationship between, (a) stressors and health and (b) psychosocial work characteristics and well-being, its moderating role remains theoretically unclear. A moderator variable is defined as one that changes the direction or strength of the relationship between two other variables (Feldt, 2000).

Antonovsky (1987) rejected the moderator hypothesis because he emphasised that SOC is not a buffer variable between stressor and disease. He claimed that SOC makes a direct contribution to health. A study on nurses found SOC not to be a significant moderator. The following reasons were offered for this finding: (a) moderated regression procedures tend to yield conservative estimates of interaction effects, and (b) it may also be due to the fact that a strong SOC has an influence at an earlier point, that of appraisal, and acts then as a mediator rather than a moderator (Levert et al., 2000).

On the other hand, the moderator hypothesis of SOC is based on the assumption that SOC changes the direction of the relationship between stressor and health outcomes. SOC acts as a buffer variable moderating the influence of stress on the development of illness (Bishop, 1993; McSherry & Holm, 1994).

McSherry & Holm (1994) tracked low, middle and high SOC individuals while exposing them to stress. Strong SOC people showed an initial elevation in physiological arousal measures associated with distress followed by a return to near baseline levels. Those with a weak or moderate SOC showed higher initial distress and maintained higher levels of distress throughout the study. These researchers speculated that over time a strong SOC may buffer the deleterious effects of stress.

Therefore, the consequences of stressors on an individual with a strong SOC may be salutary because they manage tension well, whereas in the case of an individual with

a weak SOC the consequences are more than likely to be pathogenic in nature because their ability to utilise their potential GRRs is poor, tension management tends to be flexible and coping strategies are situationally inappropriate (Feldt,2000).

Evidence in support of the moderating of SOC is found in various studies. Adverse factors in the physical work environment (temperature, illumination and noise) have the capacity to affect an individuals' well-being (Cox, 1978). Individuals with a strong SOC are better shielded from the negative effects of physical adverse work characteristics on well-being (Feldt,1997).The same was found for time pressures in the work place, being a predictor of psychosomatic symptoms and emotional exhaustion: individuals with a stronger SOC show weaker associations with adverse factors (Feldt, 1997).

Quality of social relationships are also emphasised by individuals with a weaker SOC. Feldt (1997) claimed the moderating effect of SOC to be evident in the relationships between organisational climate and well-being (psychosomatic symptoms and emotional exhaustion).

Individuals with a weaker SOC appear to benefit from good organisational climates and leadership relations. As a result they experience less psychosomatic symptoms and emotional exhaustion. Alternatively, a poor organisational climate and leadership relations is strongly connected to well-being problems in individuals with a weaker SOC (Feldt,1997; Kivimaki et al., 1997; Vuori, 1994). In stronger SOC individuals no

associations of this nature were found. A person with a high SOC sees possibilities of getting support, control and influence at work and also has the capacity to use these elements (Vuori, 1994).

SOC also changes the nature of the relationships between some work characteristics and well-being indicators (psychosomatic symptoms and emotional exhaustion). A high level of work demands is related to an increased level of emotional exhaustion in individuals with a lower SOC. This is in contrast to the individuals with a higher SOC, where it appears to be a health promoting factor. A high level of work demands appear to be associated with lower levels of emotional exhaustion (Bowman, 1996; Feldt, 1997; Flannery & Flannery, 1990).

Associations between career rewards and SOC levels are similar. A high level of career rewards is associated with high levels of emotional exhaustion in individuals with weaker SOC scores, while high career rewards is considered a health-promoting factor for individuals with a high SOC score (Feldt, 1997).

SOC may therefore play a marginal role as a specific buffer between stressors and strains; playing a main effect role in affecting the overall appraisal of the stressor (Strümpfer & Bands, 1996), as well as a general health resource (Feldt, 1997; Vuori, 1994). This result supports the assertion of Antonovsky (1987) that some work factors can be salutary when accompanied by strong SOC and pathogenic when

accompanied by a weak SOC (Bowman,1996; Feldt,1997; Flannery & Flannery,1990).

Kivimaki, Kalimo & Toppinen (1998) however, found no support for moderated effects of SOC in relationships between exposure to stress and perceived stressors at work and between perceived stressors and symptoms of strain.

Thus far, research has been unable to clarify whether SOC plays a moderating role in the work context. SOC has both operated as a moderator variable between psychosocial work characteristics and well-being and other times it has not. In Kalimo, Olkkonen & Toppinen, cited in Feldt (2000), a strong SOC buffered the pathogenic effects of poor leadership style, role indistinctions and poor co-operation on well-being among industrial managers. Feldt's (1997) results offered some support for a moderating role of SOC on the relationships between perceived work characteristics and well-being.

8.5 Limitations of research on SOC

Firstly, to achieve a more complete picture of the effect of SOC, nonoccupational stressors may also be included in the analysis. This would make it easier to control the spillover from home and leisure time to work, that is, the influence of nonoccupational stressors on stress (Kivimaki et al.,1998).

Secondly, another avenue for augmenting the understanding of the role of SOC in the process of stress, would be provided by using a longitudinal research design. Cross-sectional data imply that the variation of SOC and stress processes have reached a state in which all the variables have stabilised. This might occur with chronic stressors and in the case of SOC as a stable personality trait. A longitudinal design is, however, needed to confirm whether these requirements are actually met. For this reason, repetitive measurements of simultaneously assessed SOC and indicators of the stress process are suggested for the study (Kivimaki et al., 1998).

Thirdly, the issue concerning the possible moderator role of SOC between psychosocial work characteristics and well-being, requires further attention (Feldt, 2000). Findings thus far suggest that SOC does not consistently play a moderating role between work characteristics and well-being. Some studies have found that SOC has both a mediating and moderating effect on well-being (Feldt, 1997; Vuorie, 1994), while other studies have found SOC only to have a mediating effect on well-being (Kivimaki et al., 1998). Findings thus far are therefore inconclusive.

Fourthly, according to Feldt (2000), the appropriateness of a mediational model in explaining the effects of psychosocial work characteristics on occupational well-being via SOC has been argued on a theoretical level. This model requires more empirical confirmation.

9 EFFECTS ON HEALTH

Kaplan, cited in Antonovsky (1987), warns that a study which focuses on coping strategies only is of less value than one which proves that these strategies mediate health.

Cohen, cited in Lazarus, Matarazzo, Melamed & Schwartz (1984), proposes that there are five mechanisms by which coping can affect the etiology of and recovery from disease. Three of these are on a level of direct behavioural coping which includes:

- habits that directly interfere with or reinforce health- for example, smoking or exercise,
- adaptive behaviours that can lessen the severity of illness - for example, seeking early treatment, and,
- transactions with health professionals - for example, compliance, noncompliance and periodic checkups (Lazarus et al., 1984).

9.1 Strong SOC and health outcomes

If the focus is limited to stressors when confronted with chronic or acute stressors, Antonovsky (1987) proposes that a person with a strong SOC is less likely to respond behaviourally with maladaptive health behaviour. The reason underlying this hypothesis is that a person with a strong SOC is more likely to accurately identify the nature and dimensions of the instrumental problem, likely to approach it as a

challenge, and likely to select from his/her repertoire of resources those that are appropriate to the problem and employ them rationally.

The person with a strong SOC mobilises emotional and cognitive intra- and interpersonal and material resources to cope with problems (Antonovsky, 1987). As a result, an individual with a strong SOC is less likely to suffer from emotional exhaustion often associated with burnout. Occurring in any occupational or non-occupational context, the burning out process eventually may result in exhaustion, fatigue, and depressive episodes (Nowak, 1991; Schaufeli, Maslach & Marek, 1993). Pines & Aronson (1988) found in their study that professional women had slightly higher levels of burnout than professional men and experienced four times more of its most extreme level. They felt they had less freedom, autonomy and influence in their work as well as less variety, less challenge, and a less positive work environment.

9.2 Weak SOC and health outcomes

A person with a weak SOC is more likely to appraise a stressor as pathological, report more anxiety and anger, resulting in increased psychological distress. Because they may believe that they do not have the personal or organisational resources at their disposal to cope with the situation, they are likely to respond in behaviourally maladaptive health behaviour (e.g. smoking and alcoholism) (Kivimäki et al., 1997; McSherry & Holm, 1994).

Thus, SOC certainly plays a role in the physical as well as the psychological health of the individual to a greater or lesser degree and, as a result, it impacts on their perception of work characteristics and their belief in their capabilities to cope with it.

10 RESEARCH QUESTION

The aim of the research study was to investigate, by utilising salutogenesis as a theoretical point of departure, the phenomenon of coping amongst Black nursing sisters. The following research questions were investigated:

- (a) whether there is a relationship between SOC and well-being.
- (b) whether SOC has a main/interaction effect on well-being (strain/burnout).
- (c) whether SOC has a main/interaction effect on the perception of a selected number of work characteristics.

The relationship of these variables are represented by figure 1.

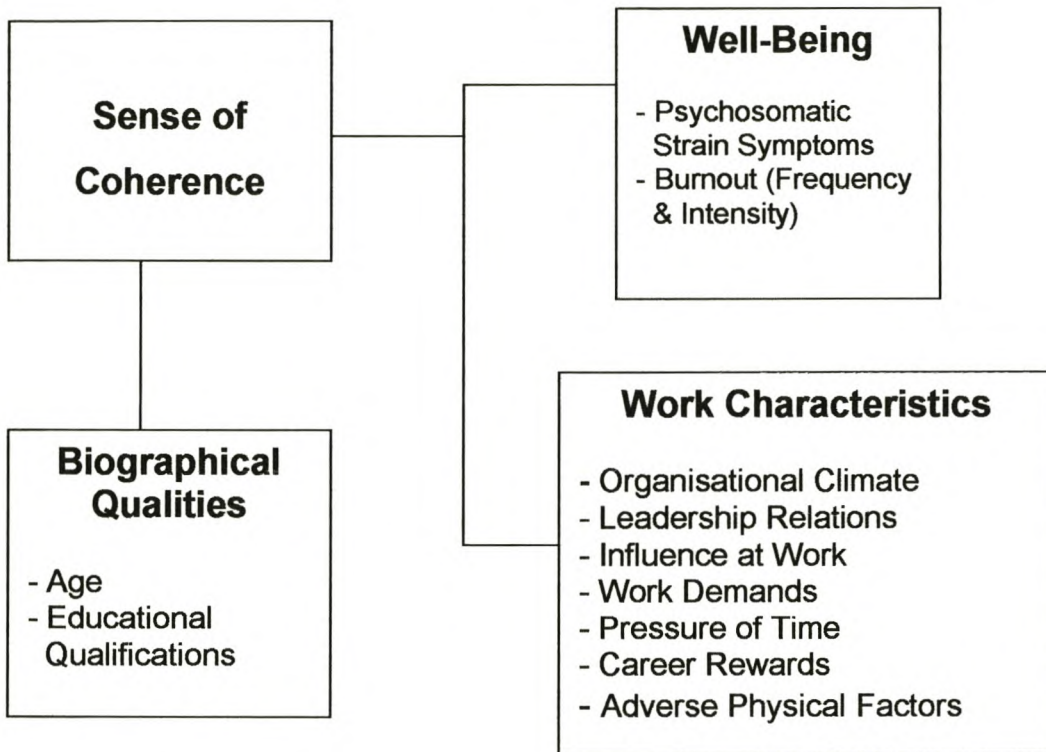


Figure 1 Relationships between variables

Age and educational qualification were included for the purpose of an interaction effect along with SOC, due to findings of previous research. Feldt et al. (2000) found education was related to the psychosocial work characteristics: those employees with a higher education level perceived their relations with the leadership better than those with a lower education level. In addition, previous studies have also found SOC to increase with age (Antonovsky & Sagy, 1986; Anstey, 1989).

It was expected that those nursing sisters with a higher Sense of Coherence will cope better than those with a lower Sense of Coherence and therefore have less negative health outcomes. The study will therefore contribute to research on SOC and occupational well-being, as well as to research on the effect that SOC has on the perception of work characteristics.

11 SUMMARY

As a result of the previous political dispensation, South Africa has extremes of wealth and poverty in its population. Various policies have led to shortcomings in the development of South Africa's human resources. Critical areas which require improvement and development are: education, training, housing, development of the infrastructure and health services (Finnemore, 1997).

Changes in workforce composition took place after the 1994 elections. The workforce comprises more women and has become more representative of all the races (Schreuder & Theron, 1997).

In addition to all these changes Black nursing sisters face a constant bombardment of occupational stressors inherent in the nursing role. The most common sources of stress include: a high workload, poor support from colleagues, role conflict and role ambiguity (Levert et al., 2000).

The link between stressful work environments and health are fairly well established (Beehr et al., 2000; Levert et al., 2000). Two paradigms, the salutogenic and the pathogenic paradigm, approach the issue of stress and coping from different perspectives. The salutogenic paradigm asks how people manage stress and stay well, whereas in the pathogenic paradigm they emphasise the etiology of disease and ways to improve their health.

Work characteristics identified by nurses as stressors include low decision latitude (Landsbergis, 1988), work overload, interpersonal conflict and lack of support (Motowidlo et al., cited in Narayanan et al., 1999).

Studies have, however, proven in health care that decision authority, learning opportunities, and dialogue between employee and supervisors and between colleagues are extremely important in promoting health and in avoiding health problems and burnout (Bakker et al., 2000).

Research has indicated that 10% of illness variance is attributed to (a) occupational stressors, (b) subjective perception of stressors and (c) their ability to overcome these stressors (Levert et al., 2000).

Antonovsky (1987) proposed that individuals ideally should use the GRRs at their disposal that are most suited to the stressors experienced, to cope with them. An individual with a stronger SOC would more likely appraise the stressor as

manageable and select the correct resources. An individual with a weaker SOC is more likely to appraise the stressors as unmanageable, believe they are incapable of coping with them and use the resources available to them.

As previously stated, the aim of the proposed research study was to investigate, by utilising salutogenesis as a theoretical point of departure, the phenomenon of coping amongst Black nursing sisters. The following research questions were investigated:

- (a) whether there is a relationship between SOC and well-being.
- (b) whether SOC has a main/interaction effect on well-being (strain/burnout).
- (c) whether SOC has a main/interaction effect on the perception of a selected number of work characteristics.

It was expected that those nursing sisters with a higher Sense of Coherence will cope better than those with a lower Sense of Coherence and therefore have less negative health outcomes. The study will therefor contribute to research on SOC and occupational well-being, as well as to research the effect that SOC has on the perception of work characteristics.

Chapter three provides a detailed description of the research methodology used to investigate these research questions.

CHAPTER 3

RESEARCH DESIGN

1 INTRODUCTION

Although the strength of the SOC is mainly shaped by life experiences in childhood and adolescence, it may be modified by the nature of the working environment. The SOC concept according to Antonovsky (1987), provides a theoretical framework for the analysis of working conditions which can either strengthen or weaken the SOC of the individual.

When an individual's level of SOC is shaped by the nature of the current working environment, it is assumed that SOC, in turn, is a major determinant of an individual's state of health and well-being (Antonovsky, 1987). A stronger SOC has been found to be negatively associated with perceived work stress, emotional exhaustion at work, and burnout. Having a stronger SOC allowed individuals to cope with adverse effects of work characteristics, which then influenced general well-being positively (Feldt, 1997). It is therefore positively associated with general well-being, and physical and psychological health (Feldt, 2000). In contrast, a weaker SOC has a negative association with general well-being and physical and psychological health (Feldt, 1997).

SOC also has an effect on the individual's perception of work characteristics. For example, an individual with a higher SOC is more likely to perceive their organisational climate as good, whereas an individual with a lower SOC is more likely to perceive their organisational climate as bad.

With the above mentioned points in mind, the study aimed to investigate the following hypotheses. Figure 2 represents the relationship between the variables as stated in the hypotheses.

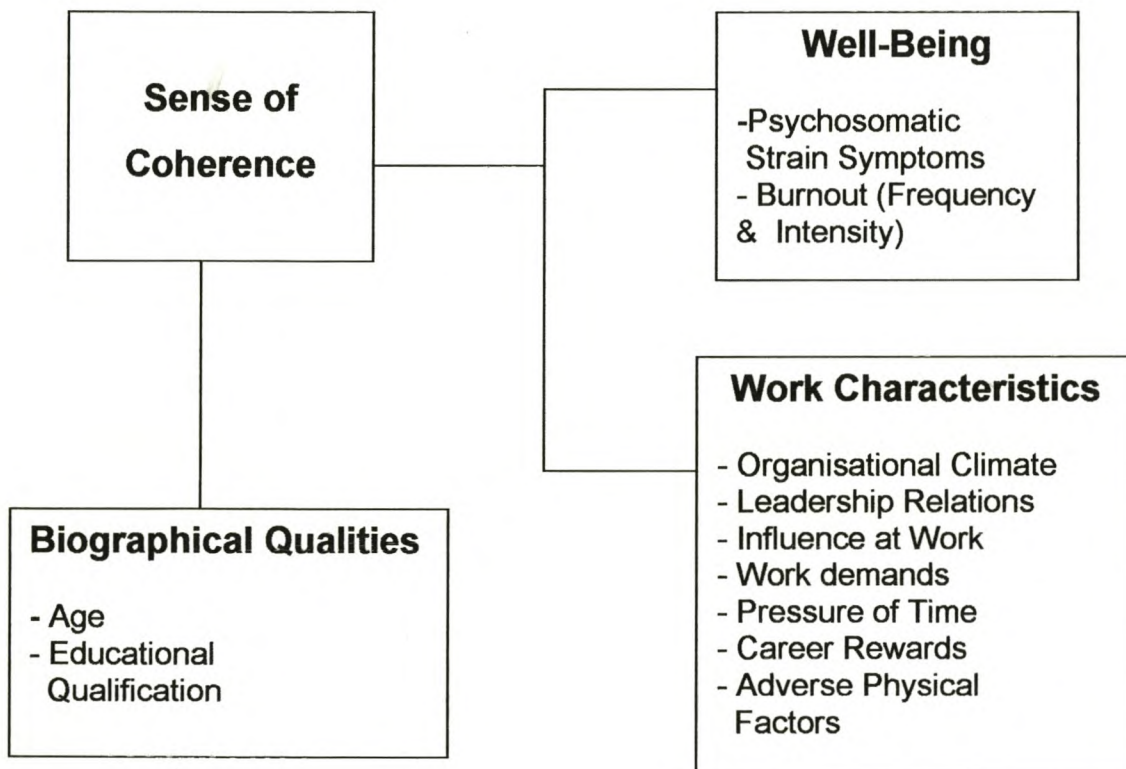


Figure 2 Relationship between the variables

Hypothesis 1

A statistical significant relationship exists between SOC (of the total sample) and psychosomatic strain symptoms.

Hypothesis 2

A statistical significant relationship exists between SOC (of the total sample) and burnout (frequency).

Hypothesis 3

A statistical significant relationship exists between SOC (of the total sample) and burnout (intensity).

Hypothesis 4

A statistical significant relationship exists between SOC (of the total sample) and the perception of each of a selected number of work characteristics.

Hypothesis 5

A statistical significant main effect exists in respect of SOC on psychosomatic strain symptoms.

Hypothesis 6

A statistical significant interaction effect exists between SOC and age on psychosomatic strain symptoms.

Hypothesis 7

A statistical significant interaction effect exists between SOC and education on psychosomatic strain symptoms.

Hypothesis 8

A statistical significant main effect exists in respect of SOC on burnout (frequency).

Hypothesis 9

A statistical significant interaction effect exists between SOC and age on burnout (frequency).

Hypothesis 10

A statistical significant interaction effect exists between SOC and education on burnout (frequency).

Hypothesis 11

A statistical significant main effect exists in respect of SOC on burnout (Intensity).

Hypothesis 12

A statistical significant interaction effect exists between SOC and age on burnout (intensity).

Hypothesis 13

A statistical significant interaction effect exists between SOC and education on burnout (intensity).

Hypothesis 14

A statistical significant main effect exists in respect of SOC on the perception of each of a selected number of work characteristics.

Hypothesis 15

A statistical significant interaction effect exists between SOC and age on the perception of each of a selected number of work characteristics.

Hypothesis 16

A statistical significant interaction effect exists between SOC and education on the perception of each of a selected number of work characteristics.

The aim of the study stated briefly is to: (a) determine the effect that SOC has on the well-being of Black nurses, based on their experience of psychosomatic strain, as

well as burnout (frequency and intensity) even though they experience the array of stressors as stated in the literature chapter, and (b) the effect that SOC has on the perception of their work characteristics, since they work in a highly stressful environment. In addition to the above two points mentioned, the question arises as to whether SOC has a main/interaction effect with other selected variables (age and education) on well-being and their perception of work characteristics.

The remainder of the chapter discusses the research method used to obtain the results presented in the next chapter.

2 MEASURING INSTRUMENTS

Participants were requested to fill out a five-part questionnaire consisting of the following: (a) Biographical data, (b) Strain Measure, (c) Maslach Burnout Inventory, (d) Orientation to Life Questionnaire and (e) Work Characteristics Questionnaire. (See Appendix A.) A cover letter provided general information and instructions to respondents. According to Banist et al., cited in Strümpfer (1997), it is inevitable that people will formulate their own understanding of an investigation, which may or may not be accurate. This in turn could affect their responses given in the questionnaires. The cover letter ensured the respondents that information would be anonymous and confidential.

2.1 Biographical data

Biographical data obtained from participants included age, gender, place of birth, home language, other languages spoken, highest educational qualification, institution where qualified, present position, number of years and months in position, and number of subordinates reporting to them. The above biographical items were included to ensure optimal homogeneity of the sample.

2.2 Sense of coherence

Sense of Coherence was assessed by means of the Orientation to Life Questionnaire (29-item SOC scale) (Antonovsky, 1987). The scale has eleven items on comprehensibility (e.g. "Do you have very mixed up feelings and ideas?"), ten on manageability (e.g. "Do you have the feeling you are being treated unfairly?") and eight on meaningfulness (e.g. "How often do you have the feeling that there's little meaning in the things you do in your daily life?"). The items are scaled along a 7-point semantic differential scale (1-never to 7-always). The SOC scale was developed to measure the construct as a global orientation, and not to measure the separate components of SOC (comprehensibility, manageability and meaningfulness) (Feldt, 1997). Higher scores on this test indicates a stronger SOC (mean = 136.37, SD = 20.19).

2.2.1 Characteristics of the Orientation to Life Questionnaire

According to Frenz, Carey & Jorgensen (1993), the scale appears to be a unidimensional instrument measuring SOC.

With regard to the reliability of the Orientation to Life Questionnaire (SOC-Scale), findings indicate that it is internally consistent and stable over brief intervals. Internal consistency coefficients alpha for the scale range from .84 to .93. The SOC-scale demonstrates high test-retest reliability from .85 to .92 (Frenz et al., 1993). They are consistent with Antonovsky's (1987) view that, although minor changes may occur over time, such changes are either, (a) temporary fluctuations in reaction to major stressors or (b) slow, gradual shifts that take place in response to significant medications in the environment.

Evidence supportive of the construct validity of the SOC scale includes the following: an inverse relationship between SOC and perceived stress supports Antonovsky's view that individuals with a high SOC are less likely to appraise stimuli as stressors than those with a weak SOC (Antonovsky, 1987).

Of concern is the significant positive correlation between the SOC and social desirability. This finding suggests that the SOC and items are somewhat "transparent" and therefore vulnerable to social desirability response bias. In this regard the SOC is not alone, as other widely used personality measures also correlate as high or higher

with social desirability measures. Nevertheless, users of the scale need to exercise caution when interpreting the SOC scores of subject groups that are likely to be motivated to present themselves in a favourable light (Frenz et al., 1993).

2.3 Well-being at work

Since well-being is a single behavioural construct, it was measured by the following two instruments:

- i. Strain Measure (Psychosomatic symptoms)
- ii. Maslach Burnout Inventory (Burnout)

Psychosomatic symptoms are conceptualised as potential consequences of negative experiences of work characteristics, and emotional exhaustion at work is conceptualised as a negative outcome when an employee's emotional energies become drained (Feldt, 1997).

2.3.1 Strain measure

The strain measure (Kobasa, 1982) was used to gauge the extent of illness experienced over the previous 12 months. This measure consists of a list of physical and mental symptoms associated with stress responses (e.g. headaches, nervousness and shortness of breath). Subjects were asked to indicate the degree to which they experience each of the 16 symptoms (0 = not at all; 1 = a little; 2 = a bit and 3 = extremely). The summation of all the ratings of the respondent is their strain score (mean = 12.16, SD = 6.57).

2.3.1.1 Characteristics of the strain measure

The strain measure was found to have good internal consistency with a coefficient alpha of .85. Test retest reliability was .80. The validity of the measure being used as an indicator of health threatening states had a significant correlation with physical illness ($r = .35$, $p < .05$) (Kobasa, 1982).

2.3.2 Burnout

Burnout was assessed using the Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1981) designed to measure hypothesised aspects of the burnout syndrome (emotional exhaustion, personal accomplishment, depersonalisation and involvement). "Burnout is formally defined and subjectively experienced as a state of physical, emotional and mental exhaustion caused by long-term involvement in situations that are emotionally demanding" (Pines & Aronson, 1988). As their emotional resources are depleted, workers feel they are drained at a psychological and physical level. Another aspect is the development of negative and cynical attitudes. An individual with burnout syndrome has the tendency to evaluate himself negatively, particularly with regard to his work. They feel unhappy about themselves and dissatisfied with their accomplishments on the job (Maslach & Jackson, 1981) (mean for burnout frequency = 63.25, SD = 23.60; mean for burnout intensity = 63.0, SD = 22.25).

2.3.2.1 Characteristics of MBI scales

Internal consistency is estimated by Cronbach's coefficient alpha, which yielded reliability coefficients of .83 (frequency) and .84 (intensity) for the scale. The reliability coefficients for the subscales were .89 (frequency) and .86 (intensity) for Emotional Exhaustion, .74 (frequency) and .74 (intensity) for Personal Accomplishment, .77 (frequency) and .74 (intensity) for Depersonalisation, and .59 (frequency) and .57 (intensity) for Involvement (Maslach & Jackson, 1981).

The test-retest reliability coefficients for the subscales were .82 (frequency) and .53 (intensity) for Emotional Exhaustion, .80 (frequency) and .68 (intensity) for Personal Accomplishment, .60 (frequency) and .69 (intensity) for Depersonalisation and .64 (frequency) and .65 (intensity) for Involvement. These coefficients are significant beyond the .01 level (Maslach & Jackson, 1981).

Studies have indicated that emotional exhaustion appeared to be the most stable dimension. High correlations suggest that burnout is a chronic rather than a transient state of mind. Research results confirm factor analyses of the three-factor structure of the MBI (Boles, Dean, Ricks, Short & Wang, 2000; Schaufeli et al., 1993).

Studies on convergent validity of MBI yield positive results, indicating that to a certain extent the MBI scales measure the same construct as do other burnout instruments. Emotional exhaustion has been found to be the best validated dimension of the

burnout syndrome. Thus, in conclusion, the factorial and the convergent validity as well as the reliability of the instrument is encouraging. On the other hand, burnout as measured with the MBI, cannot be validly distinguished from related concepts such as depression and job satisfaction (Schaufeli et al., 1993).

2.4 Work characteristics

The Work Characteristics Questionnaire that measures the following seven work characteristics: organisational climate, leadership relations, influence at work, work demands, and time pressure, career rewards and adverse physical factors, which were developed by Feldt (1997), was used to assess the relationship of SOC on the perception of work characteristics.

Organisational Climate: Statements are used to assess the organisational climate. They include statements about assistance from others, the social climate and conflicts at work. Participants respond on a 5-point scale (1 = totally agree to 5 = totally disagree) (Feldt, 1997). The scores of respondents are recoded and summed, with a higher score indicating a good organisational climate (mean = 18.37, SD = 4.83).

Leadership Relations: Statements refer to various relations between employee and leadership concerned with feedback, support, and frankness from leadership. Responses to each statement are made on a 5-point scale (1 = totally disagree to 5 =

totally disagree) with a higher score indicating good leadership relations (Feldt, 1997) (mean = 18.72, SD = 4.91).

Influence at work: The sum variable of influence at work (i.e. autonomy and attitude in decision-making) are examined using statements related to the above. Responses are given on a 5-point scale (1= totally agree to 5= totally disagree) (Feldt, 1997). Responses are recoded and summed with a higher score indicating a high level of influence in their work place (mean = 22.62, SD = 3.96).

Work Demands: Questions are asked related to opportunities of the respondent to develop and learn new skills in the work place (1 = not at all to 5= very much). Scores of respondents are summed with a high score indicating a high prevalence of work demands (Feldt, 1997) (mean = 18.38, SD = 3.47).

Pressure of time: Statements made about time constraints, workload and ability to reach deadlines require a response from the respondents. The scale ranges from 1 = never to 5 = extremely). Higher scores indicate high levels of pressure of time experienced at work (Feldt, 1997) (mean = 9.99, SD = 2.71).

Career Rewards: An adaptation of Feldt's (1997) questionnaire was used to measure career rewards. It consisted of one question containing 5 items "To what extent does the accumulation of experience in your job influence (a) salary (b) an increase in responsibility at work (c) the variety of working tasks performed (d) increased

appreciation, and (e) career advancement. A five-point response format ranging from 1 (not at all) to 5 (very much) was used. Responses were summed and a higher score indicated a high level of career rewards (Feldt, 1997) (mean = 16.44, SD = 3.92).

Adverse Physical Factors: Physical factors in the working environment were assessed concerning various ergonomic factors such as poor lighting, poor ventilation, crowded working space, dirt and dust, noise, restlessness and poor soundproofing. Respondents are required to answer each item on the basis of their personal experience using a 5-point scale ranging from 1 (not at all) to 5 (very much). Higher scores indicate a high level of adverse factors in the work environment (Feldt, 1997) (mean = 24.71, SD = 7.68).

2.4.1 Characteristics of work characteristics questionnaire

This Work Characteristics Questionnaire used by Feldt (1997) was a modification of that used in studies by Lehto, Kalimo, Olkkonen, Toppinen and Mäkinen, as cited in Feldt (1997). Work characteristics, organisational climate and leadership relations were modifications of those used by Lehto (1991). Most of the questions concerning influence at work, work demands and pressure of time, were taken from Kalimo et al., cited in Feldt (1997). The adverse physical factors scale is used in Finnish work stress studies (Mäkinen & Kalimo et al., cited in Feldt, 1997). Feldt (1995), cited in Feldt (1997), formulated the career rewards scale.

Reliability coefficients were found to be as follows for the seven work characteristics: organisational climate ($\alpha = .85$), leadership relations ($\alpha = .86$), work demands ($\alpha = .69$), influence at work ($\alpha = .76$), career rewards ($\alpha = .78$), time pressures ($\alpha = .65$), and adverse factors in the work environment ($\alpha = .86$) (Feldt, 2000).

3 SAMPLING

Nonprobability sampling (accidental sampling) was used to determine from which hospitals the sample of Black nursing sisters should be drawn. Seven hospitals in the Cape Metropol (Cape Town) were selected for practicality purposes of the research. Accidental sampling was further used to randomly select a sample of Black nursing sisters. On both occasions selection was determined by availability and willingness on the part of respondents (Shaughnessy & Zeichmeister, 1994). It was vital that the respondents have occupied this position for a minimum period of one-year.

Permission for the study was obtained from the Deputy-Director of Health and Social Services of the Western Cape to engage in research in hospitals in the Cape Metropol region as well as the community health care centres. After permission was granted contact was made with the medical superintendents of the hospitals and community health centres.

The medical superintendents further suggested that the matrons of the hospitals be contacted.

Once the matrons received and read the outline further, arrangements were made with regard to the distribution and collection of the questionnaires. Distribution had to take place in a manner which they thought to be the least disruptive to hospital services.

Respondents completed questionnaires on a voluntary basis. A period of one week (7 days) was allowed to respondents to complete and return questionnaires. Envelopes were provided with each questionnaire. Participants were thus able to seal their completed questionnaires in the envelope to ensure anonymity and confidentiality. All questionnaires were completed in English.

The following information pertained to the sample of nursing sisters (n = 100): (a) A mean age of 42.64 was found, ranging from 25-60. (b) 47% of the respondents speak Afrikaans, 49% speak English, and 4% speak Xhosa. (c) The qualification levels of the sample varied. Eight percent were found to have a Junior Certificate, 52% had a Matric qualification, 30% indicated they had a diploma and 10% indicated that their highest qualification was a degree. (d) They have served in their present position for an average of 11.72 years, and (e) supervised an average of 19.84 subordinates. The means and standard deviations for the initial sample are represented in Table 2.

Table 2 Means and standard deviations for the initial sample

	Age	Tenure	Number of Subordinates
Mean	42.64	11.72	19.84
Standard Deviation	7.87	9.64	37.85

n = 100

The final sample size was 96, since the four Xhosa speaking participants were excluded in order to gain further homogeneity in the sample. The final means for n=96 were as follows: (a) a mean age of 42.56 years, ranging from 25-60. (b) The percentage of the sample that speaks Afrikaans and English are as above. (c) Eight were found to have a junior certificate, 48 had a matric qualification, 30 indicated they had a diploma and 10 indicated they had a degree. (d) A mean of 11.69 ranging from 1-48 years in their current position was found with a mean of 19.26 subordinates. Table 3 represents the final mean and standard deviations for age, years in the position and number of subordinates for the sample.

Table 3 Mean and standard deviation for the final sample

	Age	Tenure	Number of Subordinates
Mean	42.64	11.72	19.84
Standard Deviation	7.87	9.64	37.85

n=96

4 STATISTICAL ANALYSIS

The sample was divided into three groups according to the SOC scores they obtained. Using the mean = 136.37 and standard deviation = 20.19 for the total sample, the three SOC groups were devised as follows:

- Group 1(83-116): The lowest SOC score (83) obtained for the sample was used as the start of the first SOC group. The cutoff point for this group was calculated by subtracting the standard deviation from the mean.
- Group 2 (117-157): Logically, the second SOC group would start at 117. The cutoff point was calculated by adding the standard deviation to the mean.
- Group3 (158-189): Group 3 starts at 158 with the cutoff point being the highest SOC score obtained in the total sample (189).

These groups are represented in Table 4.

Table 4 Frequency table of SOC scores

SOC Groups		Frequency	Percentage	Cumulative
1.	83-116	11	11.5	11.5
2.	117-157	73	76.0	87.5
3.	158-189	12	12.5	100.0
Total		96	100.0	

The SOC groups were labelled from one to three with group one containing the lowest SOC scores and group three containing the highest SOC scores. The mean and the standard deviations of these three groups are presented in Table 5.

Table 5 Means and standard deviations of SOC Groups

SOC Groups		Mean	Standard Deviation
1.	83-116	103.27	13.1
2.	117-157	136.08	11.12
3.	158-189	171.42	10.22

Pearson Product-Moment Correlation coefficient (r) was used to indicate the measure of the relationship between the variables. The correlation coefficient is a point on this scale between -1.00 and $+1.00$, the closer it is to either of these limits, the stronger the relationship between the two variables. A positive relationship is a relationship where an increase in one variable is associated with increases in the other. Whereas a negative relationship is indicative of a relationship where increases in one variable are associated with decreases in another (Howell, 1995).

The correlations were completed to investigate the relationship between SOC and the well-being indicators (strain measure and Maslach Burnout Inventory scores). Further correlations were done on SOC and the seven work characteristic scores. These results are presented in Table 6.

Table 6 Correlational results between SOC and well-being, and the work characteristics

	SOC-Score
Well-Being	
MBI(Frequency)	-.316**
MBI (Intensity)	-.032
Strain Measure	-.273**
Work Characteristics	
Organisational Climate	.165
Leadership Relations	.079
Work Demands	.292**
Influence at work	-.063
Time Pressures	-.200
Career Rewards	.295**
Adverse Factors in the work environment	-.104

** p < .01

According to the literature as previously explained, SOC has the ability to play a main role or an interaction role in well-being, as well as on the perception of work characteristics. This study investigated whether SOC has a main effect on well-being and perception of work characteristics. It further investigated whether SOC has an interaction effect with age and education on their well-being and perception of their work characteristics.

A main effect variable refers to the overall effect of an independent variable in a complex design (Schaunessy & Zeichmeister, 1990). Interaction variances are those

that are attributable to the two variables acting together (Guilford, 1965). In other words, it occurs when the effect of one independent variable differs depending on the level of a second independent variable.

Two-way ANOVAs were therefore used to assess whether differences in well-being and perception were due to SOC scores (higher scores vs lower scores) only, or whether differences were due to other variables as well, such as age and educational level of the nurses. The independent variables in this study are the subjects' SOC (as well as age and educational level) and the dependent variables are work characteristics, strain and burnout.

Two-way ANOVAs were selected because they have several advantages. Firstly, they allow for greater generalisation of results. It allows for a broader interpretation of the variables (SOC, age and education) of this study. The second important feature of two-way ANOVAs is that it indicates interactions (Howell, 1995). For example, in this study one of the interactions that it indicates is whether there is an interaction effect between SOC and age. A third reason for using a two-way ANOVA is its economy. Since it averages the effect of one variable across the levels of the other variables, it requires fewer subjects than two one-way ANOVAs for the same degree of power (Howell, 1995). As the sample size of this study is fairly small ($n = 96$), it was regarded as more advisable to use a two-way ANOVA.

5 SUMMARY

This research aimed to investigate the effect that SOC has on well-being and the perception of work characteristics. Accidental sampling was used to determine from which hospitals the sample should be taken. Their availability and willingness to take part in the study determined selection of hospitals and participants (Shaughnessy & Zeichmeister, 1994).

The initial sample consisted of 100 nursing sisters and the final sample totalled 96 nursing sisters. Biographical information is reported for both groups in this chapter although further analysis was only done the final sample.

The Orientation to Life Questionnaire was used to measure their SOC scores. The Strain Measure was used to gauge the extent of illness experienced over the previous twelve-month period. Burnout was assessed using the Maslach Burnout Inventory. Seven work characteristics were used to assess their perceptions of the work characteristics. This data was statistically analysed using Pearson Moment Correlation and two-way ANOVAs. The results of the investigation that were found will be presented in the following chapter.

CHAPTER 4

RESULTS

1 INTRODUCTION

The objective of the present study was to investigate the relationship of SOC to occupational well-being. It further aimed to investigate whether SOC has a main/interaction effect on well-being and the perception of the seven work characteristics referred to in chapter three.

A questionnaire consisting of a biographical information section, a strain measure, the MBI, the Orientation to Life Questionnaire and the Work Characteristics Questionnaire, was used to measure the relevant variables. The strain measure was used as an indication of the extent of psychosomatic complaints experienced by the participants, the MBI to measure the extent of burnout, and the Orientation to Life Questionnaire to measure each participant's SOC score. Lastly, the Work Characteristics Questionnaire was used as a measure of their perception of organisational climate, leadership relations, influence at work, work demands, pressure of time, career rewards and adverse physical factors in the work environment.

Pearson Product-Moment Correlation coefficients (r) were determined to indicate whether a positive or a negative relationship exists between the variables. Two-way ANOVAs were used to investigate whether the independent variable, SOC, has a

main/interaction effect on the dependent variables, strain, burnout and perception of work characteristics.

For the purpose of the two-way ANOVAs the participants were divided into three sub-groups based on the level of their Sense of Coherence.

The independent variables used in the analysis were age and educational level.

2 FINDINGS OF THE PRESENT STUDY

2.1 Relationships between well-being variables

Hypothesis 1

A statistical significant relationship exists between SOC (of the total sample) and psychosomatic strain symptoms.

A significant correlation was found between SOC scores and the strain measure scores ($r = -.273$, $p < .01$). The relationship indicates that with a decrease in SOC scores, strain scores increased. Subjects with lower SOC scores experienced more strain and thus more psychosomatic symptoms. Table 7 presents the correlations between SOC, strain and burnout.

Table 7 Correlations between SOC, strain and burnout

	SOC Score
SOC Score	-
Burnout (Frequency)	- .316**
Burnout (Intensity)	- .032
Strain	-. 273**

****** $p < .01$ **Hypothesis 2**

A statistical significant relationship exists between SOC (of the total sample) and burnout (frequency).

Findings indicate a significant correlation between SOC and burnout frequency scores ($r = - .316$, $p < .01$). From this result it can be concluded that SOC scores do vary with burnout frequency, with increases in SOC scores associated with decreases in burnout frequency experienced. (See Table 7).

Hypothesis 3

A statistical significant relationship exists between SOC (of the total sample) and burnout (intensity).

Although an inverse relationship was found between SOC scores and burnout intensity, contrary to expectation a significant result was not found ($r = - .032$). The relationship does, however, indicate that an increase in SOC-scores is associated with a decrease in burnout intensity. SOC scores therefore do vary with strain and burnout intensity scores, with higher SOC scores resulting in a reduction in the burnout intensity experienced. (See Table 7).

Hypothesis 4

A statistical significant relationship exists between SOC (of the total sample) and the perception of each of a selected number of work characteristics.

Not all the correlational relationships between SOC and the work characteristics were significant. These relationships are presented in Table 8.

Table 8 Correlational relationships between SOC and work characteristics

	SOC Score
Work Characteristics	
Organisational Climate	.165
Leadership Relations	.079
Work Demands	.292**
Influence at work	-.063
Time Pressures	-.200
Career Rewards	.295**
Adverse factors in the work environment	-.104

** $p < .01$

A significant positive correlation was found between SOC and work demands ($r = .292, p < .01$). The relationship indicates that an increase in work demands is associated with an increase in SOC scores. Work demands may therefore be a contributing factor to the strengthening of an individual's SOC.

A significant positive correlation was also found between SOC and career rewards ($r = .295, p < .01$). An increase in SOC scores is therefore associated with increases in career rewards. Career rewards at work may therefore contribute to (a) the strengthening of an individual's SOC, alternatively, (b) nurses with a strong SOC may perceive their work to provide a high degree of career rewards.

However, the following relationships were not found at a statistical significant level:

- Organisational climate ($r = .165, p < .01$)
- Leadership relations($r = .079, p < .01$)
- Influence at work ($r = -.063, p < .01$)
- Time Pressures ($r = -.200, p < .01$)
- Adverse factors in the work environment ($r = -.104, p < .01$).

Hypothesis 5

A statistical significant main effect exists in respect of SOC on psychosomatic strain symptoms.

Contrary to hypothesis 5, results indicate that no significant main effect of SOC on psychosomatic strain exists. The three SOC groups do not differ significantly from each other in their experiences of psychosomatic strain symptoms $F(2,85) = .204$, $p < .05$. Although the finding is not significant, means presented in Table 9 indicate that the Group 3 (158-189) experiences less strain than Group 1 (83-116) and Group 2 (117-157). A stronger SOC is therefore associated with less psychosomatic strain.

Table 9 Mean scores for the main effect of SOC on psychosomatic strain

SOC Group	Mean	Standard Error
83-116	13.33	1.94
117-157	12.50	.80
158-189	7.29	2.43

Hypothesis 6

A statistical significant interaction effect exists between SOC and age on psychosomatic strain symptoms.

The results showed that no significant interaction effect exists between SOC and age on psychosomatic strain symptoms $F(3,88) = .79$, $p < .05$, reflecting that there are generally no differences between the SOC groups and age on psychosomatic strain symptoms experienced. Table 10 provides a summary ANOVA table of the interaction effect of SOC and age on psychosomatic strain symptoms.

Table 10 Summary ANOVA table of SOC and age on psychosomatic strain

Source	SS	df	MS	F
SOC Group	204.97	2	102.49	2.7
Age	205.08	2	102.59	2.69
SOC*Age Interaction	89.71	3	29.90	.79
Error	3353.55	88	38.11	
Total	17230.00	96		

Although the interaction effect for SOC and age on psychosomatic strain symptoms is not significant, descriptive statistics presented in Table 11 indicate that the age group 25 -34 in the SOC Group 1 has the highest mean strain score ($M = 15.30$) as opposed to the age group 25 -34 in SOC Group 3 with the lowest mean strain score ($M = 2.00$). Although the findings are not significant they do suggest that nurses with a stronger SOC experience less psychosomatic strain than those with a weaker SOC.

Table 11 Descriptive statistics for SOC and age on psychosomatic strain

SOC Group	Age	M	Standard Error
83-116	25-34	15.25	3.09
	35-49	11.43	2.34
	50-60	.	.
117-157	25-34	12.23	1.71
	35-49	11.48	.98
	50-60	13.80	1.38
158-180	25-34	2.00	6.17
	35-49	7.14	2.33
	50-60	12.75	3.09

Hypothesis 7

A statistical significant interaction effect exists between SOC and education on psychosomatic strain symptoms.

Results indicate that no significant interaction effect was found between SOC and education on psychosomatic strain symptoms experienced. See Summary ANOVA Table 12.

Table 12 Summary ANOVA table for the interaction effect of SOC and education on psychosomatic strain symptoms

Source	SS	df	MS	F
SOC Group	127.37	2	63.68	1.61
Education	94.06	3	31.35	.79
SOC *Education	146.27	5	29.25	.74
Error	3344.87	85	39.35	
Total	17230.0	96		

The mean scores presented in Table 13 indicate that subjects in Group 3 with a degree experience the least psychosomatic strain. Mean scores are not consistent enough to suggest that an interaction effect between SOC and individuals with tertiary level qualifications experience less psychosomatic strain.

Table 13 Mean scores for the interaction effect of SOC and education on psychosomatic strain

SOC Group	Education Level	Mean	Standard Error
83-116	junior certificate	.	.
	matric	11.00	2.56
	diploma	15.50	3.14
	degree	13.00	6.27
117-157	junior certificate	15.40	2.80
	matric	11.86	1.05
	diploma	11.32	1.26
	degree	15.29	2.40
158-189	junior certificate	10.33	3.62
	matric	8.17	2.57
	diploma	13.00	6.27
	degree	5.00	4.44

Hypothesis 8

A statistical significant main effect exists in respect of SOC on burnout (frequency).

A significant main effect was found for SOC on burnout frequency $F(2,88) = 3.19$, $p < .05$. (See table 15). It is evident from Table 14 that Group 3 experiences significantly less burnout than Group 2 and Group 1. Findings therefore suggest that

subjects with a stronger SOC generally experience less burnout frequency than subjects with a weaker SOC.

Table 14 The main effect of SOC on burnout frequency

SOC Group	M	SD
83-116	66.91	27.54
117-157	63.68	22.48
158-189	48.92	20.99

Hypothesis 9

A statistical significant interaction effect exists between SOC and age on burnout (frequency).

There is no significant interaction effect between SOC and age on burnout frequency $F(3,88) = .48, p < .05$. This indicates that the interaction effect between SOC and age generally has no significant impact on the burnout frequency experienced. Table 15 represents a summary ANOVA table for the interaction effect between SOC and age on burnout frequency.

Table 15 Summary ANOVA table of the interaction effect between SOC and age on burnout frequency

Source	SS	df	MS	F
SOC	3311.979	2	1655.99	3.19
Group				
Age	2114.73	2	1057.36	2.04
SOC*Age	724.14	3	247.38	.48
Interaction				
Error	45672.68	88	519.09	
Total	422846.00	96		

Descriptive statistics presented in Table 16 indicate that the youngest age group in group 3 experiences the least burnout, while in Group 1 age group 35-49 has the highest occurrence of burnout.

Table 16 Descriptive statistics for SOC and age on burnout frequency

SOC Group	Age	Mean	Standard Error
83-116	25-34	63.00	11.39
	35-49	69.14	8.61
	50-60	-	-
117-157	25-34	54.07	6.31
	35-49	67.03	3.60
	50-60	63.25	5.09
158-189	25-34	15.00	22.78
	35-49	54.71	8.61
	50-60	47.25	11.39

Hypothesis 10

A statistical significant interaction effect exists between SOC and education on burnout (frequency).

No significant SOC and education level interaction effect exists on burnout frequency $F(5,85) = 1.64, p < .05$. Although this finding is not significant it does indicate that the weakest SOC group generally experiences the highest frequency of burnout as.

Hypothesis 11

A statistical significant main effect exists in respect of SOC on burnout (Intensity).

In contrast to the above finding no significant main effect exists for SOC in burnout intensity $F(2,85) = 1.82, p < .05$. Table 17 indicates that burnout intensity increases with an increase in SOC scores. Contrary to expectation, subjects with a stronger SOC generally experience a higher degree of burnout intensity than those with a weaker SOC.

Table 17 Mean scores for the main effect of SOC on burnout intensity.

SOC Group	Mean	Standard Error
83-116	58.17	8.43
117-157	65.63	3.41
158-189	74.04	7.51

Hypothesis 12

A statistical significant interaction effect exists between SOC and age on burnout (intensity).

The results show no significant interaction effect for SOC and age on burnout intensity $F(3,88) = .198, p < .05$. Burnout intensity is therefore not significantly affected by the interaction between SOC and age.

Hypothesis 13

A statistical significant interaction effect exists between SOC and education on burnout (intensity).

A significant interaction effect for SOC and education was found on burnout intensity $F(5,85) = 2.34, p < .048$. The interaction effect for SOC and education is presented in Figure 3.

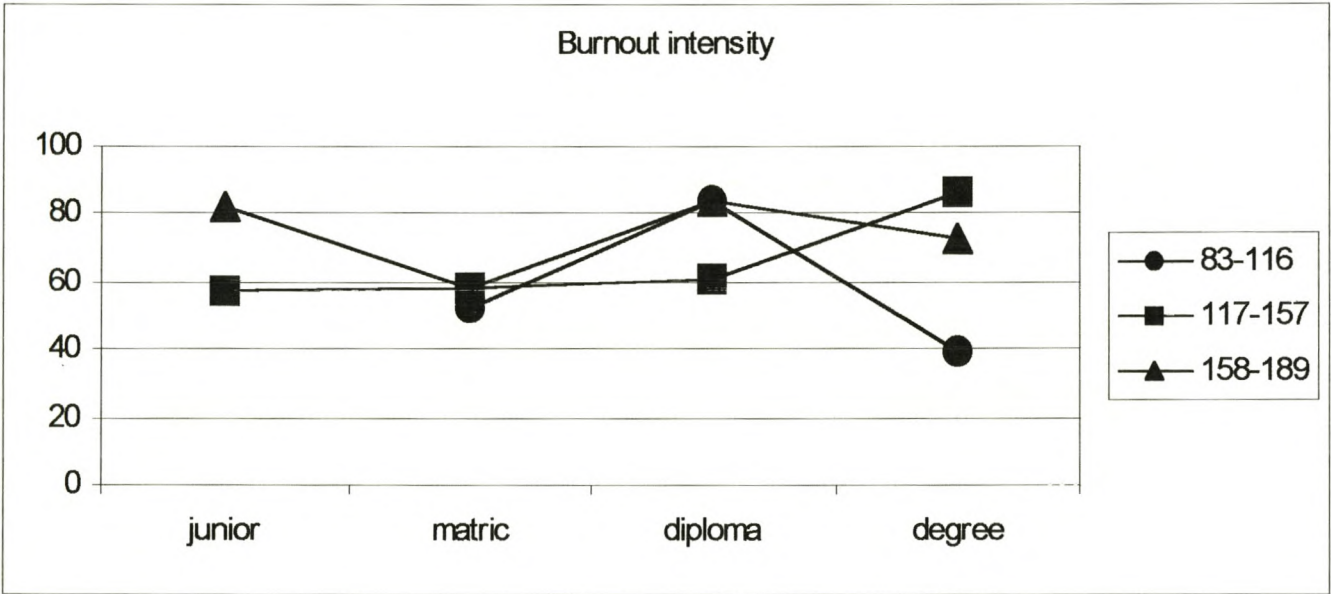


Figure 3 Interaction effect for SOC and education on burnout intensity

From figure 3 it is evident that Group 2 experiences more burnout intensity as the education level increases, whereas, Group 3 and Group 1 experience less burnout intensity with an increase in education level.

2.2 Work characteristics

Hypothesis 14

A statistical significant main effect exists in respect of SOC on perception of each of a selected number of work characteristics.

Results suggest that no significant main effect exists for SOC on the perception of organisational climate $F(2.85) = .47, p < .05$. Although there is no significant effect for SOC on the perception of organisational climate, subjects with a weaker SOC generally obtained the lowest mean score for their perception of organisational climate. Subjects with a lower SOC score generally perceive the organisational climate less positively.

A significant main effect exists for SOC on the perception of leadership relations $F(2.85) = 3.37, p < .05$ exists. Significant differences are between Group 1 and Group 2 and 3. Table 18 represents mean scores for these groups.

Table 18 Mean scores for the main effect of SOC on the perception of leadership relations.

SOC Group	Mean	Standard Error
83-116	18.69	1.94
117-157	23.70	.78
158-189	25.67	1.73

From these findings it can be deduced that subjects with higher SOC scores tend to believe that there are good leadership relations between subordinates and leaders.

A significant main effect was found for SOC on the perception of influence at work $F(2,88) = 3.69, p < .05$. The significant difference is between group 1 and 2. It is evident from figure 4 older subjects with weaker SOC believe they have less influence at work.

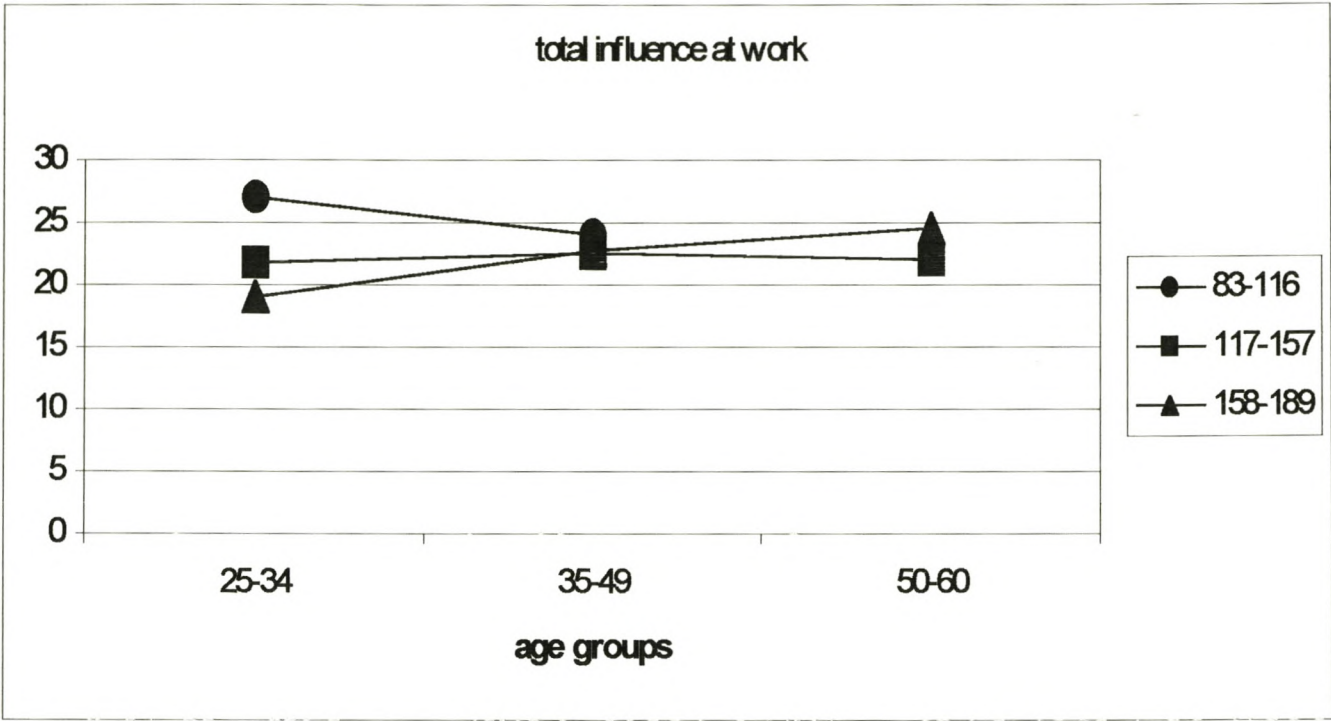


Figure 4 The main effect of SOC on influence at work

No significant main effect exists for SOC on the perception of work demand $F(2.85) = .67, p < .05$. Mean scores, however, indicate that Group 3 perceives the greatest work demand, while Group 1 perceives the least. Findings are presented in Table 19.

Table 19 Means for the main effect of SOC on the perception of work demands

SOC Group	Mean	Standard Error
83-116	17.583	1.31
117-157	18.23	.53
158-189	19.54	1.16

The results show no significant main effect for SOC on the perception of time pressures $F(2,85) = .64, p < .05$. The strength of the individuals SOC may therefore not be a contributing factor to how they perceive time pressures at work.

A significant main effect was found for SOC on the perception of career rewards $F(2,88) = 3.49, p < .05$. Significant differences were found between Group 1 and Group 2, as well as Group 1 and Group 3. Mean scores are presented in Table 20.

Table 20 Mean scores for career rewards

SOC Group	Mean	Standard Error
83-116	12.96	1.18
117-157	16.97	.49
158-189	16.89	1.48

It is further evident from Figure 5 that Group 1 and Group 3 vary in their perception of career rewards.

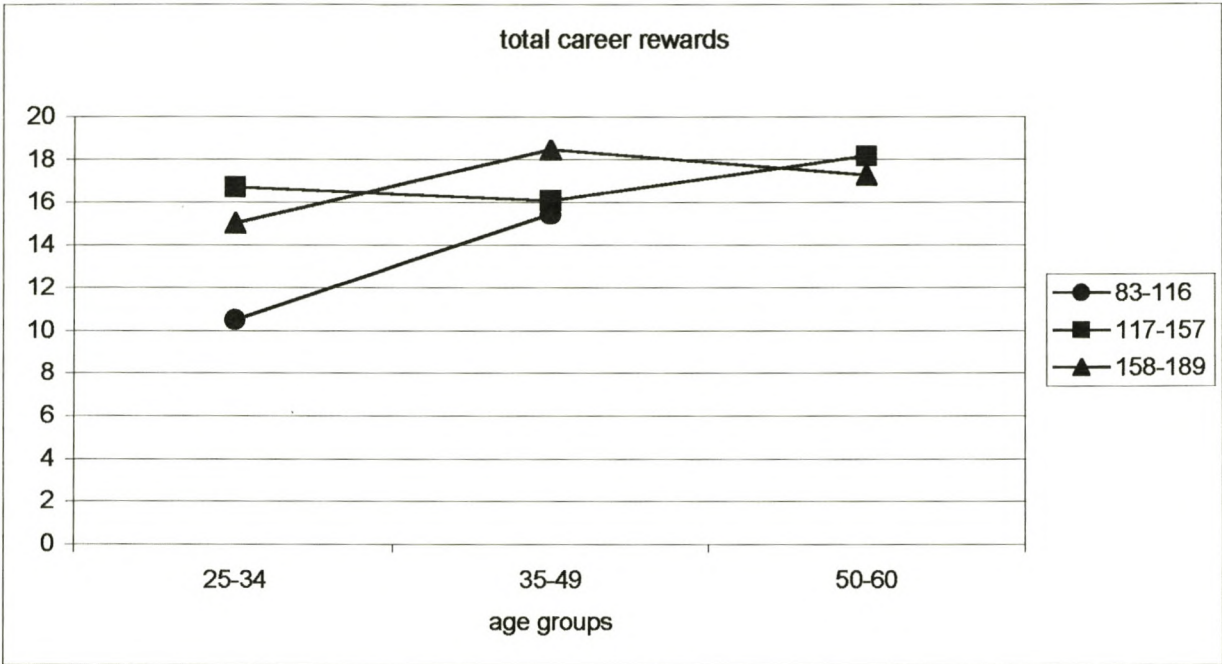


Figure 5 Main effect of SOC on the perception of career rewards

No significant main effect was found for SOC on the perception of adverse factors in the work environment $F(2.85) = .94, p < .05$. Findings presented in Table 21 indicate that Group 1 and Group 3 believe that their work environment has less adverse factors than Group 2.

Table 21 Means scores for the main effect of SOC on the perception of adverse factors in the work environment

SOC Group	Mean	Standard Deviation
83-116	23.82	5.95
117-157	24.82	7.60
158-189	22.67	9.59

Hypothesis 15

A statistical significant interaction effect exists between SOC and age on perception of a selected number of work characteristics.

No significant interaction effect exists between SOC and age on the perception of organisational climate $F(3,88) = .52, p < .05$. The mean scores for the interaction effect between SOC and age on perception of organisational climate do not differ from each other significantly. Table 22 presents the means for the interaction effect of SOC and age on the perception of organisational climate.

Table 22 Means of the interaction effect between SOC and age on organisational climate

SOC Group	Age	Mean	Standard Error
83-116	25-34	23.75	2.43
	35-49	21.00	1.84
	50-60	.	.
117-157	25-34	23.308	1.35
	35-49	24.32	.77
	50-60	22.55	1.09
158-189	25-34	26.00	4.87
	35-49	24.71	1.84
	50-60	25.00	2.43

No significant interaction effect was found between SOC and age on the perception of :

- influence at work $F(3,88) = 1.20, p < .05$;
- leadership relations $F(3,88) = .171, p < .05$;
- work demand $F(3,88) = 1.74, p < .05$;
- time pressures $F(3,88) = .218, p < .05$;
- career reward $F(3,88) = 1.97, p < .05$;
- adverse factors in the work environment $F(3,88) = .56, p < .05$.

The interaction effect between SOC and age generally do not influence subjects' perceptions of the above listed work characteristics.

Hypothesis 16

A statistical significant interaction effect exists between SOC and education on perception of a selected number of work characteristics.

Contrary to hypothesis 16, findings indicate that no significant interaction effect exists between SOC and education level on the perception of the following work characteristics:

- organisational climate $F(5,85) = 1.71, p < .05$.
- leadership relations $F(5,85) = 1.39, p < .05$;
- Influence at work $F(5,85) = .59, p < .05$;
- work demand $F(5,85) = 1.28, p < .05$;
- time pressures $F(5,85) = .93, p < .05$;
- career rewards $F(5,85) = .51, p < .05$;
- adverse factors in the work environment $F(5,85) = 1.31, p < .05$.

The interaction effect between the above variables therefore do not significantly influence their perception of the above work characteristics.

3 SUMMARY

The objective of the study was to investigate the relationship between SOC and occupational well-being. In addition to this it aimed to investigate whether SOC has a

main/ interaction effect on well-being and the perception of the seven work characteristics.

Pearson moment correlation and two-way ANOVA were used to analyse the data collected. Three SOC groups were used in the two-way ANOVAs to investigate the hypotheses set out in chapter three.

The following is a summary of the findings:

H1: A significant correlation was found between SOC scores and psychosomatic symptoms.

H2: A significant negative correlation was found between SOC and burnout frequency.

H3: No significant relationship exists between SOC and burnout intensity.

H4: A significant relationship was found between SOC and work demands; and SOC and career rewards. No significant relationship was found between organisational climate, leadership relations, influence at work, time pressures and adverse factors in the work environment.

H5: No significant main effect exists in respect of SOC on psychosomatic strain symptoms.

H6: No significant interaction effect exists between SOC and age on psychosomatic strain symptoms.

H7: No significant interaction effect exists between SOC and education on psychosomatic strain symptoms.

H8: A significant main effect exists for SOC on burnout frequency.

H9: No significant interaction effect exists between SOC and age on burnout frequency.

H10: No significant interaction effect exists between SOC and education on burnout intensity.

H11: No significant interaction effect exists between SOC and education level on burnout frequency.

H12: No significant interaction effect exists between SOC and age on burnout intensity.

H13: A significant interaction effect for SOC and education was found on burnout intensity.

H14: No significant main exists of SOC on the perception of the following work characteristics:

- organisational climate
- time pressures
- work demands
- adverse factors in the work environment

A significant main effect exists for SOC on the perception of the following work characteristics:

- leadership relations
- influence at work

- career rewards

H15: No significant interaction effect exists between SOC and age on the perception of the following work characteristics: organisational climate, influence at work, work demand, time pressures, career rewards, leadership relations and adverse factors in the work environment.

H16: No significant interaction effect exists for SOC and education level on the perception of: organisational climate, influence at work, work demand, time pressures, career rewards, leadership relations and adverse factors in the work environment.

CHAPTER 5

DISCUSSION

1 INTRODUCTION

Evidence relating SOC to well-being comes from life-stress literature, whereas the possible health role of SOC in the work context has received less attention. In the work context an important question is the extent to which differences in work characteristics cause differences in SOC, and how these differences may affect the quality of individuals' health outcomes (Feldt, Leskinen, Kinnunen & Ruoppila, 2000).

After considering the research question stated in chapter one in respect of why some Black nurses cope better than others even though they experience similar non-occupational and occupational stressors, using salutogenesis as a point of departure, the following objectives were determined. The research firstly aimed to investigate the relationship of SOC to well-being. Secondly, it aimed to investigate more in particular, the effect that SOC has on the well-being of Black nurses. Two measures of well-being were used, viz. burnout and strain. The third objective was to investigate whether SOC has a main/interaction effect on the perception of a number of work characteristics. The findings of the study are discussed in this chapter in relation to previous research findings.

2 SOC AND OCCUPATIONAL WELL-BEING

2.1 Relationship of SOC with psychosomatic strain symptoms and burnout

In line with this study's expectations, results revealed that those nurses who had higher SOC scores experienced less psychosomatic strain symptoms than those nurses with the lower SOC scores did. Findings also indicate that nurses with a higher SOC experience less burnout than those nurses with a lower SOC. (See Table 7 in Chapter 4). Both these findings supported the results obtained by Feldt (1997) and Flannery and Flannery (1990).

This finding can be explained according to the general, well-validated model of the process of occupational stress, the Michigan Model. According to this model exposure to objective stressors influences subjective perceptions of them (Kivimaki et al., 1998). These perceptions, in turn, partly give rise to psychological and physiological symptoms of strain (Kivimaki et al., 1998; Nowack, 1991; Tetrick & La Rocco, 1987; Wolman, 1988).

Bishop (1993) indicates that people's general orientation towards life plays a significant role in the stress-illness relationship. SOC as a personality factor is therefore associated with interpersonal differences in vulnerability to occupational stress (Kivimaki et al., 1998), since it is a global orientation which affects the individual's perception of his/her environment (occupational or non-occupational) in terms of manageability, comprehensibility and meaningfulness. The difference lies, as previous studies indicate, in that a strong SOC appears to be associated with

subjective well-being, while a weak SOC is related to anxiety and distress (Antonovsky & Sagy, 1986; Flannery & Flannery, 1990; Kalimo & Vuorie, 1990). The results of this study confirm this phenomenon.

2.2 The relationship between SOC and the perception of a selected number of work characteristics

Kalimo and Vuorie, cited in Kivimaki et al. (1998), found that the possibility exists that SOC influences the stressors perceived at work. However, evidence for this assumption is not firm because adequate longitudinal studies are lacking.

The findings of this study indicate that significant relationships exist between SOC and the perception of work demands and career rewards. A stronger SOC may therefore be associated with the perception of more career rewards, as well as increases in work demands. In this study work demands refer to: constant self-development, opportunities for change, development of new skills and the degree of monotony of work. It is for this reason that an individual with a stronger SOC could prefer or cope better with more work demands. They are more likely to perceive them as challenges, as opposed to threats.

No significant relationship was found between SOC and their perception of organisational climate, leadership relations, influence at work, time pressures and adverse factors in the work environment. This finding may suggest that the strength of the nurses SOC does not influence their perception of these work characteristics

as was hypothesised in Chapter four. Further possible explanations for this result may be the following:

- they work with numerous hospital members (employees) regardless of the conflict which may exist between various staff members,
- they may all have a similar level of independent decision making and autonomy, bearing in mind they have to work closely with physicians,
- they have to cope daily with time pressures to ensure patients are cared for because of limited resources (understaffing).

3 MAIN EFFECTS OF SOC

3.1 Psychosomatic strain symptoms

Results in this study indicated that there was no significant main effect for SOC on strain (experiences of psychosomatic symptoms). The three SOC sub-groups of the study did not differ significantly from each other in their experiences of psychosomatic symptoms. This finding is, however, not consistent with that of Feldt (1997) who found that SOC has a main effect on strain; individuals with a stronger SOC experience less strain than those with a weaker SOC.

A possible explanation for the lack of association in this study may be due to methodological reasons. The sample size may not be large enough to detect significant main effect relationships. As a result, although differences were found between SOC sub-groups, with those with a weaker SOC experiencing more

psychosomatic strain than those with a stronger SOC, these findings were not significant.

3.2 Burnout

A significant main effect was found between SOC and experiences of burnout frequency. This finding supports that of Bishop (1993). However, no significant main effect was found between SOC and experiences of burnout intensity. Higher SOC scores amongst nurses may therefore be associated with less burnout frequency. It could further be argued that nurses with a stronger SOC, are able to cope better with the stressors inherent in the nursing role than those with a weaker SOC.

An inability of this study to produce a significant main effect for SOC on burnout intensity may be due to two reasons: (a) as mentioned above, the small sample size results in small sub-groups, and (b) it may be more difficult to provide a measure of the intensity of burnout experienced as opposed to the frequency of its occurrence.

3.3 Perception of work characteristics

Strümpfer (1990) found SOC plays a role in affecting the overall quality of perception of stimuli, whereas, Kalimo and Vuorie (1991) found SOC to influence the way stressors are perceived at work. It was found that the stronger the SOC, the weaker the associations between time pressure and adverse factors in the work environment. No association was however found for leadership relations and SOC in their study. It is also expected that a high level of work demands are related to well-being problems

in low SOC groups, while it is a health promoting factor in individuals with a higher SOC (Feldt, 1997).

Contrary to these findings, this study, however, found no significant main effect for SOC on the perception of organisational climate, time pressures, work demands and adverse factors in the work environment. Whether an individual has a higher or lower SOC does not significantly affect their perception of these work characteristics.

One possible reason for this may be found in methodological difficulties as stated above (small sample size resulting in small sub-groups). Another reason might be that, regardless of the strength of their SOC, South African hospitals generally provide a work situation where they work long hours, nursing staff is seen as playing an inferior role to that of doctors (Levert et al., 2000) and work demands may be similar in most hospital settings.

A significant main effect was, however, found for SOC and leadership relations, influence at work and career rewards. These findings support those of Kalimo and Vuorie (1991) and Vuorie (1994). Vuorie (1994) found that a strong SOC was related to perceptions of support and influence at work. These findings however, vary from Feldt et al. (2000), who found that influence at work had no relation to SOC, but was rather directly related to well-being.

Vuorie's (1994) findings may be explained as follows: individuals with a strong SOC are more likely to perceive support at work as a GRR, while influence at work (degree of independent decision making, autonomy) may influence the degree to which they find their job meaningful and manageable. Feldt's (2000) findings may on the other hand be explained in terms of an individual's ability to believe in his/her ability to cope with stressors and this in turn may decrease his/her strain and emotional exhaustion experienced.

Significant main effect differences were found for leadership relations between group one and group two, and group one and group three. Nurses therefore with higher SOC scores tend to believe that there are good leadership relations at work; that those in management work closely with staff, have open discussions with staff about hospital matters, provide continuous feedback and encourage staff development. Nurses with a lower SOC believe that management staff in hospitals make all the decisions, and provide no feedback about staff performance.

This in turn may impact on the burnout intensity experienced by nurses. Nurses with higher SOC scores tend to perceive positive leadership relations. Whereas nurses with a weaker SOC tend to perceive leadership relations less positively and may therefore suffer from burnout. Literature often indicated that burnout in human services may be the result of the lack of support received (Bakker et al., 2000; Landsbergis, 1988; Schutte et al., 2000).

A significant main effect was also found for SOC and influence at work. Significant differences were between group one and group two. Findings suggest that subjects in group two believe that they are allowed to make independent decisions and are given a certain degree of autonomy. In comparison, nurses in group one believe their work is more controlled and they are unable to extend any influence over work matters. Although nurses in group three did not differ significantly from group one, findings may suggest that the nurses in group three are more likely to believe that they have influence over their work than nurses in group one. This finding supports that of Vuorie (1994) where it was found that a stronger SOC is related to perceptions of support and influence at work.

Findings of the study suggest that SOC has a main effect on the nurses' perceptions of their career rewards. The significant differences were found between group one and group two, as well as between group one and group three. An increase in SOC is therefore associated with perceived increases in their career rewards. Nurses with a higher SOC therefore believe that work experience would influence salary and result in increased responsibility, increased appreciation and career advancement, whereas nurses with a lower SOC may believe that work experience does not influence salary, their degree of responsibility, appreciation by colleagues and career advancement.

4 INTERACTION EFFECTS OF SOC ON WELL-BEING

Findings indicate that there is no significant interaction effect between SOC and age on burnout frequency. This was also found to be true for the interaction effect between SOC and education on burnout frequency. These findings indicate that interaction effects between SOC and age, as well as SOC and education, do not significantly have an effect on the above mentioned well-being variables for the nurses. This finding was contrary to the expectations of the study, because increases in age result in increases in tenure and it was believed that this may place nurses in more favourable positions to be able to cope with stressors since they have an opportunity to reflect on past coping abilities. An explanation for the finding may be that if they already have a past where they were unable to cope with stressors they may believe they are unable to cope with present stressors.

A further explanation may be that helping people who experience major life problems constitutes a major challenge to many health care providers. Such work may be rewarding, for example when patients recover after being cared for (Maslach, cited in Bakker et al., 2000). Unfortunately, nurses may often be confronted with patients who do not follow advice, and who may even be manipulative. This situation often progresses into a chronic disequilibrium, where they feel they are giving more and receiving less from interaction with patients. Consequently, burnout is the response to the chronic stress of dealing with patients when they have problems (Bakker et. al., 2000).

Findings do indicate a significant interaction effect between SOC and education on burnout intensity. Differences were found between group one and group three. It is evident that group two experiences an increase with burnout intensity when their education level increases (diploma and degree). In the case of group one and group three an increase in education level indicates a decrease in burnout intensity experience. Burnout intensity decreases as a result of the interaction effect between SOC and education in group three. These findings suggest that self development and constant learning could be seen as salutary by them, as was the case with work demands and high SOC scores in Feldt (1997). The reason for the reduction in burnout intensity in group one, with higher education levels, remains unclear.

On the one hand, it may be more difficult to give an indication of intensity of a feeling, as opposed to the frequency of an occurrence. On the other hand, the reduction in burnout intensity with increases in education level may be due to a possible sensitization for the management of stress during their tertiary education years that are beneficial in the hospital setting, since, according to Feldt (2000), individuals with a weaker SOC tend to be inflexible in selecting coping strategies.

In Feldt, Kinnunen and Mauno (2000), none of the background variables (education, age and gender) in the study were found to be directly related to SOC or well-being. In this study a significant positive correlation was, however, found for SOC by age. This indicates that increases in their SOC scores are associated with an increase in age. It was further found that no nurses from the age group 50-60 had a weak SOC,

that is, form part of group 1. This finding is in support of Anstey (1989), Antonovsky and Sagy (1986) and Smith and Meyers (1997) who found an increase in SOC is associated with an increase in age.

Three reasons may underlie this finding: Firstly, it may be due to the fact that when an individual enters young adulthood, the individual has only acquired a tentative level of SOC. It is only after age 30, that SOC is expected to remain relatively stable since their lifestyle and social roles are already established. This produces an individual with a stable set of life experiences which enables SOC to become established.

Secondly, according to Mercer (1989), women's integrity of coping effectiveness increases with age. The source or reason for an increase in coping effectiveness, according to Mercer (1989), is still a matter of speculation. A possible answer to this phenomenon, is that an increase in SOC is associated with the increase in age. An individual with a stronger SOC reports higher levels of perceived coping resources (McSherry & Holm, 1994), and uses these resources (Vuori, 1994). This in turn places them in a more favourable position to cope effectively with perceived stressors.

Thirdly, Anstey (1989) also found higher levels of SOC with associated increase in age. According to Anstey (1989), this may be as result of a phenomenon referred to as the survivor hypothesis: older employees with a weak SOC may have already left

the organisation. This may be due to their inability to cope in the stressful hospital environment.

5 INTERACTION EFFECTS OF SOC ON THE PERCEPTION OF WORK CHARACTERISTICS

5.1 SOC and age interaction effect

Present findings found no significant interaction effect for SOC and age on the nurses' perception of organisational climate. Despite this lack of statistical significance, group three still had the highest scores for organisational climate. This indicates that those nurses in group three are more likely to perceive good organisational relations (i.e. colleagues willing to help, constructive group work and shared information).

Because findings are not significant, one could also say that the interaction effect between SOC and age does not significantly affect their perception of the organisational climate. However, it may also indicate that the objective reality of hospitals is that they may have similar organisational climates.

Contrary to expectation, there was no significant interaction effect between SOC and age on the perception of leadership relations, influence at work, time pressures, work demands, career rewards and adverse factors in the work environment. This interaction effect may therefore have an insignificant effect on:

- the perceived degree of autonomy,
- the extent of work demands (self-development),
- levels of time pressure due to changes in schedules
- whether their job experience has an effect on rewards
- the kind of physical environment in which they work (whether hospitals are crowded, noisy, have good lighting, ventilation and whether it offers a pleasant working environment).

5.2 Interaction effect of SOC and education on the perception of work characteristics

No significant interaction effect exists between SOC and educational level on organisational climate. No significant difference was found between the three different SOC groups and educational level on their perception of organisational climate. It was expected that a high educational level would strengthen the nurses' SOC, due to it being a GRR. This GRR may be used in the work environment and, via this route, influence their perception of organisational climate (Feldt et al., 2000).

Feldt et al. (2000) found education to have an indirect relationship with SOC through work characteristics. Less educated employees were on average older and perceived more negative changes in their organisational climate over the follow up period of Feldt's longitudinal study, than the higher educated younger employees. Changes in organisational climate, in turn, were related to changes in SOC. Antonovsky (1987) believed that comprehensibility at work is strengthened considerably when the work

environment enables an employee to see the organisation as a whole and his/her place in it. This fosters confidence and feelings of security, and supports communicability in social relations, consequently well-being is improved.

According to Antonovsky (1987), leadership relations are one of the work characteristics which include elements that are important in an individual's SOC level. Feldt et al. (2000) found those employees with a higher education level perceived their relations with the leadership better than those with lower education. This study found no significant interaction effect between SOC and education level on the perception of leadership relations. Findings indicate that the interaction effect between SOC and education level may not significantly affect perception of the extent to which:

- managers and staff work closely together
- staff receive feedback
- open discussions take place
- the leader makes all the decisions.

The interaction effect between SOC and education level was found not to affect the perception of time pressures at work. Regardless of SOC or education level, there appears to be no significant difference in their perception of work schedules, changes in stress levels and the time given to find solutions to problems.

Findings further suggest that no significant interaction effect between SOC and education level exists on work demands, career rewards and adverse factors in the work environment. SOC by education level therefore does not significantly affect their perception of the prevalence of work demands, whether their work experience influences career rewards and the degree to which adverse factors in their physical work environment affect their job.

Failure to produce results at a significant level may be the result of the distribution of the education level within the sample, since, as stated in Chapter 2, not all Black nurses had access to various facilities. Distribution of education level may not therefore be even, although it was expected that older nurses may have lower educational levels of qualification than those who are younger because of the changes made within the political arena.

6 SUMMARY

Findings indicate that nurses with a stronger SOC experience less psychosomatic strain symptoms than those nurses with a weaker SOC. Results further revealed that nurses with a higher SOC experience less burnout than those nurses with a lower SOC.

Present findings also indicate that significant positive relationships exist between SOC and their perception of work demands and career rewards. A stronger SOC

may therefore be associated with the perception of more career rewards and an increase in work demands.

No significant relationship was found between SOC and their perception of:

- organisational climate
- leadership relations
- influence at work
- time pressures
- adverse factors in the work environment

This finding may suggest that the strength of the nurses' SOC does not influence their perception of these work characteristics.

Results in this study found there was no significant main effect for SOC on psychosomatic strain. This finding was not consistent with that found by Feldt (1997).

A significant main effect was found between SOC and experiences of burnout frequency. However, no significant main effect was found between SOC and burnout intensity experienced.

Contrary to previous findings, this study found no significant main effect for SOC and organisational climate, time pressures, work demands and adverse factors in the work environment. A significant main effect was however found for SOC on the perception of leadership relations, influence at work and career rewards.

Findings indicate that there is no significant interaction effect between SOC and age on burnout frequency. This was also found to be true for the interaction effect between SOC and education level on burnout frequency.

Significant interaction effects were found between SOC and education level on burnout intensity.

The findings suggest that no significant interaction effect exists for SOC and age on the nurses' perceptions of organisational climate. Contrary to expectation there was no significant interaction effect between SOC and age on the perception of leadership relations, influence at work, time pressures, work demands, career rewards and adverse factors in the work environment.

On the basis of the findings of the study, no interaction effect exists between SOC and education level on organisational climate, leadership relations, time pressures, work demands, career rewards and adverse factors in the work environment.

In Chapter 6, the limitations, future research options, and implications of this study are discussed.

CHAPTER 6

CONCLUSIONS AND IMPLICATIONS

1 INTRODUCTION

1.1 Overview

1.1.1 Research problem

Many Black nurses who originally come from previously disadvantaged communities find themselves at present in relatively senior positions. The reality is, however, that many of these employees are still residing in residential areas where the transformation and changes are still very limited and progress hardly noticeable. Such employees experience the (stressful) world of nursing on the one hand while they also have to battle with the realities of the legacy of Apartheid. These may include aspects such as financial burdens, long distances from work, poor public transport, high crime rates in their communities and schools that are yet to improve standards.

There are still Black South Africans amongst them Black nursing sisters, who have to battle with these problems daily because of the gradual change process, in addition to occupational stressors. One would assume then that they may be experiencing a large degree of strain and burnout.

This research was therefore concerned with those nurses who remain productive and efficient in their work by overcoming constant occupational and non-occupational

demands and stressors. Not all nurses, however, experience ill health due to stressors; there are nurses who do cope well.

Two research questions were investigated with reference to the above: (a) Why some Black nursing sisters appear to cope better than others and (b) what the role of Sense of Coherence (SOC) is as a coping resource.

1.1.2 Analysis

The study therefore investigated the statistical relationship, using Pearson Product Moment Correlation and ANOVAs, between (a) SOC and well-being and (b) the effect that SOC has on the perception of a selected number of work characteristics.

1.1.3 Findings

The following is a summary of the findings:

H1: A significant correlation was found between SOC scores and psychosomatic symptoms.

H2: A significant negative correlation was found between SOC and burnout frequency.

H3: No significant relationship exists between SOC and burnout intensity.

H4: A significant relationship was found between SOC and work demands; and SOC and career rewards. No significant relationship was found between organisational climate, leadership relations, influence at work, time pressures and adverse factors in the work environment.

H5: No significant main effect exists in respect of SOC on psychosomatic strain symptoms.

H6: No significant interaction effect exists between SOC and age on psychosomatic strain symptoms.

H7: No significant interaction effect exists between SOC and education on psychosomatic strain symptoms.

H8: A significant main effect exists for SOC on burnout frequency.

H9: No significant interaction effect exists between SOC and age on burnout frequency.

H10: No significant interaction effect exists between SOC and education on burnout intensity.

H11: No significant interaction effect exists between SOC and education level on burnout frequency.

H12: No significant interaction effect exists between SOC and age on burnout intensity.

H13: A significant interaction effect for SOC and education was found on burnout intensity.

H14: No significant main effect exists of SOC on the perception of the following work characteristics:

- organisational climate
- time pressures
- work demands
- adverse factors in the work environment

A significant main effect exists for SOC on the perception of the following work characteristics:

- leadership relations
- influence at work
- career rewards

H15: No significant interaction effect exists between SOC and age on the perception of the following work characteristics: organisational climate, influence at work, work demand, time pressures, career rewards, leadership relations and adverse factors in the work environment.

H16: No significant interaction effect exists for SOC and education level on the perception of: organisational climate, influence at work, work demand, time pressures, career rewards, leadership relations and adverse factors in the work environment.

The results thus indicate that SOC that a positive correlation exists between SOC and well-being.

The remainder of this chapter includes a discussion of the limitations, implications for present and future practices and suggestions for future research. It was, however, found that the limitations that were mentioned in the literature review related to SOC were difficult to overcome in this study due to various characteristics of this study, for example, the time frame and sample size. The study does, however, make a contribution to the research on SOC, and work characteristic, since, as indicated in Feldt (2000), this area requires further empirical exploration.

2 LIMITATIONS

2.1 Sample

Although the sample characteristics were originally chosen because there was a need for research on Black females in South Africa, these sample characteristics were found to be problematic in that the population chosen was small. This then in turn resulted in a small sample size, impacting on the generalisability of the findings as well as the statistical methods used in the analysis (Nixon, 1995). Firstly, in using Pearson Correlation, one is restricted to find either positive or negative relationships existing between the variables. Causality cannot be inferred from correlational techniques. Secondly, due to sample size, group 1 (83-116) and group 3 (158-189) were much smaller than group 2 (117-157). It may be that, in respect of the ANOVAs, effects of independent variables could have been found significant if the number of subjects in the SOC group 1 and group 3 were larger, with possibly the same number of subjects in each group. The ANOVA does, however, allow comparisons between the 3 SOC groups and an investigation of main and interaction effects of SOC on well-being and work characteristics.

The sample comprised of Black females only, making it difficult to generalise to other minority groups such as white females or the physically disabled. More research should be conducted on other designated groups in South Africa that may be facing similar stressors in the workplace. A further suggestion would be to encourage comparative research studies (Stewart, 1991) on the role that SOC plays in well-being, for example,

Black and White females, or disabled and non-disabled groups who occupy the same position (lateral) in an organisation and their perception of work characteristics. Research on physically challenged employees could be interesting. However, once again, sample size may be a problem which may later impact on research analysis.

2.2 Data collection

All the data were gathered simultaneously, since it is impractical to obtain data at more than one point in time (Strümpfer & Bands, 1996). Respondents may tire of answering questions, which in turn compromise accuracy of the information they provide. An attempt was made to reduce the impact of tiredness on responses by allowing them to do so at their own pace (a seven day period was given).

2.3 Questionnaire responses

Response to questionnaires relies on the participant's ability to recall the information accurately about the previous 12 months. They may only have been able to recall information which they perceive to be significant, or of significance to the research. Since they are not completely aware of the objectives of the study they are not in a position to make such judgements without affecting the research results.

Individuals too, might answer questionnaires in a manner that they feel would place them in a more favourable light, especially the Orientation to Life Questionnaire. This is the case, however, with many personality tests. To minimise the impact of such

behaviour, the researcher ensured confidentiality and anonymity to the respondents. This was done with the hope of reducing dishonesty in questionnaire completion.

Only English measuring instruments were used in this study. Considering that this sample was Black (African, Coloured and Indian), it may have placed those participants whose first language (those with Afrikaans or Xhosa as a first language) was not English, at a disadvantage. Future researchers should consider translating instruments into other official languages as well to ensure that they are clear and easy for participants to understand. However, this could be time consuming since they have to ensure translations are accurate. If the translations were not accurate, this in turn may affect the reliability and validity of the measuring instrument.

Incumbents were asked to rate their job on the basis of their own internal frame of reference. This frame of reference is likely to be quite idiosyncratic. Subjects may compare their own job with other similar jobs they have had, with jobs others have, or with some internal standard (Spector & Jex, 1991). This may lead them to either overstate or understate certain work characteristics they experience. For example, their work conditions may not be bad, but in relation to other work environments they may not have certain conveniences, resulting in their concluding that their work environment is bad. This may be one of the reasons that respondents' views of their environment varies to a greater or lesser extent.

One of the major conceptual and methodological problems which pervades studies of task and job effects on behaviour has to do with the differences between task materials as they exist in objective reality and as they are perceived by individual performers. Tasks and jobs are invariably redefined by the individuals who perform them, sometimes deliberately and sometimes without full awareness by the performers of the changes that are being made. Further, it is the redefined task rather than the objective task the individual tries to perform, and only those aspects of tasks or jobs which are actually perceived or experienced by a performer can have an impact on his performance and attitudes (Hackman & Lawler, 1971). It is therefore the redefined task that the individual will use as a frame of reference when filling out the questionnaire. This, however, is not much of a concern to this study since one is interested in their perceptions of their work environment and whether these have a significant effect on the relationship to their SOC scores.

Although this research design replicated that of Feldt (1997) to a large extent, it varies from hers with regard to sample size, sample demographics, occupation, means of measurement, and statistical analyses. Caution should therefore be exercised when comparing the results of Feldt's (1997) research and the findings of this study. However, this research does make a valuable contribution to information on the SOC construct and perception of work characteristics in Black female populations.

3 FUTURE RESEARCH

3.1 Main/Interaction effect

An option for future research would be to continue to attempt to clarify whether SOC has a main/interaction effect on well-being and perception of work characteristics. This could be done using a much larger sample size than was used in this study.

3.2 The relationship between education level and SOC

Further clarity on the relationship between education level and SOC is also required. Feldt et al., (2000) found education level to decrease as the age of the respondents increased, and that individuals with a higher education level perceived their leadership relations to be better than those with a lower level of education. Although this study could not detect a relationship between SOC and education level, a higher education level is associated with a stronger SOC. It could further be hypothesised that education level may provide both a theoretical and a practical resource to refer to throughout their career. This in turn may contribute to their ability to manage, comprehend their work and possibly find it more meaningful.

3.3 Inclusion of non-occupational stressors

Occupational research in South Africa may contribute to the present understanding of the role of SOC by covering a larger range of stressors. Additional stressors may include, e.g. qualitative and quantitative overload, goal and process clarity, and job security. To achieve a more complete picture, nonoccupational stressors may also be

included in the analysis. This would make it easier to control the spillover from home and leisure time to work, that is, the influence of nonoccupational stressors on the process of occupational stress (Kivimaki et al., 1998).

3.4 Coping with organisational change

Future research should further focus on the relation between SOC, locus of control, job performance, and psychological strengths and coping with organisational change (Geyser & Theron, 2000). This research would be particularly interesting in the South African context where organisations' structures and work force demographics are dramatically changing. Individuals are forced to cope with restructuring, outsourcing, sudden unemployment and facing the constant uncertainty of the South African labour market.

3.5 Longitudinal research design

Longitudinal research designs are another avenue for augmenting the understanding of the role of SOC in the process of stress. Firstly, cross-sectional studies imply that the variation of SOC and stress processes have reached a state in which all variables have stabilised. This may be the case with chronic stressors and in the case of SOC a stable personality trait (Kivimaki et al., 1998). Secondly, cross-sectional analysis does not clarify the causal relations among the variables (Feldt, 1997).

4 IMPLICATIONS FOR PRESENT AND FUTURE PRACTICES

4.1 Selection and placement

Organisations may find that the Orientation to Life Questionnaire is a short, effective measure of an individual's ability to cope in the organisational environment based on their perception of the manageability, meaningfulness and comprehensibility of their life. It may therefore serve as a selection. In addition to the selection of the individuals they may also use an employee's SOC score, in conjunction with other selection methods, to make decisions with regard to promotions.

4.2 Connection between SOC, work characteristics and well-being

Information obtained using this questionnaire would prove helpful to employees, management and unions, if findings of a study like this one are presented in a way that is easily understood by these parties. Information should convey the importance of the connection between SOC, work characteristics and their effect on well-being.

4.3 Influence of organisation on employees

Well-being in the work-place can be enhanced if there is an understanding of the ways in which psychosocial work characteristics shape employees' SOC, and thus their well-being at work. Those who are responsible for employees' psychosocial welfare in the workplace should pay particular attention to ensuring a good organisational climate which enhances an employee's SOC and well-being at work (Feldt, 2000).

Organisations can therefore contribute to the development of a worker's SOC by providing information to him/her in a consistent, structured, ordered and desirable format. By equipping the worker with the necessary knowledge, skills, material, instruments and other resources, the organisation can make a further contribution to the development of the worker's SOC (Geyser & Theron, 2000).

5 SUMMARY

This study aimed to investigate why some Black Nurses cope better than others and remain well, even though they experience a similar range of stressors. Findings indicated, after collection and analyses of the data, that a stronger SOC does contribute to positive well-being in Black nurses.

It has also been suggested in previous research that SOC contributes to an individual's subjective perception of occupational and non - occupational stressors. This study supported this phenomenon to a large extent.

Finally, limitations found to affect the study, amongst others, referred to in the final chapter, are the sample size, and collection of data at one point in time. These limitations are not, however, unique to this study only. From this investigation and consideration of previous research in the area of SOC, well-being and work characteristics, suggestions are made for future research. Lastly, the implications of the findings for organisations are discussed.

The well-being of all employees in South Africa needs to be addressed at all times. The role of a salutogenesis perspective and, more particularly, SOC, has become a powerful theoretical framework for behavioural research as the results of this study indicate.

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APPENDIX A

Dear Respondent

I am a Master's student in Industrial Psychology at the University of Stellenbosch and am currently conducting research on Stress Management amongst nursing sisters. The nursing profession and in particular that of nursing sisters by virtue of their responsibility level as well as the apparent stress levels of their roles, qualify in all respects for participation in this research.

It would be appreciated if you could assist me with my research by completing this questionnaire. Please read the instructions carefully before attempting to complete these. Questionnaires are completed anonymously and your responses will be treated confidentially.

On completion of the questionnaire, please seal it in the envelope provided.

Thanking you in advance for the time you have taken to respond to the questionnaires. If you are interested in the findings, a summary will be made available at your hospital.

Kind Regards

Cindylou Belelie

Ph: (021) 705-2060

e-mail: jimmi@icon.co

PART 1

1. Gender Male/Female
2. Age_____
3. Place of Birth_____
4. Home Language_____
5. Other Languages Spoken_____
6. Highest educational qualification:_____
7. Institution where qualification (as indicated in 6) was
obtained:_____
8. Present Position:_____
9. Number of years and months in this position:_____
10. Approximate number of subordinates that report to you
directly:_____

PART 2

Indicate the degree to which you have experienced each of the following symptoms during the previous 12 months by marking it with an X.

1. Heartburn, upset stomach or recurrent diarrhea

0	1	2	3
not at all	a little	quite a bit	extremely

2. Headaches

0	1	2	3
not at all	a little	quite a bit	extremely

3. Loss of appetite

0	1	2	3
not at all	a little	quite a bit	extremely

4. Dizzy spells

0	1	2	3
not at all	a little	quite a bit	extremely

5. Nervousness

0	1	2	3
not at all	a little	quite a bit	extremely

6. Shortness of breath

0	1	2	3
not at all	a little	quite a bit	extremely

7. Trouble sleeping

0	1	2	3
not at all	a little	quite a bit	extremely

8. Irregular heartbeats

0	1	2	3
not at all	a little	quite a bit	extremely

9. Anxiety attacks

0	1	2	3
not at all	a little	quite a bit	extremely

10. Inability to concentrate

0	1	2	3
not at all	a little	quite a bit	extremely

11. Sweaty palms

0	1	2	3
not at all	a little	quite a bit	extremely

12. Shaky hands

0	1	2	3
not at all	a little	quite a bit	extremely

13. Stiffness in back of neck

0	1	2	3
not at all	a little	quite a bit	extremely

14. Crying spells

0	1	2	3
not at all	a little	quite a bit	extremely

15. Hyperventilation

0	1	2	3
not at all	a little	quite a bit	extremely

16. Depression

0	1	2	3
not at all	a little	quite a bit	extremely

PART 3

Indicate the frequency and intensity with which you experience the following by placing the appropriate number in the box using the following scale. If you never experience the feeling or attitude please place a cross in the box marked 'never'.

FREQUENCY SCALE

X	1	2	3	4	5	6
Never	A few times year	Monthly	A few times a month	Every week	A few times a week	Every day

INTENSITY SCALE

X	1	2	3	4	5	6	7
Never	Very mild, barely noticeable			Moderate			Very strong, major

	Frequency	Intensity	Never
1. I feel emotionally drained from my work.	<input type="text"/>	<input type="text"/>	<input type="text"/>
2. I feel used up at the end of the workday.	<input type="text"/>	<input type="text"/>	<input type="text"/>
3. I feel fatigued when I get up in the morning and have to face another day on the job.	<input type="text"/>	<input type="text"/>	<input type="text"/>
4. Working with people all day is really a strain for me.	<input type="text"/>	<input type="text"/>	<input type="text"/>
5. I feel burned out from my work.	<input type="text"/>	<input type="text"/>	<input type="text"/>
6. I feel frustrated by my job.	<input type="text"/>	<input type="text"/>	<input type="text"/>
7. I feel I am working too hard on my job.	<input type="text"/>	<input type="text"/>	<input type="text"/>
8. Working with people directly puts too much stress on me.	<input type="text"/>	<input type="text"/>	<input type="text"/>
9. I feel like I'm at the end of my rope.	<input type="text"/>	<input type="text"/>	<input type="text"/>
10. I can easily understand how my subordinates feel about things.	<input type="text"/>	<input type="text"/>	<input type="text"/>
11. I deal very effectively with the problems of my subordinates.	<input type="text"/>	<input type="text"/>	<input type="text"/>

- | | | | |
|---|--------------------------|--------------------------|--------------------------|
| 12. I feel I'm positively influencing other people's lives through my work. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. I feel very energetic. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. I can easily create a relaxed atmosphere with my subordinates. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. I feel exhilarated after working closely with my subordinates. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. I have accomplished many worthwhile things in this job. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. In my work, I deal with emotional problems very calmly. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. I feel I treat some subordinates as if they were impersonal 'objects'. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 19. I've become more callous toward people since I took this job. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20. I worry that this job is hardening me emotionally. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 21. I don't really care what happens to some subordinates. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 22. I feel subordinates blame me for some of their problems. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 23. I feel similar to my recipients in many ways. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 24. I feel personally involved with my subordinates' problems. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 25. I feel uncomfortable about the way I have treated some subordinates. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

PART 4

Answer the following questions by making a clear X across the number that represent your true feelings.

1. When you talk to people, do you have the feeling that they don't understand you?

1	2	3	4	5	6	7
never have						always have
this feeling						this feeling

2. In the past, when you had to do something which depended upon cooperation with others, did you have the feeling that it:

1	2	3	4	5	6	7
surely wouldn't						surely would
get done						get done

3. Think of the people with whom you come into contact daily, aside from the ones to whom you feel closest. How well do you know most of them?

1	2	3	4	5	6	7
you feel that						you know them
they're strangers						very well

4. Do you have the feeling that you don't really care about what goes on around you?

1	2	3	4	5	6	7
very seldom						very often
or never						

5. Has it happened in the past that you were surprised by the behaviour of people whom you thought you knew well?

1	2	3	4	5	6	7
never						always
happened						happened

6. Has it happened that people whom you counted on disappointed you?

1	2	3	4	5	6	7
never						always
happened						happened

7. Life is:

1	2	3	4	5	6	7
full of						completely
interest						routine

8. Until now your life has had:

1	2	3	4	5	6	7
no clear goals or						very clear goals
purpose at all						and purpose

9. Do you have the feeling that you're being treated unfairly?

1	2	3	4	5	6	7
very often						very seldom
						or never

10. In the past ten years your life has been:

1	2	3	4	5	6	7
full of changes						completely
without you knowing						or never
what will						clear
happen next						

11. Most of the things you do in the future will probably be:

1	2	3	4	5	6	7
completely						deadly
fascinating						boring

12. Do you have the feeling that you are in an unfamiliar situation and don't know what to do?

1	2	3	4	5	6	7
very often						very seldom
						or never

13. What best describes how you see you life:

1	2	3	4	5	6	7
one can always						there is no
find a solution						solution to
to painful things						painful things
in life						in life

14. When you think about your life, you very often:

1	2	3	4	5	6	7
feel how good it						ask yourself why
is to be alive						you exist at all

15. When you face a difficult problem, the choice of a solution is:

1	2	3	4	5	6	7
always confusing						always completely
and hard to find						clear

16. Doing the things you do every day is:

1	2	3	4	5	6	7
a source of deep						source of pain
pleasure and						and boredom
satisfaction						

17. Your life in the future will probably be:

1	2	3	4	5	6	7
full of changes						completely
without you						consistant and
knowing what						clear
will happen						
next						

18. When something unpleasant happened in the past your tendency was:

1	2	3	4	5	6	7
"to eat yourself up" about it						to say "ok, that's that, I have to live with it," and go on

19. Do you have very mixed-up feelings and ideas?

1	2	3	4	5	6	7
very often						very seldom or never

20. When you do something that gives you a good feeling:

1	2	3	4	5	6	7
it's certain that you'll go on feeling good						it's certain that something will happen to spoil the feeling

21. Does it happen that you have feelings inside you would rather not feel?

1	2	3	4	5	6	7
very often						very seldom or never

22. You anticipate that your personal life in the future will be:

1	2	3	4	5	6	7
totally without meaning or purpose						full of meaning and purpose

23. Do you think that there will *always* be people whom you'll be able to count on in the future?

1	2	3	4	5	6	7
you're certain						you doubt
there will be						there will be

24. Does it happen that you have the feeling that you don't know exactly what's about to happen?

1	2	3	4	5	6	7
very often						very seldom
						or never

25. Many people- even those with a strong character- sometimes feel like sad sacks (losers) in certain situations. How often have you felt this way in the past?

1	2	3	4	5	6	7
never						very often

26. When something happened, have you generally found that:

1	2	3	4	5	6	7
you overesti-						you saw things
mated or under-						in the right
estimated its						proportion
importance						

27. When you think of difficulties you are likely to face in important aspects of your life, do you have the feeling that:

1	2	3	4	5	6	7
you will always						you won't succeed
succeed in over-						in overcoming
coming the						the difficulties
difficulties						

28. How often do you have the feeling that there's little meaning in the things you do in your daily life?

1	2	3	4	5	6	7
very often						very seldom or never

29. How often do you have feelings that you're not sure you can keep under control?

1	2	3	4	5	6	7
very often						very seldom or never

PART 5

Please answer the following questions to the best of your ability by making a clear X across the number that represent your true feelings.

1. ORGANISATIONAL CLIMATE

1. If there is conflict between colleagues, they keep it between themselves.

1	2	3	4	5
totally agree				totally disagree

2. Colleagues openly disagree.

1	2	3	4	5
totally agree				totally disagree

3. Colleagues are willing to help each other solve problems.

1	2	3	4	5
totally agree				totally disagree

4. Colleagues work constructively in groups.

1	2	3	4	5
totally agree				totally disagree

5. There is always a positive atmosphere in the workplace.

1	2	3	4	5
totally agree				totally disagree

6. Colleagues are competitive with each other.

1	2	3	4	5
totally agree			totally disagree	

7. Information is shared in the workplace.

1	2	3	4	5
totally agree			totally disagree	

2. LEADERSHIP RELATIONS

1. Your manager makes decisions on his/her own.

1	2	3	4	5
totally agree			totally disagree	

2. Your manager is passive and does not take part in workplace matters.

1	2	3	4	5
totally agree			totally disagree	

3. Your manager and staff work closely together.

1	2	3	4	5
totally agree			totally disagree	

4. Managers provide staff with good feedback about their work.

1	2	3	4	5
totally agree			totally disagree	

5. Managers have open discussions with staff.

1	2	3	4	5
totally agree			totally disagree	

6. Managers openly discuss matters related to the workplace.

1	2	3	4	5
totally agree			totally disagree	

7. Your manager encourages staff members to study and improve themselves.

1	2	3	4	5
totally agree			totally disagree	

3. INFLUENCE AT WORK

1. I can make decisions independently with regards to my work.

1	2	3	4	5
totally agree			totally disagree	

2. I have the opportunity to influence decision-making in the company.

1	2	3	4	5
totally agree			totally disagree	

3. I am in charge of a few staff members.

1	2	3	4	5
totally agree			totally disagree	

4. My work is so controlled and governed that I have no influence over it.

1	2	3	4	5
totally agree			totally disagree	

5. I can decide where and when I do my work.

1	2	3	4	5
totally agree			totally disagree	

6. My work allows me to develop ideas that I have.

1	2	3	4	5
totally agree			totally disagree	

7. Does your work allow you to make independent decisions?

1	2	3	4	5
not at all			very much	

8. Does your work provide you with autonomy?

1	2	3	4	5
totally agree			totally disagree	

4. WORK DEMANDS

1. Your work demands constant self-development.

1	2	3	4	5
seldom			constantly/always	

2. Your work requires you to constantly learn new 'things'.

1	2	3	4	5
not at all			very much	

3. Does your work offer you opportunities for change?

1	2	3	4	5
not at all			very much	

4. To what extent does your job offer you the possibility to develop your working skills?

1	2	3	4	5
not at all				very much

5. Does it influence your productivity if your work is monotonous?

1	2	3	4	5
not at all				very much

5. TIME PRESSURES

1. To what extent do work schedules affect your work?

1	2	3	4	5
not at all				very much

2. Has your stress level changed over the previous year because of work schedule changes?

1	2	3	4	5
stress has lessened				stress has increased

3. Because of time constraints I don't have enough time to find the best possible solutions to my work tasks.

1	2	3	4	5
not at all				very much

6. CAREER REWARDS

To what extent does the accumulation of experience in the job influence:

1. salary

1	2	3	4	5
not at all				very much

2. an increase in responsibility at work

1	2	3	4	5
not at all				very much

3. the variety of working tasks performed

1	2	3	4	5
not at all				very much

4. increased appreciation

1	2	3	4	5
not at all				very much

5. career advancement

1	2	3	4	5
not at all				very much

7. ADVERSE FACTORS IN THE WORK ENVIRONMENT

To what degree do the following factors affect your work:

1. Crowded working space

1	2	3	4	5
not at all				very much

2. Noise

1	2	3	4	5
not at all				very much

3. Poor sound proofing

1	2	3	4	5
not at all				very much

4. Poor lighting

1	2	3	4	5
not at all				very much

5. Insufficient/ ventilation

1	2	3	4	5
not at all				very much

6. Dust/dirt

1	2	3	4	5
not at all				very much

7. Restlessness

1	2	3	4	5
not at all				very much

8. Does your job offer you a pleasant working environment?

1	2	3	4	5
definitely				not at all