

**VOLUNTEER STRESS AND COPING IN HIV AND AIDS HOME-BASED CARE**

By

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### **Declaration**

I declare that Volunteer Stress and Coping in HIV and Aids home-based care is my own work, that it has not been submitted for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

Mosa Zephorah Moremi

February 2012

Signed .....

## **Acknowledgement**

I would like to extend my gratitude and appreciation to the following people without whom this study would not have been possible.

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## **Summary**

Volunteer caregivers provide essential services to people in the terminal stages of AIDS and their families. Volunteers are exposed to stress and burnout. This study investigated the relationships between stress, coping strategies, levels of burnout and resilience in this population. Volunteers from Societas 'O Sociale (SOS) Children Villages and community based organisation (CBO) partnerships, were selected using non-probability purposive convenience sampling. A total of 110 participants were given the Experience of Work and Life Circumstances Questionnaire (WLQ), Brief-Cope, Maslach's Burnout Inventory (MBI), a Resilience scale and the Living Standard Measure to complete. Statistical analyses were performed on the data. This includes descriptive statistics, reliability analysis, factor analysis, correlations and multivariate analysis of variance. The study found that volunteer caregivers experience high stress levels and burnout related to stressors outside work, remuneration, personnel policies and high resilience. High burnout is associated with all forms of coping. Further it is shown that training in problem-solving skills, counselling, government and public lobbying for support, registration with relevant professional bodies, furnished offices, reasonable recruitment requirements and compensation are needed to help the care givers avert the effect of stressors and control stress by stopping it from turning to burnout.

## **Key words**

Volunteers, care-giving, stress, coping, burnout, resilience, HIV, Aids

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**Acronyms used in the text:**

Aids	Acquired Immune Deficiency Syndrome
CBO	Community Based Organisation
FSP	Family Strengthening Programme
GAS	General Adaptation Syndrome
HASA	Hospice Association of South Africa
HIV	Human Immuno Deficiency
HWSETA	Health and welfare Sector Education and training authority
IAVE	International Association of Volunteer Effort
LSM	Living Standard Measure
MDG	Millennium Developmental Goals
NGO	Non-Government Organizations
PLWHA	People Living with HIV and Aids
SAARF	South African Advertising Research Foundation
SU-LSM	SAARF Universal Living Standards Measure
SOS	Societas 'O Sociale
SOS CV	SOS Children's Villages
UNAIDS	United Nations Programme on HIV/AIDS
USAID	United States Agency for International Development (USAID)
WHO	World Health Organisation



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# Chapter One

## 1. Background and overview of the study

### 1.1. Introduction

The study explores stress and coping of volunteer home-based caregivers in HIV and Aids. This chapter introduces theoretical concepts: Stress, coping, burnout and resilience in the context of HIV and Aids home-based care-giving, and provides a background to the study. The chapter will also formulate and discuss the problem statement and the aims of the study, and discuss briefly the research design and methodology. Finally, there will be a discussion of the sequence in which the chapters will be presented.

### 1.2. HIV and Aids, stress, burnout and coping as used in the study.

HIV and infects, and Aids has affected, millions of people worldwide. Concerns of its effects go beyond the infected individuals to include those whose well-being is affected by people who succumb to the disease (UNAIDS, 2006a). The affected include family members, neighbours, people in helping professions and all volunteer caregivers. They are affected emotionally, economically, socially and physically by the illness and the death of those infected with Aids.

There is evidence that caring for a chronically ill person causes stress (Flaskerud, Faan, Carter & Lee, 2000). Furthermore, there are other factors that, according to Cooper, Dewe and O'Driscoll (2001) exacerbate the experience of stress at work which affect volunteer care givers as workers. These factors include the type of work one does, the amount of support that one receives at work and at home, and coping mechanisms employed to deal with the stressors. Too much stress can lead to ill-health and a development of psychological symptoms such as depression, anxiety and other stress-related complications like coronary heart diseases (Cooper et al., 2001). Miller (2000) refers to stressors that are unique to HIV and Aids volunteer care-giving such as fear for infection through occupational exposure to death and dying patients. Stress at work may lead to lowered performance, real and imagined

physical problems and high turnover. O'Neill and McKinney (2003) describe how chronic work-related stress results in a phenomenon known as burnout.

Burnout is emotional fatigue, feelings of inefficiency, helplessness and loss of control that relate to stress. According to Levert, Lucas and Ortlepp (2000, p. 612), "burning out means the total psychic energy of the person has been consumed in trying to fuel the fires of existence". Burnout also relates to 'compassion fatigue', a term that can be used to describe the state of a carer who wants to help someone but is unable to do so because of lack of energy (Maslach & Goldberg, 1998). As Figley (2002) declares, burnout in caregivers occurs as transformation of inner experience due to emotional and empathetic interaction with traumatised victims and chronically ill people. This, together with varied stressors that go with intense feelings, carrying people, death, fear and many others may result in high and varied levels of burnout. Therefore, one will burn out when the experience of the chronic stress at work exceeds the limits of one's ability to control or cope.

Burnout may start as a mild form of disturbance or 'a stress syndrome', but can progress to become a mental disorder that needs mental or clinical attention. In its mild form, burnout may not disturb functioning but as a mental disorder, it is as described by Schaufeli a "serious clinically relevant pattern of personal distress" that may cause diminished performance (Schaufeli, 2003, p. 3).

Yang and Meilpatrick (2001) think that care-giving should not lead to negative experiences of stress and burnout. The authors maintain that with correct attitudes and effective coping, caring for the dying should actually become an opportunity for inner growth. Moreover, the work done by caregivers requires them to maintain control. They need to control their own emotions, adapt to the situation and calmly continue to care for the patients. In other words, caregivers need good coping skills to sustain their work amid the constant emotional pressures that form part of the care-giving milieu.

Researchers who focus on the strengths and successful coping with life stressors assume a salutogenic approach (Antonovsky, 1987). The approach looks at the development of personal and social resources, as well as adaptive tendencies and strength that result in effective coping. Effective coping means: being able to deal effectively with a series of stressors that would otherwise have long-term negative effects on a person. People with effective coping skills will change any stressful event to be more manageable and create out of it an opportunity for growth and development of competency. This strength enables one to bounce back after a traumatic experience and is called resilience (Davidson, Payne & Connor, 2005). The concept is increasingly used in research on children in Africa (Daniel, Apila, Bjorgo, & Lie, 2007; Fjermestad, Kvestad, Daniel, & Lie, 2008) to counter-balance the tendency to focus on their vulnerability.

It may not be easy to distinguish between effective coping and non-coping without considering the nature of the problem faced. Adaptive behaviours that need support and are ineffective can be analysed to identify the associated stimuli (Pearce, 2009). Modes of coping can then be identified as either adaptive or ineffective. Coping by problem-solving and seeking social support are, for example, seen as adaptive while avoidance by denial and escaping are seen as maladaptive coping styles that often lead to burnout (Shinbara, 2008), depending on the situation that one faces. For example, denial of negative ideas about HIV and Aids is one way in which avoidance can be used as a positive coping approach by carers. This coping mechanism does not necessarily constitute denial of HIV-positive status, but an attempt to reject its stigmatising connotations. If stigmatisation is identified as a source of stress, denial will be used in this particular case for prevention (Miller, 2000).

Furthermore, people vary in the extent of their coping resources, and therefore in the types of coping mechanisms that they use under stress. As Veenstra states, internal psychological traits such as optimism, self-esteem, locus of control,

resilience and neuroticism, influence appraisal and cause us to choose different coping responses (Veenstra, 2006). For example, a neurotic individual is more likely to focus on the negative aspects of stressors while an optimist is more likely to view stress as a challenge to cope positively. External factors such as economic resources or social resources also impact on how one deals stressful situations. Important external resources include social networks and social supports. Social networks comprise individuals with whom one can interact, and they represent potential sources of assistance. They represent the actual receipt of emotional, tangible or informational help from others, as well as the subjective perceptions of support (Veenstra, 2006).

Spiritual beliefs and other religious as well as non-religious activities also need to be considered as factors that promote strength and successful coping. Belief can be classified as an internal or external resource, depending on individuals. Possible mechanisms for such effects include finding meaning in the face of adversity, and allowing access to a social support network including clergy and others in the faith.

The use of a particular way of coping also depends on its outcomes in previous situations and the appraisal of the present situation. This means that there is an element of learning that determines the strategies that form a coping repertoire for an individual.

Lastly, the context, as will be discussed next, determines the types of stressors that caregivers face and how volunteers, in particular, need to be equipped to deal with the demands for coping. The context in which a volunteer operates is a product of the severity of the HIV and Aids epidemic and how it affects people.



### **1.3. Background information: The impact of HIV and Aids and the role of alternative care**

#### **1.3.1. Prevalence and incidence in South Africa**

In 2007 a total of 1.7 million (1.4 million–2.4 million) people in sub-Saharan Africa became infected with HIV. At that time there were an estimated 22.5 million (20.9 million–24.3 million) people living with HIV in the region and over 15 million children have been orphaned by Aids worldwide. Of these, the vast majority are in sub-Saharan Africa (UNAIDS, 2006a). Currently the prevalence of HIV and Aids is estimated to be 22.9 million adults and children living with HIV, 1.9 million new HIV infections among adults and children, 5% adult prevalence, 1.2 AIDS-related deaths and South Africa has more people living with HIV (an estimated 5.6 million) than any other country in the world UNAIDS (2011).

UNAIDS and WHO, (2006a) also give evidence to the effect that millions of South Africans who are living with HIV do not know that they are infected because they have not tested. There are also large proportions of South Africans who do not believe that they are at risk and that they can be infected with HIV. The fact that there are possibly millions of untested people who are HIV positive and many others who could have died of Aids-related diseases means that the problem of HIV and Aids is understated. Therefore, there is a need to direct more effort and resources than those presently in use to build capacity to deal with the consequences of the epidemic.

#### **1.3.2. Impact on life and families**

It is reported that in approximately 25 years since Aids emerged as a major health hazard, the epidemic had a serious and devastating effect on human life and human development (Gauteng Provincial Government, 2005). It is stated that Aids has delayed progress towards the achievement of international Millennium Developmental Goals (MDGs). To the contrary, there are indications that in South Africa the use of social grants, which increased from R10 billion to R37,1 billion between 1998 and 2004, with beneficiaries that increased from R2,6 million to R7,9

million during the same period, led to the reduction of poverty. The report also says that an assessment of the country's performance suggests that some of the MDGs were about to be met in 2005 (Modisane & Masango, 2005). It is also necessary to ensure that the support that is given reaches those who need it the most. Volunteers need to be deployed in this area and help the beneficiaries to access all the help.

Problems caused by HIV and Aids among families are interrelated and form a complex network. Impacts that have been documented range from increased medical bills and expenditure on funerals. In most families, the increase in spending happens amid the loss of income after withdrawal of family members from work due to ill-health. The different levels of the epidemic from diagnosis of HIV to opportunistic diseases, from Aids illness to ultimate death, affect families (Barnett & Whiteside, 2002). These problems filter down to children to cause an orphan crisis.

Many orphans have no one to provide for their nutritional needs, social needs, emotional needs, psychological needs, physiological needs and the need to grow up in a family. Other problems include high mortality rate of orphans from famine and poverty, and lack of care of those infected by their mothers (Johnson & Dorington, 2001). These children also face other forms of challenges that include child labour, different forms of exploitation and illiteracy. Yet another problem that involves the orphaned children is that their numbers keep escalating. StatsSA estimates that there were 1.99 million South African children living as orphans due to Aids in 2010 compared to 780 thousand in 2003 (UNAIDS, 2006a). It was projected that by 2010, 18 million African children under the age of 18 are likely to be orphans from this single cause (UNICEF, 2008).

As a conclusion, the high numbers of orphaned children, some of them being sick, the responsibility of caring for them poses a challenge. Recent options such as the use of volunteer social protection, foster parenting and a wide range of other

measures such as welfare programmes (Akintola, 2004b) need to be expanded on, to match the fast-growing numbers.

### **1.3.3. Challenges in primary health services**

Hospitals have become overcrowded and HIV and Aids continue to cripple health-care services. Aids-related illnesses account for more than half of all hospital admissions, while the number of HIV patients in paediatric wards remains high (Veenstra, 2006). Health-care professionals in these hospitals and clinics are expected to offer comprehensive care, though some of them were only trained as medics. For example, Mayers (2005), states that they are expected to advise and help their patients to lead a healthy lifestyle, have good eating habits, a clean environment and clean water. This added responsibility could be shifted to alternative care in the community to ease the burden on professional care. In fact, comprehensive home-based care (HBC) programmes are proving to be a popular strategy for ensuring a continuum of care and support to PLWHA outside the health facility environment. There is evidence that these programmes, which initially emerged as a response by civil society organizations (CSOs) to the needs of HIV-affected communities, are now increasingly being advocated as a cornerstone to the HIV response by international organizations and funding agencies (USAID, 2008).

Government supports care at home, as an alternate to professional health care which relieves hospitals from the burden of high patient numbers (Akintola, 2008). For example, Fox, Faucet, Kelly and Ntlabathi (2002) report that the use of home care in KwaZulu Natal led to a decrease in the average number of days that a patient spends in hospital from 14 to 3.5. A patient stays for a shorter period at the hospital and is then discharged into a care programme that can be monitored from home. Government intervenes in the form of the Strategic Plan for HIV and Aids/STI for 2007–2011 (Department of Health, 2009), to help with the care and treatment of people from home, so as to limit the need for hospital care, thus creating and increasing the need for care at home. Recently, Government has prioritised mass

mobilisation for the better health of the population. Key elements of the strategy include a creation of supportive environments; developing personal skills on health promotion; building health public policies and strengthening community participation to secure infrastructure for health promotion (Department of Health Strategic Plan 2010/11-2012/13) .

My personal observations of HIV and Aids-infected persons is that they spend most of their illness days at home, whether or not professional care has been arranged. In South Africa and other countries where the majority of people are poor, care from home is more convenient but as Shinbara asserts, it has no guarantee for more comfort than would be found in hospitals (Shinbara, 2008). People with poor economic backgrounds would prefer to be treated from home to avoid problems of poor and the high cost of transport to hospitals (Akintola, 2004a; Jackson, 2002).

While caring for patients in the privacy of their homes may lessen the distress associated with stigmatisation at hospitals, families may also get stigmatised when caregivers are seen going to the house to give care. This makes stigma one of the biggest challenges we face in tackling HIV and Aids. It extends beyond the disease itself, to cause stress and burnout to providers and volunteers who care for people living with HIV (Miller, 2000). It often results in feelings of shame and guilt with lowered self-esteem that threatens to undermine interventions for the prevention and treatment of HIV and AIDS.

However, care at home does not replace, or take over from, the formal health system. Care from home should be seen as an integral part of the whole system of care. Home care represents care at the lower level or micro-level and the health system is the macro-level of care-giving (Cullinan, 2006). Home care uses partly trained or untrained carers while the health system uses structured care with highly trained professional caregivers.

The escalating numbers of the infected and the heightened responsibility of home carers, which cuts through all the stages of HIV, from the moment after testing to treatment for full-blown Aids and after the death due to Aids, require that these caregivers be helped to have fewer problems. They can maintain a healthy life by using coping strategies that change stressful experiences into chances for growth. Sources of stress that can be controlled should be dealt with by the powers that be to avoid an unnecessary burden on the caregivers. Otherwise, failure to develop efficient coping strategies for stressors in care-giving may limit their capacity to give quality care and to sustain their work. In the long run this may affect the whole system of care.

#### **1.4. The context for volunteer care-giving**

In South Africa the changing demographics of the HIV epidemic caused a shortage of resources, workforce and services. To ensure effective primary health care, health facilities now incorporate voluntary services of non-governmental organisations (NGOs) and other organisations outside the health care institutions, as well as community participation using volunteers. Therefore, volunteering does not happen unsystematically but is done in established settings that are either formal or informal, depending on the nature of the response to the need. Such settings include community-based organisations, church-based organisations, home-based organisations and hospices. This study will focus on HIV and Aids home-based and community-based organisations.

Home-based care is the provision of health services by formal and informal caregivers in the home (O'Neill & McKinney, 2003). Home-based care includes palliative care which helps to improve the quality of life of patients and families facing the problems associated with a life-threatening illness. This form of care helps families with prevention and relief from suffering through early identification and treatment of pain and other physical, psychosocial and spiritual problems. This increases the importance of alternative treatment, such as home-based care, dramatically because care can be extended to those who are affected by an infected

or terminally ill person in their family. However, the services need to be stepped up because as was discovered, 4.3 million people need AIDS home-based care in sub-Saharan Africa, but only approximately 12% of these people receive it (Thabethe, 2011).

#### **1.4.1. Volunteer care-giving within the SOS Children's Villages**

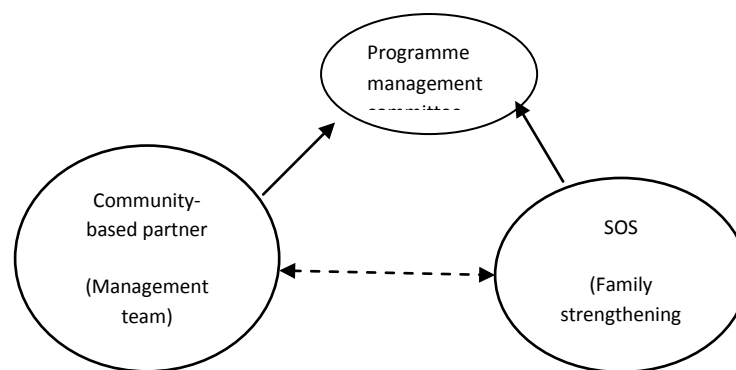
Societas 'O Sociale Children's Villages (SOS CV) is an NGO that builds families for children who have lost their families and strengthen families that are on the brink of breaking down. To build families, SOS CV accommodates children without families in their villages. Families that require to be strengthened are registered into SOS CV's Family Strengthening Programme (FSP). The FSP operates in identified communities in partnership with community-based organisations that offer services to families in need. The partnering organisations employ concerned individual community members who are motivated by free will to participate in community initiatives (community-based organisations, childcare forums, community leadership structures, etc.) to address specific issues.

If the community-based partner already has an established network of volunteers, the partnership works with, and through, them. Otherwise selection criteria (required qualities and skills) are drawn up by the community-based partner in consultation with SOS CV. These should include a requirement that volunteers live within walking distance of the families they are assigned to support. The community-based partner together with SOS CV decides who is involved in the selection process, for example, community leadership structures and/or other relevant stakeholders. Once a volunteer is selected, she or he signs a volunteer agreement with the community-based partner, with a clear outline of their role and responsibilities. At this time, volunteering hours, days and number of households are also clearly defined.

#### **1.4.1.1. The reporting structure**

Volunteers report to and are accountable to the community-based partner and are supervised by the management of that organisation on a day-to-day basis. The community-based partner reports on volunteer activities and issues to the SOS CV programme management committee. The programme management committee is made up of representatives of the community-based partner and SOS CV, plus all other relevant stakeholders.

**Figure 1: SOS/ CBO partnership reporting structure**



#### **1.4.1.2. The role of volunteers within the programme**

Volunteers co-operate with the FSP co-ordinator to support the development of their assigned families within the programme. They make regular home visits for the delivery of services where this includes care for sick family members, as well as monitoring the family's situation and progress towards achievement of agreed plans. Lastly, they contribute to the development of the programme through participation in the programme planning process that includes programme reflection meetings, programme planning meetings and stakeholders' feedback meetings.

#### **1.4.1.3. Support, monitoring and evaluation of volunteers**

Volunteers are offered programme-related training to build the skills and knowledge required to perform their role. They are awarded opportunities to share their concerns and challenges with programme management. They also get emotional support in the field, such as de-briefing meetings and access to counselling.

Volunteers make regular written reports on home visits and other activities, with copies being kept in participant family files. They are also encouraged to write weekly report back meetings of volunteers to management. Monthly reports are presented by NGO managers at programme management committee meetings.

#### ***1.4.1.4. Benefits and incentives for volunteers***

Volunteers benefit from partnering with SOS CV through skills development for better access to employment opportunities and certification for training attended. SOS CV also organises annual volunteer recognition events with awards such as community service certificates. They also participate in other SOS CV forums that include Woman of Courage Awards and reference/letters for participation in community forums, peer-to-peer programme visits.

These benefits and incentives encourage broad community participation and ownership of the programme. They promote sustainability as volunteers are from the target community and are likely to stay and carry on with the work. They enable the programme to reach more beneficiaries with limited available resources. Furthermore, they raise awareness of the situations of beneficiaries and give community members the opportunity to help vulnerable families within their own environment. Finally, these benefits strengthen existing community support systems for children and their families. They also encourage participation in community life and development of new skills towards self-reliance.

### **1.5. The rationale for the study and the problem formulation**

The rationale for this study is an observation that, first, in sub-Saharan Africa, the need for volunteer caregivers continues to increase as a result of the depth of the HIV and Aids crisis. Second, volunteers, similar to other professional caregivers, are subjected to stresses related to care-giving. These volunteers survive and continue to give care despite exposure to the stresses and strains of care-giving (Miller, 2000). It is also evidenced that a large proportion of burned-out volunteer caregivers stay in



their jobs involuntarily because of lack of alternative jobs (Schaufeli, 2003), and because of an increased need for volunteer care-giving created by the HIV and Aids epidemic. This situation may seriously impair the provision of quality care by volunteer caregivers and consequently impact on the efficacy of health service delivery (Lee & Wang, 2002).

The focus of this study will therefore be to identify sources and levels of stress, and protective processes that volunteer care givers use when faced with adversities, and determine associated levels of burnout and resilience of these volunteer caregivers. The knowledge obtained will be useful in the formulation of recommendations to address stress amongst home-based volunteer caregivers in a particular cultural milieu. The research question to be answered here is: How does stress experienced in and out of work together with coping strategies (including some socio-demographic issues) relate to burnout and resilience levels of volunteer caregivers in home based care?

### **1.6. Research hypotheses**

The following assumptions and expected outcomes will form the basis of this study.

The assumptions are:

- I. Stressors in the form of care-giving experiences, challenges and unmet needs, employment status, dependants, hours spent at work, number of sick people in one's care, exposure to Aids-related deaths, and lack of support and training may distress and result in an experience of stress.
- II. In the absence of effective moderators or coping resources the stress can develop into burnout. Such burnout may lead to drop-outs or reduced performance, ill-health or use of maladaptive coping such as use of drugs and alcohol for those carers who continue to give care.
- III. Burnout rates will have a strong negative correlation with resilience..
- IV. High burnout is associated with a high reduction of personal accomplishment and low resilience is also associated with high reduction in functioning.

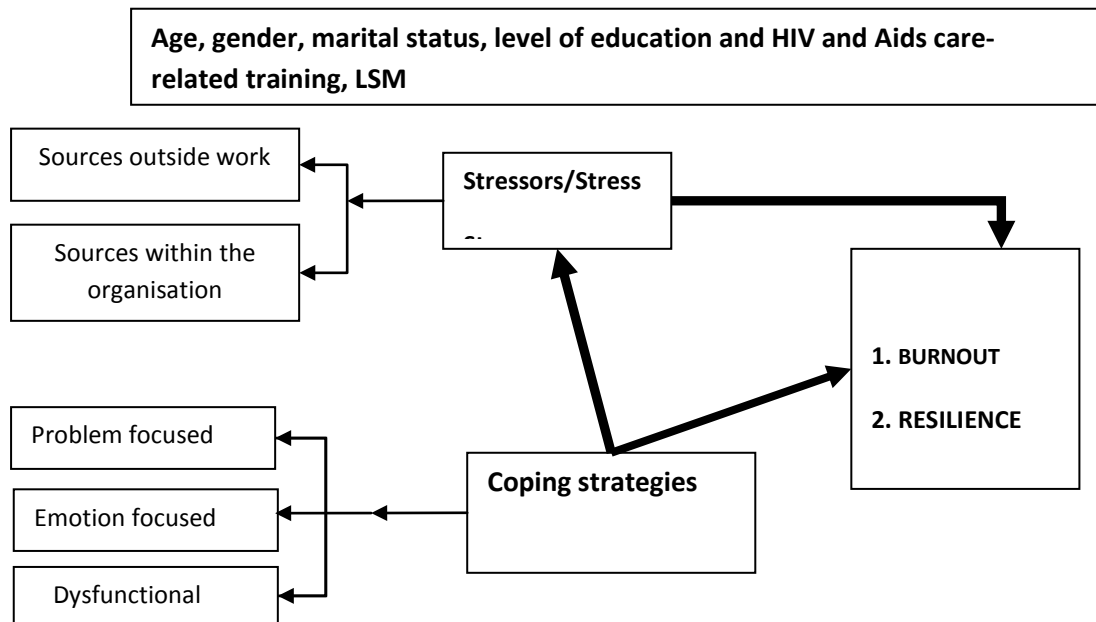
- V. Younger caregivers score highly on stress levels. Differences in experience of work stress are also gender based and depend on cultural values, marital status, religious affiliation, training received, sources of income and number of patients that influence care-giving (Miller, 2000).

### **1.7. The aim, objectives and purpose of the study**

The general aim of the study is to investigate the relationship between stress, the coping strategies of the volunteer caregivers as well as burnout and resilience, and the socio-demographic characteristics of the carers.

A literature survey will explore the broad theoretical conceptualisation of stress, burnout, resilience and coping strategies that are associated with voluntary care of HIV and Aids patients in home-based care. It will specifically look at the coping strategies of volunteers who live with adversities but maintain high levels of resilience that sustain them in their care-giving, and the coping of volunteers who burnout and drop out of care-giving.

The scientific study will investigate the theoretical relationship between predictor variables (stress, coping and socio-demographic factors) criterion variables (burnout, resilience) as shown in the research model. This will be followed by formulation of recommendations based on the outcome.

**Figure 2: Research model**

This will be achieved by:

- I. Obtaining the demographic profiles of home-based volunteer caregivers in HIV and Aids home-based care, that is, finding out about their age, gender, marital status, and level of education and training for HIV and Aids care, living standards and comparing stress, coping, burnout and resilience according to the demographic data where it is possible. An added demographic will be determined by evaluating the participants' living standards and level of urbanisation using the 29 items of the SAARF Universal LSM of 2004 (Haupt, 2004). I will then establish the relationship between these demographics and the constructs stress, coping, burnout and resilience,
- II. assessing the relationship between stress (work-related, i.e., organisational functioning, task characteristics, physical working conditions, career matters, social matters, remuneration and non-work related stressors) and burnout (depersonalisation, emotional exhaustion and personal accomplishment),

- III. assessing the relationship between stress (work-related, i.e., organisational functioning, task characteristics, physical working conditions, career matters, social matters, remuneration and non-work related stressors) and total resilience,
- IV. assessing the relationship between the coping strategies of volunteer caregivers and burnout,
- V. assessing the relationship between the coping strategies of volunteer caregivers and total resilience and
- VI. assessing the relationship between work stress levels, coping strategies and burnout.

### **1.8. Overview of the chapters**

#### Chapter Two: Literature review on stress and coping

The chapter will provide an understanding of stress and coping by defining these terms. It will refer to the theoretical implications of stress and coping, such as the stress-coping model, and look at a variety of coping strategies that might be used by carers. The chapter will also conceptualise burnout and resilience. This will conclude with a theoretical integration of stress and coping to determine the relationship between the two concepts.

#### Chapter Three: Literature review of volunteerism in home-based care

The literature review will explore and discuss relevant literature on volunteers/volunteerism and home-based care in general. The chapter starts with a definition of the two terms followed by an exploration of volunteerism in the context of care from home. It will also include a discussion of stress and coping issues in volunteer home-based care.

#### Chapter Four: Research design and method

Research design is the plan that describes the conditions and procedures for collecting information (McMillan & Schumacher, 2006). Research method describes

particular techniques that are chosen from the broad spectrum of methods to be used to conduct the research. The research design and method for this study will be discussed in detail.

#### Chapter Five: Results

This chapter will give the data collected, an analysis and discussion of the data, and end with an integration of results with the theory discussed in the literature section.

#### Chapter Six: Discussion of results

The outcome and the relevance of this outcome in answering questions that prompted this study will be discussed with reference to relevant literature.

#### Chapter Seven: Limitations, recommendations and Conclusion

This chapter will look at challenges that had a potential to affect the outcome of the study, with recommendations on how to avoid such challenges in future. Other recommendations will be on how to avoid or deal with stressors of caregiving to minimise stress in volunteers.

## **Chapter Two**

### **2. Volunteers in HIV and Aids home-based care: Literature review**

#### **2.1. Introduction**

This literature review will start by defining volunteers, who they are, and explore their role in HIV and Aids. Key aspects in the management of volunteers will be looked at, focusing on recruitment and selection, training and retraining them, as well as how their special needs can be met. Some attention will also focus on the context in which volunteer caregivers function, with consideration of their role in non-profit organisations that do home-based care. The information in this section of the study is necessary for sampling because people do volunteer work in a wide range of settings. It will also help me to focus the unit of analysis.

#### **2.2. The origin of volunteerism and its maintenance**

The definition and concept of volunteerism has evolved considerably over the course of decades and has progressed to be a reliable response to the needs of those affected by HIV and greater access to care and treatment.

Volunteerism in the African tradition can be traced back to collective actions that were found in practices such as “letsema” and “lethsolo” translated work parties or collective work and donation of time and other resources for the benefit of other community members. This included helping bereaved families whenever there was a burial in the neighbourhood. Community members engaged in these out of their own free will while they also expected to be helped should disaster strike in their own families. All these forms of helping were according to Thupayagale and Rampa, (2005) and Mahillal (2006), done within the context of informal helping networks. With the advent of HIV and Aids and in response to the growing burden of care that fell on family members, home based care programmes such as The Aids Service Organization (TASO) in Uganda emerged with a focus on mobilizing volunteers to visit AIDS patients in their homes to provide counselling, assist with household

chores and educate family members about the principles of palliative care (Shaibu, 2006; Wringe, Cataldo, Stevenson & Fakoya, 2009).

There is evidence in United Nations Volunteers, (2005a) and in Rankopo, Osei-Hwedie and Modie-Moroka, (2006) that people around the world continue to offer their time and skills voluntarily, where each kind of service depends on cultural practices, socio-economic and political circumstances within the communities or countries

### **2.3. Variations in definition and value of volunteering**

Over the years, volunteerism has grown from being an unorganised form of helping others carry out their responsibilities to highly structured ways of working together under certain organisations to achieve set goals. In the same manner, the meaning of volunteerism has also evolved, leading to many different ways of defining volunteerism where each definition emphasises different aspects of the act. The definition of Volunteerism by Pearce (1993, p.4) says volunteerism is 'a mobilization and utilization of unpaid individuals and groups to provide human services'.

In a more comprehensive definition, Flick, Bittman and Doyle (2002) assert that volunteering is an effective way to help solve serious human, social and environmental problems, deliver services to provide individualised attention, engage with those most in need of help, improve the quality of life in our communities while enabling people to live healthier more productive and more fulfilling lives and learn new skills, build new social connections and reaffirm their value to others.

Manuel-Ubaldo (2003) described volunteerism as a form of assistance that is given through not-for-profit organisations or projects and is undertaken to be of benefit to the community and the volunteer. The volunteers give such help of their own free will and without coercion, for little or no financial gain while they may also get fulfilment from helping others.

Thupayagale and Rampa (2005, p.2) use the definition of the International Association of Volunteer Effort (IAVE) and conceptualise volunteering as 'organised support that involves individuals freely giving of their time and expertise in order to benefit others'. The main forms of volunteering are charitable or humanitarian service, material aid and self-help, public-community service, advocacy and activism, and informal volunteering.

The United Nations used a long and detailed definition in the International Year of Volunteers in 2005. There are three key defining characteristics of volunteering. First the activity should not be undertaken primarily for financial reward, although the reimbursement of expenses and some token payment may be allowed. Second, the activity should be undertaken voluntarily, according to an individual's own free will, although there are grey areas such as school community service schemes which encourage, and sometimes require, students to get involved in voluntary work and. Third, the activity should be of benefit to someone other than the volunteer, or to society at large, although it is recognised that volunteering brings significant benefit to the volunteer as well.

The United Nations Volunteers (2005a) also gave an enriching contribution to the definition of volunteerism by saying that crucial learning opportunities are available to the not-so-privileged people like young people, women and the unemployed, as well as senior citizens by giving them a chance to volunteer to participate in civic matters.

Following various definitions of volunteerism from the early years, it is apparent that the good act underwent changes from unpaid provision of help out of free will to an incentivised requirement, especially for students. It also moved from an unstructured provision of help to organised activities based on the history of the country. In addition, from the various definitions of volunteering with different areas of emphasis, one can deduce specific and core characteristics that underlie the



concept of voluntary activities. Key characteristics that form the basis of volunteering are: active involvement and contribution of time, utilisation of energies, talents and expertise, common good, free choice and free will, commitment to help and share, little or no remuneration and learning.

However, there are indications that people who volunteer also do it for certain gains. For example, Rankopo et al. (2006) and believe that people volunteer because it is either some form of pathway towards formal employment or social contact. Also, while volunteers willingly help others without expecting any remuneration, whether monetary or otherwise, in the process they earn moral credits, recognition, personal satisfaction and newly formed relationships (Held & Brann, 2007). This makes volunteering to be two-faced, benefiting both the serviced and the service provider.

## **2.4. The general profile of volunteer caregivers**

### **2.4.1. The age and socio-economic status of volunteers**

Akintola gives characteristics of HIV and Aids volunteer caregivers in South Africa and Uganda as level of education of 7 to 12 years of schooling though there may be some who are university graduates (Akintola, 2004b). Ages have been found to be between 18 and 65 (Orner, 2006) and most of younger caregivers are unmarried with some having had children out of marriage. Caregivers who are below 18 years normally do not work as volunteers though some studies on Zimbabwe, Botswana, and South Africa have documented the existence of child primary and secondary caregivers (Akintola, 2006b).

Patel and Wilson (2004) supported by Akintola (2010), maintain that most of the volunteers come from families with a poor economic backgrounds. Besides depending on the stipend, these volunteer young adults who are in the age range 18 and 25 years are sole breadwinners or single parents. Other authors state that volunteer work aggravates their poverty as many caregivers spend long days of unpaid work and share their own food and other material goods with the patients they visit, (Aggleton, Wood, & Malcolm, 2005). Ndlovu (2005) also says that most

depend on the monthly stipend that other NGOs can afford. In South Africa, very old, young, single and unemployed volunteers also benefit from a variety of cash transfers called grants (old-age pensions, disability grants, child support grants, care dependency grants and many others).

#### **2.4.2. The gender-based role of volunteers**

Akintola (2004b) in his study on volunteer caregivers in Uganda and South Africa and Levine's (2004) survey on Long-term care found that care-giving is assumed to be women's work. In Africa for example, it is evidenced that two thirds of all caregivers for persons living with HIV and AIDS are women (UNAIDS, 2011). Moreover, it is traditionally believed that the duty of caring for others and especially sick ones, both in families and in health institutions, is a responsibility for women (Orner, 2006). Though this is slowly changing, one can look at the ratio of female nurses to male nurses to know whose job it is to care for sick people.

As evidenced in UNAIDS (2000), men are almost never primary carers in the home and men were socialised into believing that it is not a man's duty to care for others. In rare cases where men have to look after children, the society views them with suspicion because of gender role stereotyping and the many incidences of sexual abuse (Marincowitz, Jackson & Ferhsen, 2004). Some men can respond in different ways to changing circumstances around illness, bereavement, and the care needs of family by performing roles that extend far beyond economic support. The community cannot acknowledge such positive involvement due to prevailing norms regarding gender roles and responsibilities within households while attention is focused on men's frequent inability to meet the traditional obligation of economic provision through wage labour.

In addition, traditional cultures that emphasise the role of men as breadwinners discourage them from doing any volunteer work. The local traditional view is that men are required to support the family financially and so for whatever work they do,

they expect payment. Therefore, for men, working to earn a salary remains a must and not an option and this leaves no time for staying at home and caring for sick people, whether it is family or others outside the family.

On the contrary, Ogden, Esim and Grown (2004) state that the emphasis on equity, economic empowerment, property and inheritance laws, as well as action against abuse and violence against women in South Africa and other countries is slowly leading to a reversal of roles. This reversal of roles is also bound to impact on, and change the, belief that makes women major caregivers. It encourages men to play an important and more active role in care-giving. While this may be a call for changing roles, the fact that more women will move out of the kitchen and become economically active does not necessarily mean that they will be replaced by men in volunteer care-giving. A greater percentage of active volunteers are women who are breadwinners themselves while those who are not breadwinners do not last long as volunteers (Marincowitz et al., 2004).

While community acceptance of men in the caregiver role runs counter to the norm and often drives them away from being active participants, Johnson (2008) states that National Societies have increased the recruitment of male care facilitators through community sensitisation meetings to address the gender imbalance in the provision of home-based care. Such attempts will help to increase the number of male volunteers and reduce the burden of care on women. Care for the sick may shift from being a responsibility of women to becoming a shared responsibility between and among men and women.

It is therefore clear that both men and women have important roles to play in caring for the infected and affected. The way to engage them should be different. It is not so much about men and women doing the same things but there is a need to find roles that each will be comfortable with and that together enhance the quality of total care afforded to the patient.

## **2.5. Experiences of HIV and Aids volunteers in home-based care`**

Volunteerism plays a vital role in the wellbeing and advancement of all human societies, regardless of their level of development, be they third world or developed nations. Volunteers who do home-based care in HIV and Aids help to empower communities to take responsibility for their own health to normalise the disease within the society (Manuel-Ubaldo, 2003). However, the role of the volunteer is not always clearly understood by the family. As a result, volunteers have a wide variety of experiences, some of them mentioned here.

Ndlovu (2005) discusses how in some instances the family would just withdraw and abdicate their roles and responsibilities. When they see volunteers they take them as people who are employed to help them at home with the sick person or household helpers. Ndlovu also states that some of the confusion is created by the volunteers themselves as they want to do everything for the family even those roles that are supposed to be performed by the family (2005).

It is indicated that at the beginning of a relationship families react negatively, and some so negatively that volunteers may lose hope that a positive working relationship will ever be established. This is experienced in situations where the worker is dealing with an involuntary patient who may not even believe that the worker has the capacity to help him or her (Corey and Corey, 2003). What is important is to deal with the clients' doubts and resistance rather than avoid or suppress it (Mabuda, Potgieter & Alberts, 2008). They also argue that many people fail to establish functional working relationships although they may work very hard toward achieving it. Trust develops when the family has confidence in the helper and is satisfied about the honest motives of the helper so that the family does not disclose secrets that can later be used against them. Corey and Corey (2003) adds that unconditional acceptance, warmth and respect displayed by the helper on the

family leads to development of honesty, genuineness and confidence towards the caregiver.

According to Ndlovu (2005), this can easily be achieved when volunteers are rooted in the community because they can be listened to more than would be the case with strangers. Moreover, these volunteers are able to guide and advise the NGO on social and cultural issues that affect them and can work closely with traditional leaders and traditional healers.

However, Fox et al. (2002) maintain that while volunteers contribute significantly to community development, the employment of volunteers has its own problems. It has been found that clearly the people who are available as volunteers in communities most affected by HIV and Aids are not well equipped in terms of educational and working experience to be able to carry out their responsibilities efficiently. Issues of recruitment are discussed below.

## **2.6. Selection and training of volunteers in home-based care**

There is consensus on the critical need for orientation and training of volunteers (Lombard & Modise, 2002; Motsepe & Perry 2000). Orientation and training of volunteers help to familiarise them with the broad mission and function of the NGO and the volunteer programme that describes their current range of activities. Lombard and Modise (2002) view orientation as a means to integrate the newly recruited volunteer into the structure of the organization. Training tends to impart to volunteers a sense of belonging and status and it further demonstrates that the organization values them and the contribution they will make on the agency mission and goal. Training may be specialized for example home-based care training and be determined by the work that volunteers will do (Lombard & Modise, 2002).

In 1997 the South African Department of Health awarded three contracts to the Hospice Association of South Africa (HASA) to do projects associated with volunteer caregivers. They were requested to develop a community caregiver training

programme and an auditing tool for evaluating the programme; establish HASA Integrated Community-Based Home Care programmes at seven different hospice sites; adapt the programme to the needs of the communities; and develop cost estimates for providing palliative care through a home-based care programme (Wiik, 2005). Sources of training material were, according to Wiik, the HASA volunteer training course, the Red Cross training course and St. John's training course. The content of the training programme included basic health care (anatomy and physiology), Aids awareness, basic nursing techniques and palliative care principles. The training programme was accredited by the South African Qualifications Authority (SAQA). People who qualified for training were individuals who were already providing informal care in the community. Applications for training came through community health centres and community health forums.

Training has evolved for community-based workers. The NGOs that are selected to give training to volunteers who are from civil society organisations do it in partnership with the Department of Health. They use the 59-days standardised home-based care course, which was developed by the National Department of Health (Rendall-Mkosi & Phohole, 2005). The initial training is 59 days, and the trainees then get weekly support in groups from the zone leader.

The whole programme lasts 3 months, as opposed to the original Department of Health suggestion of 9 days (3 days basic nursing, 3 days HIV awareness, and 3 days counselling). Motsepe and Perry (2000) discuss the selection of carers in their pilot study of the Buddy system of support and give a life example of what happens in the training. In this programme the volunteers go through a stringent selection procedure that involves basic training and assessment in basic HIV and AIDS information, palliative care and counselling. Thereafter, each volunteer or "buddy" is assigned a client in a home, hospital or hospice setting. Recently, SAQA registered unit standards at NQF Levels 3 and 4 for Community Health Workers. The Health and welfare Sector Education and Training Authority (HWSETA) is in charge of the

development of learnerships. Accredited service providers need to be registered and their capacity as service providers is assessed to ensure their accreditation as service providers in the sector.

Organisations also need to recognise the tremendous value of volunteers. It is necessary that they do not see volunteers as just an extra form of assistance, but that they meet the needs of volunteers largely. Most importantly, many organisations that work with volunteers have come to realise that the best volunteering happens when there is a healthy “give and take” relationship between the organisation and their volunteers (Aggleton et al., 2005).

## **2.7. Concluding remarks**

This chapter introduced and described the population group of the study. There is now a description of who they are, how they are classified, their age, socio-economic status, their role according to gender and their role and experiences in the South Africa that is challenged by HIV and Aids. There is also an understanding of how volunteers are selected and the form of training that most of them receive. The next chapter will focus on specific challenges that these volunteers are faced with and how the challenges affect them in their care-giving.

## Chapter Three

### 3. Stress, coping and related issues: Literature review

This chapter aims to theoretically describe stress, burnout and coping for volunteer caregivers in HIV and Aids. According to Russel (2009), a literature study helps to clarify the problem and shed light on the planning and execution of the study, giving a broad orientation and knowledge enrichment about the topic under discussion before the start of the investigation.

#### 3.1. Understanding stress

'Stress' is a word that is used to explain the experience felt in mind and body when there is an encounter, response and reaction to challenging life situations. People use the term stress broadly to describe a variety of negative feelings and reactions that accompany all situations that threaten or challenge them. It is important to note that in studying stress there should be a distinction to closely related terms such as: 'stressors' 'strain', 'pressure' and 'demands' (Francis & Barling, 2005). The stressors are actual objective events or external stimuli that threaten one's physical or emotional homeostasis (Selye, 1983). External events such as a heavy workload may put pressure or demands on a person and lead to the experience of stress. Strain describes the long-term effects of stress and psycho-physiological symptoms such as cardiovascular disease, gastrointestinal disease, anxiety and its manifestation in panic attacks, as well as depression syndrome (Kelloway, Francis, Catano, & Fleming, 2009).

##### 3.1.1. Models of stress

There have been several attempts to provide definitions of stress. Each model, as will be discussed, has its own problems or inadequacies and strengths. It is important to draw upon all the strengths to produce a comprehensive representation of stress in identified situations.



### ***3.1.1.1. Response and stimulus-based models of stress***

Many years ago, stress scientists defined stress in terms of external, usually physical forces, challenges or demands acting on an individual. The demands ranged from variations in environmental temperature, overcrowding, painful stimuli, and loud noises.

In the original definition of stress that was proposed by Hans Selye in 1926, he regarded stress as the “non-specific” response of the body to any demand placed upon it (Selye, 1983). Selye believed most of life was stressful and that people always experience some degree of stressors all the time. He considered external demands as stressors and the internal body changes they produce as the stress response. According to Selye, an important aspect of stress is that a wide variety of dissimilar situations are capable of producing stress responses such as fatigue, effort, pain, fear, and even success. He described the reaction to a stressor as adaptation that happens in three phases: the Alarm Reaction, Stage of Resistance and Exhaustion, and termed the reaction the General Adaptation Syndrome (GAS) (Selye, 1983). Selye therefore believed that long-term exposure to stressors is harmful. He also maintained that overuse of the body's defence mechanism eventually leads to disease, decreased stress tolerance, progressive mental and physical exhaustion, illness and, ultimately, collapse of the body. He then coined the term ‘eustress’ to stand for good or healthy stress, times when the adaptation process resolves itself quickly, and he chose the term ‘distress’ to stand for bad or unhealthy stress, when the adaptation response is excessive or prolonged.

Other authors agree that stress is a response to demands put on the body but they are more specific about types of reactions to stressors and the outcome of reactions to these stressors. These authors such as Prabha, Chandra, Jairam and Anila (2004) and Cox in his stimulus-based model of stress (Miller, 2000) maintain that the experience of a force which becomes a stressor creates physiological or psychological strain, depending on specific reactions to the stressor.

Another old stress model that formed the basis of the understanding of reaction to stressors is a more comprehensive view of stress given by the bio-psycho-social model. The model has three factors: an external factor, an internal factor, and the interaction between the external and internal factors (Brannon & Feist, 1997). The link between the bio-psycho-social model and Selye's response theory is that the former model's external factors of stress are the same as Selye's external demands; environmental events precede the recognition of stress and can elicit a stress response. The internal factors of the bio-psycho-social model include a set of neurological and physiological reactions that are similar to Selye's GAS. The difference between Selye's stress model and the bio-psycho-social model is that the latter has a third factor which is the interaction between the internal and the external factors.

When one combines the ideas of the three theories of stress, one finds that stress is a response to demands on the body. The response may be in three identifiable phases (Selye's GAS) or in specified ways affecting different areas of functioning (psychological or physical), and cognitive and spiritual functioning can be added. It is also noticed that the model's approach is simplistic and linear. The approach in the model is also strictly pathogenic as opposed to the salutogenic approach which says that one is naturally equipped to deal with the external forces so that one is not just a victim of the threats. A pathogenic approach focuses, as is the case with Selye's theory, on negative effects, reporting maladaptive coping patterns, stress-related illness and other unpleasant consequences. Other models were explored for a broader picture of the construct.

### ***3.1.1.2. Transactional models: the person – environment fit***

Contemporary views on stress require researchers to think of stress as a transaction between the individual and the environment (Bowin & Harvey, 2001; Lazarus & Folkman, 1984). These transactional theories of stress emphasise further that people and groups differ in their sensitivity and vulnerability to certain types of events, as well as in their interpretations and reactions to the events. Transaction also implies

that stress is neither in the person nor in the environment but in the relationship between the two (Prabha et al., 2004). That is, stress does not reside in either the external or the internal conditions of an individual's life but that it is the outcome of the interaction of the external conditions with the person's internal state. Interactions then become moderators and transactions that contain temporal factors, with one leading to another.

The person–environment fit happens on three levels. The first phase is the fit between the objective environment which is norms and values that govern one's environment, as well as role expectations and personal attributes such as skills, energy, strengths and aptitude. The second phase is the fit between the real or objective environment and the subjective environment as perceived by the person. The third phase is the fit between one's real attributes and one's subjective attributes (Schaufeli & Bakker, 2004). On the basis of this relationship, stress is viewed as a significant imbalance between environmental demands and the response capability of the focal organism (Prabha et al., 2004). This dimension introduces the fact that stress occurs only when perceived as such by the person. When people judge their coping skills as being inadequate to meet the current demand they experience the demand as stressful (Mayers, 2005), meaning, a stressor becomes stress when perceived as such by an individual.

#### ***3.1.1.3. The Salutogenic model of stress***

This model of stress attempts to answer the question on how people manage stress and stay well. It describes the process of staying healthy despite exposure to stress. It is a cognitive model of human responses to stress which, over time and within a socio-cultural historical context, influences health.

Antonovsky's work has encouraged a paradigm shift from pathogenesis to salutogenesis. He changed the bio-psychosocial model regarding the explanation of coping with stress, health and wellbeing. Instead of focusing on ill-health and poor wellbeing that result from stress, salutogenesis focuses on the strengths and successful coping with life stressors (Antonovsky, 1987). It also looks at the

development of personal and social resources, as well as adaptive tendencies that result in effective coping behaviour and growth. These personal qualities that make it possible for individuals to grow amid unfavourable circumstances make up what is termed resilience. Resilience defined in Connor (2006) is a way of measuring one's ability to cope. Antonovsky (1987) asserts that through life experiences, individuals develop psychological strengths that facilitate avoidance or combating of a wide variety of stressors, by taking advantage of family, social and external support systems (Frieborg et al., 2006).

### **3.1.2. The complexity of the stress process**

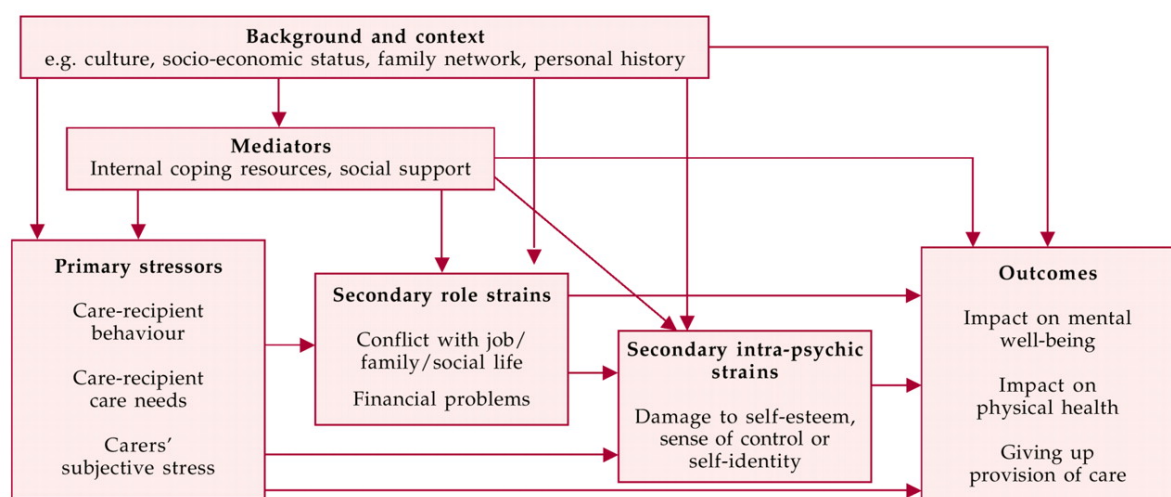
There is a need to transcend the simplistic understanding of stress as what the person perceives or external forces, or internal responses and consider the complexity of the relationship between cognitive elements that mediate perception of stresses and responses to stress to preserve the wellbeing of the individual. What is observed as a reaction to a stressor is a product of an interaction between external forces or stressors and one's needs and desires, ability to mobilise energy, assessment of what is important in life, sense of self, how one views oneself in relation to others and aspirations to help others. These are personal attributes that are exclusive to people. This complex depiction of the process of stress answers the question why, given similar encounters with stressful situations may test the adaptive capacities of some people but not of others. The experience of stress becomes subjective and difficult to comprehend (Mayers, 2005). Contemporary research and conceptualisation of stress is forced to be a study of isolated units and situations. This study will focus on the specific situation in HIV and Aids home based care to understand how caregivers are affected by stress.

### **3.1.3. Care-giving stress models**

Care-giving stress, just like all other work-related stress, is subjective as it depends on an individual's perception of the situation and the person's view of the socio and psychological sources, as well as mediators of stress.

There are several models that describe the process of care-giving stress. One of them is Pearlin, Mullan, Semple and Skaff's (1994) framework that explains the process of care-giving stress adaptation. This framework, represented in Figure 1, divides care-giving experiences into objective and subjective stressors, as well as intra-psychic stressors. Objective or primary stressors are problems that are generally associated with caring for sick people or cumulative demands that are potentially stressful. Subjective stress includes subjective feelings of overload and burden associated with, for example, conflicting demands of volunteer work and family responsibilities. The stressors are subjective because they are about the care-giver's internal responses to the external stimuli (the actual and objective conditions). These internal responses include various thoughts and feelings of burden and overload that carers experience as they go about their duties. What is critical about care-related stress is that just like all other work-related stress, it influences other social roles of the caregiver. The third form of stressor, the intra-psychic strain, is an outcome of the other two levels of stressors and a stressor on its own.

**Figure 3: The stress process model of Pearlin, Mullan, Semple, and Skaff (1994)**



The framework allows demands on the caregiver and available resources to be clearly identifiable. It distinguishes four domains in the process of care-giving stress, which are (1) background and contextual factors, (2) stressors, (3) mediators of

stress and (4) outcomes. Major factors within these domains are background issues such as demographic, cultural and life-history influences. In the model, the background issues link to mediating or coping factors because volunteers source their strength from interpersonal relationships and socio-economic support structures. The background and mediators also link directly with outcomes. In support of this view, Li (2005) found that perceived social support and satisfaction with social support, which often depend on one's background and context, are predictors of wellbeing.

The primary stressors in the diagram represent the objective burden in the practical care and support activities and the carer's subjective stress. The link between objective and subjective stressors depends on a personal interpretation of the situation based on underlying beliefs and values. The secondary role strains 1 and 2 are the emotional and cognitive reactions.

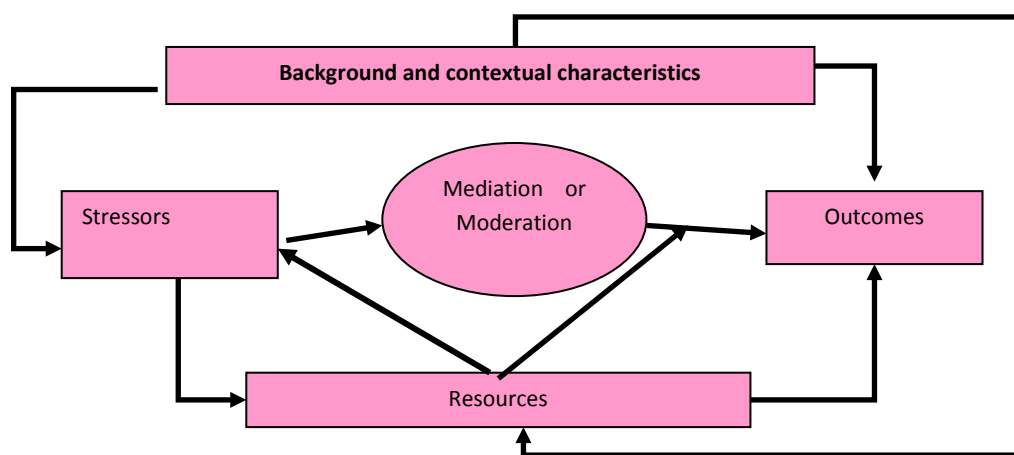
Outcomes of stress are, as shown in the diagram, impacts that the stressors have on mental and physical wellbeing. Physiological outcomes are varied. They range from short-term reactions such as hormonal, immunological and neuro-regulatory changes to long-term changes such as the development of coronary heart disease, from general tiredness to a clinical condition and from minor disturbances to major moves such as decision to leave care-giving.

This model does not draw a solid line between stressors and stress, which is defined as a reaction to challenges being stressors. At one stage the secondary role strains are seen as stressors and the next time they are referred to as reactions to stressors. Another important feature is that the model does not consider positive reactions to care challenges but looks at stressors as progressing to affect the body negatively all the time and causing a decline in wellbeing, ending with the person dropping out of care. However, the model by Pearlin et al. (1994) discussed above helps us to better

understand the role of external demands and internal sources in the process of care-giving stress (Oyebode, 2003).

The second model to be discussed is the stress-process model by Aneshensel, Pearlin, Mullan, Zarit, & Whitlatch (1995).

**Figure 4: The stress process model of Aneshensel, Pearlin, Mullan, Zarit, & Whitlatch, (1995)**



This is a simplified diagrammatic representation showing all factors of the care-giving stress process that includes stressors, outcomes, resources and background. The figure shows a mediation or moderation process that occurs between stressors and outcomes. Mediation is a factor or variable that explains a pathway by which another factor affects the outcome of a process. For example, if one says that death of a patient causes depression in caregivers, there is a need to explore the mechanisms by which this happens. One way to do this can be through an appraisal of the patient's situation. Appraisal is necessary to achieve the best possible fit between environmental demands and personal interests. If the demands of the care-giving situation dominate at the expense of the carer's personal interests, then psychological distress may develop. Such distress may, for example, be related to the

caregiver's preoccupation with the care-giving demands that conflict with family pressures.

Moderation is a buffering or protective effect that a variable may have. For example, caregivers with social support are expected to experience less stress as social support has been found to be a moderator of stress. Social support can be one of the coping styles that moderate in the progression of stress to resilience, helping the caregiver to emerge stronger after experiencing traumatic situations.

### **3.1.4. Development of a theoretical model for the study**

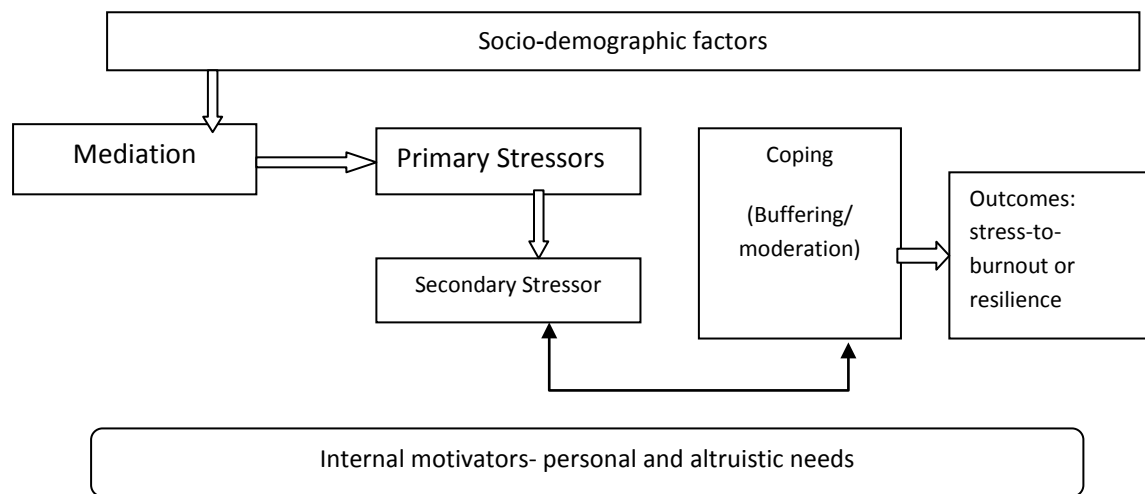
The models discussed above give a complex picture of the process of stress in care-giving. The process starts with a situation that exists in a setting that is influenced by cultural, political and socio-economic factors, as well as personal needs and the need to put oneself in danger to help others (altruism). In this instance the onset of stress can be understood in terms of the person–environment fit model whereby the source of stress is found not to reside in either the external or the internal conditions of the carer's life but in the carer's interaction with the environment (Mayers, 2005; Prabha et al., 2004). It is within this situation that the care-giver identifies the problem of a sick person who needs help. This situation is a dilemma where the carer is faced with two mutually exclusive goals which may become a major source of stress, a double approach–avoidance conflict. This type of conflict involves the choice between two goals: avoiding the situation or confronting it, that both have positive and negative consequences. The person is attracted equally to these two situations: ignoring the patient who is suffering to spend time on personal things or spend personal time helping the patient and gain fulfilment through self-actualisation or get spiritual fulfilment from intercession. If the person pursues one goal he or she abandons the other one. Mediation of personal attributes such as aptitude and acquired skills or external resources such as employment, social support and economic status and energy help in the decision-making.



Once the caregiver has decided on helping the sick person, the situation constitutes what is called in Pearlin et al.'s model (1994), a "Primary stressor". The Primary stressor is made up of the patient's expectations for care and support (objective stressors) as well as the carer's subjective stressors. The outcome of the objective and subjective stressors is a function of personal interpretation of the situation based on underlying beliefs and values, background and context factors, as well as one's previous experiences such as HIV and Aids cases in one's own families which form mediating factors.

Care-giving is affected by the problems and challenges that the new care-giver experiences in caring for the sick person. One of the problems is according to Miller (2000), "secondary stigmatisation" of working with HIV and Aids or "associated stigma". This is stigma that results from a person's association with someone living with, working with or otherwise associated with people living with HIV/AIDS (Holzemer et al, 2007). Other challenges are, the absence of a cure for the disease, the intensity of the epidemic and the high numbers of those infected, fears of becoming infected through occupational exposure to death and dying patients, to mention but a few. More care giving stressors will be discussed in detail in the next section.

Coping strategies are used for buffering the effects of stress. Forms of coping such as getting in touch with your spirituality have, according to Garfield, Spring and Ober (1995), a buffering effect in the progression from stress to burnout or growth. Social support (approval, esteem) that is available for the carer has also been found to play a role in moderating the effects of stress (Li, 2005). Therefore depending on the availability of and efficiency of these and other moderating and buffering factors, one expects stressors to become stress that will progress to burnout or resilience (growth). The expected relationship between stressors, stress- to-burnout/resilience is mapped in the model below.

**Figure 5: A composite theoretical model of stress**

### 3.2. Stress experience in HIV and Aids home-based care

Stressors of care-giving are plentiful and they range from direct physical stressors to economic stressors as a result of involvement in care-giving. Stressors may lead to a chain of experiences of stress such as physical strain, social stress and emotional stress. Uys (2003) asserts that stress experienced in HIV and Aids care giving is inherent in the nature of the work itself. Another view that supports this belief comes from Held and Brann (2007) who, though they admit that caring for others has gains both intrinsic (e.g., personal satisfaction) and extrinsic rewards (e.g., developing relationships), maintain that frustrations are more abundant and more consistently discussed.

Forms of physical stress involve the strain that goes with lifting and supporting patients, bathing them, doing house-chores and walking long distances to the homes of the sick or to fetch water to patients' homes (Campbell, Nair & Maimane, 2005). Akintola (2006a) also asserts that caregivers may also face risk of infection with tuberculosis or HIV.

Economic and material stress is another form of stress that results from low or no incentives, leaving them unable to meet their basic needs (Campbell et al., 2005).

UNAIDS and WHO (2006a), notes that of the 1176 registered home-based care organisations in South Africa with over 40,000 volunteer home-based caregivers, only one-third of them get government funding (Kehler, 2007). Therefore in South Africa, most volunteer workers, unlike professional community health workers do not receive payment for the work they do. Akintola (2004a) refers to a case where an NGO almost lost funding for a project when it included a stipend for volunteers in its proposal. The donor told the NGO to remove this cost factors or lose the funding. It is also affirmed that the financial strains on volunteers become worse when they find themselves spending their money to support their patients because of the situation of poverty that their care-receivers face.

Another form of stress is social stress associated with an HIV and Aids situation of the affected family (Hall, 2005; Holzemer et al, 2007). This form of stress results from stigmatisation of the family of the sick and all those who associate themselves with the family, including caregivers. However, this problem is slowly decreasing in intensity given the change in attitude associated with intensified HIV and Aids awareness programmes.

Stressors discussed by Held and Brann (2007) and Shaibu (2006) include becoming emotionally involved with the clients and internalising some of the hardships the clients experience. This goes with volunteers feeling bad for them or feeling sorry for them. Such emotional involvement may lead to experience of stress when the client neglects to follow-through with treatment.

Therefore, stress in caregiving is unavoidable and what makes a difference is how people react to the experience.

### **3.3. Coping with stress**

Lazarus and Folkman (1984) are amongst some of the authors who made a breakthrough into research on coping. The breakthrough was prompted by an

interest in how people adapt to adverse conditions, how people cope with stressful circumstances and how coping affects them in turn.

Coping strategies refer to the specific efforts, both behavioural and psychological, that people employ to master, tolerate, reduce, or minimise stressful events. Various views of coping are explored to come up with a personalised view of the construct.

Vatista's (2006) contribution involves three different levels of coping that are not necessarily linked: (1) Removing the stressors from the lives of individuals, (2) not allowing 'neutral' events to become stressors, developing a proficiency in dealing with situations we do not wish to avoid and (3) seeking diversion from the pressure(s) or by relaxation. Various coping strategies are used interchangeably in these three levels of coping.

According to the stress and coping paradigm (Doka & Davidson, 2001), the carer's coping style mediates between the impact of care-giving and psychological adjustment. In other words, coping, which changes to suit the emotional experience, serves as a shock absorber and its impact will depend on whether the coping style is effective or not. The outcome is either poor or good adjustment and burnout or resilience (Li, 2005).

The descriptions of coping highlight three key issues in coping: (1) That coping is an effort by the individual to either combat or avoid a stressful situation, (2) that coping serves as a mediator or buffer of the impact of stress and (3) that coping is a process that begins with an assessment of the situation. Another key issue is that while there are models that emphasise traits or styles as stable dispositions to cope in particular ways, irrespective of the situations, for others coping varies according to the type of stressors and the individual's situation.

Lazarus and Folkman (1984) defined coping in terms of problem-focused strategies and emotion-focused strategies. Problem-focused coping is defined as attempts at

solving or altering the problem and seeking information using cognitive or behaviour-focused strategies. Information gathered will be used to formulate a plan of action for eliminating or altering the stressor. Emotion-focused coping may deal with inherent negative emotions or distress and may include seeking others' company or denial of facts to distort reality, or looking on the bright side of things.

Skarsater, Denker and Bergbom (2003) agree with the definition and added that most types of stress usually require a combination of the two types of coping. Therefore, people use problem-focused coping when they feel that they can do something constructive to deal effectively with the stress. Emotion-focused coping is utilised when the person feels that the stress is overwhelming and unmanageable, and makes efforts to modify the distress that accompanies the stress by denying or by taking to drinking.

Researchers also discovered that similar coping strategies used to deal with stress in different contexts yield opposing outcomes. A study by Port (2006) carried out with a group of nursing professionals found that coping strategies oriented to control or actively solving the problem led to increased personal accomplishment. In another study by Prabha et al. (2004) and Port (2006) it was found that coping strategies geared towards avoidance related to decreased emotional exhaustion and decreased depersonalisation, as well as increased personal accomplishment in a group of secondary school teachers. Use of avoidance coping can easily produce positive outcomes in teaching where actively dealing with the problem will yield positive outcomes in a nursing situation. The same would be true for caregivers who operate in an environment similar to that of professional nurses.

The stress and coping paradigm as discussed in Coifman, Bonanno, Ray, & Gross does not recognise and address such differentiation of context. It says without mentioning situations that direct coping and the use of anti-depressants are associated with low

emotional distress and emotion-focused coping also called 'emotion regulation strategies' lead to high distress and poor adjustment (Coifman et al., 2007)

Therefore, the type of work caregivers do and the special conditions that affect them as volunteers mean that they will not necessarily use coping strategies found to be coping repertoires of caregivers in different conditions of work. The nature of the work carried out by caregivers allows them to distinguish and use active coping strategies to enable the caregiver to complete the task-related aspects of the job. Secondly, emotional coping strategies are important to help the caregiver deal with emotions associated with treating the terminally ill patient and facing the death of such a patient.

Another important aspect of coping is that the pre-existing factors and coping processes form an inter-related system or a feedback loop. The utilisation of the available, adequate coping strategies to deal with the stressors is followed by an evaluation of the outcome of the situation and a decision is made whether the consequences are good or not good. Now, the appraisal of the situation, available coping resources and the evaluation of the outcome determine what strategies the person will use, and what will become part of the individual's coping repertoire. Each successful coping attempt also strengthens the belief of the person in respect of his/her internal locus of control.

### **3.4. Stress, burnout and coping of volunteers in HIV and Aids home-based care**

Research shows that every day stressors that are not addressed as well as stress gradually undermine the caregiver's mental and physical health to cause what is described as 'burnout' (Armstrong, 2000). When the idea of burnout appeared for the first time in 1974, the term was used to explain the process of physical and mental deterioration in professionals working in areas such as teaching, health care, social work or emergency legal services (Freudenberger, 1985). Subsequently,

'burnout syndrome' defined is a sustained response to chronic work stress. The basis of this definition is, studies carried out with what is possibly the most commonly used self-report instrument in research on this phenomenon, the Maslach Burnout Inventory (MBI); (Maslach & Goldberg, 1998).

Different authors base the description of the process in the development of burnout on different circumstances. For example Burisch, (2006)'s model of the progression of stress to burnout starts with idealistic enthusiasm and ends with apathy and emotional exhaustion when care workers put high expectations on themselves and end up losing themselves in the work. Miller (2000) associates burnout with being in the same job for a long period. Prabha et al. (2004) and Port (2006) think that carers who work with Aids patients experience burnout as a function of concentrated exposure to the disease. Therefore, the term "burnout" will be used in this study to describe what happens to some volunteer caregivers when they have given out too much for too long and have, as a result, become overly drained.

Maslach and Goldberg (1998) and O'Neill and McKinney (2003) suggested three dimensions that explain burnout in care-giving. Firstly, they discuss a predominance of mental or emotional exhaustion, fatigue and depression that occur when there are physical symptoms that appear without organic base. These should not be confused with physical strains related to activities such as lifting. Secondly, they discuss depersonalisation, the interpersonal dimension of burnout whereby one feels drained and used up. This leads to a development of an "emotional buffer" or "detached concern" that may cause one to interact with others in a negative and cold-hearted manner. The third dimension is, reduced personal accomplishment, which comes from negative self-evaluation and a lowered self-esteem that often lead to feelings of inadequacy and a self-imposed verdict of failure. These three MBI-based factors, they argued, influence one another and each has a distinct relationship with environments and individual factors in the same way that stressors relate to individuals and their environments.

Volunteer caregivers, just like nurses, have a very rewarding but also very challenging task. Akintola (2008) refers to intrinsic rewards related to self-growth and personal (emotional and psychological) development on the job as well as satisfaction derived from recognition by community members who may express a need for their services. Nonetheless, caregivers work with patients who suffer immense physical and psychological pain that can wear down the optimism and motivation of any worker. When patients get worse instead of better, despite all the worker's skill and effort, burnout becomes a high probability for the caregiver. In addition, carers of HIV and Aids patients have to deal with more burdens that are associated with the epidemic, such as stigma, and this makes their work more challenging and more stressful.

In home-based care-giving, burnout can easily occur to carers who are faced with a multitude of stressors as a result of their wide job definitions. The services performed by volunteers include offers of respite to regular caregivers, house-hold errand running, meal preparation, recreational services, companionship, delivery, helping to ensure adherence to in-patient services, counselling, and taking care of own families or own lives. In a different tone, Akintola (2004a) contends that some of the stress experienced by volunteer caregivers is due, in part, to the experience of death and dying with the clustering of HIV and Aids in own families. That, for caregivers providing palliative care from home, this is a slow distressing and painful experience.

However, not all people are equally prone to be affected negatively by stress to the level of being burned out. Some people have inborn traits that help them to build-up strength in the face of adversities and others practice coping strategies that can prevent or reduce the negative impact of stress. This ability to grow and even to make headway in unfavourable circumstances is resilience. According to Bonanno (2004) people achieve resilience through repressive coping, hardiness and self-



enhancement. He asserts that while hardiness and self-enhancement are cognitive processes, repressive coping occurs as a result of emotion-oriented mechanisms, for example, emotional dissociation. Bonanno argues that repressors may report relatively few stress reactions in stressful situations though indirect measurements show fairly high stress reactions (2004). It is further mentioned that repressors manage it better in that even if they develop more physical symptoms, these disappear in the long term.

Some coping strategies have been found to be effective in reducing burnout, while other strategies have increased levels of burnout. These are findings by different researchers who had varying emphasis on associations between certain coping strategies and some dimensions of burnout. For example, Anderson (2000) found that individuals who used active coping strategies had less feelings of disparagement and their sense of professional efficacy increased. However, it did not save them from exhaustion. Using a sample of pharmacists, Storm and Rothman (2003) found that personal accomplishment (professional efficacy) was the only factor of burnout associated with coping strategies. Like Anderson, they also found that Active coping strategies were associated with higher levels of personal accomplishment, lower levels of disparagement, and higher levels of professional efficacy. Anderson (2000) found that workers who used avoidance coping strategies more, showed an increase in exhaustion. Mitchell and Hastings (2001) found that the use of disengagement coping strategies predicted both exhaustion and less positive feelings of professional efficacy.

Another form of coping that is needed especially by caregivers who treat terminally ill people is the proactive form coping used by hospice people. The hospice environment requires proactive coping strategies. According to Port (2006), proactive coping consists of efforts undertaken in advance of a potentially stressful event to prevent it or to modify its form before it occurs. Meaning that hospice workers have learnt to deal with the stress associated with dying patients who they

know are terminally ill. Another form of coping also used by hospice workers is the one suggested by Wakefield (2000), the masking of depression. This means that in an attempt to do their jobs, they hide their true feelings. According to Melnick (2002), this is not effective, because masking of depression is similar to repression. Melnick asserts that deep down the nurses feel that they have let their patients down even though they believe that they, as individuals have done their best, they feel guilt, anxiety and a loss of job satisfaction.

Spirituality has also been found to be helpful especially in palliative care (Lloyd-Williams, 2003). A sense of spirituality can be helpful to caregivers as they struggle to find meaning in what they are doing, as well as helping the sick to give meaning to what they are going through without attempting to change their situation (Byamugisha, Steinitz, Williams, & Zondi, 2002). Some researchers found that turning to Religion has come to the fore as denial (Mitchell & Hastings, 2001) and humour (Fortune, Richards, Griffiths & Main, 2002). Spiritual resources help people to cope with stress primarily through the appraisal process, by providing a perceptual framework that can help establish the meaning of a stressor in a larger context. Once meaning is given, one is then able to come up with acceptable coping techniques. Care-giving is also a spiritual practice where the real caregiver serves another and not the self. The spiritual approach helps both the carer and the cared for to care for their soul, which is the depth, value, relatedness, heart and personal substance. Lastly, being spiritual has been found to create a balance in the carer's life, helping him or her to be able to manage pain well. Therefore one can say that spirituality, intent and motivation, not the task, determine good care-giving.

Inborn traits or coping strategies of care-givers can work together to minimise the impact of stress. However, inborn traits or personalities and strategies can also counter each other and maximise the negative impact of stress if there is no fit between them. Another factor that has not been considered is the context. Forces in an environment can work against or help a healing process and result in the caregiving situation becoming more stressful or even easy for the caregiver, the

patient and other people. The relationship between stress and coping can thus not be described as a cause and effect phenomenon as it is very complex, and differs from situation to situation.

### **3.5. Demographic variables in care-giving stress, and coping**

Different researchers discuss the following demographic information:

Younger caregivers report more stressors, more manifestations of stress and fewer coping strategies. They have also reported higher degrees of burnout where increased job satisfaction is associated with older caregivers (Lloyd-Williams, 2003). According to Miller (2000), age is one of the variables that are significantly predictive of higher MBI scores with reliance on external coping mechanisms.

Akintola (2004a) found that women who experience a lot of burnout face a greater problem because of the nurturing role that they are traditionally expected to play. He further asserts that women find themselves playing the role of the carer even when they are also on the deathbed. Women do, as Flaskerud et al. (2000) found out, report higher care-giving burden than men do and, in most of the cases, they give care to people of the opposite sex. Men are, as is reported, easily overwhelmed by the problem of caring for sick people on their own. It is partly for this reason that there are such few male volunteer caregivers. In cases where they do help, they have been found to stick to transporting and carrying the sick ones when the need arises.

Commenting on the impact of working with HIV and Aids people, Prabha et al. (2004) postulate that stress in staff members may differ depending on any of these conditions: their training, previous experience, personality, gender and reason for working in the field, number of years and total work time spent working as an Aids care-giver. This therefore means that any attempt to study stress as experienced by caregivers should look at these variables as well.

Volunteers also experience system-related stressors such as low pay or no pay, poor working conditions, and low or no employee status because they work for non-profit making organisations, some with little or no source of income. This lack of

occupational security may easily lead to work overload. Various studies referred to above have related training needs to burnout and other consequences of occupational stress in volunteers caring for sick people. These studies have suggested that there are significant stresses and burnout associated with the fact that a majority of volunteers have not been adequately trained.

**Concluding remarks**

This chapter discussed stress and coping in detail to provide a theoretical foundation and clear conceptualisation of the constructs. In addition, the progression of stress to burnout or resilience, specifically within care-giving, has been discussed thoroughly. Coping has been found to play a moderating role in the process of stress. The next chapter will discuss the methodology for the study for empirical validation of the relationship.

## Chapter Four

### 4. Methodology

#### 4.1. Introduction

This chapter discusses the methodology for the study. Methodology is a set of systematic techniques used to address a research question. The techniques as discussed under research methodology include the rationale or logic behind and philosophical assumptions that underlie or guide the choice of these techniques in a manner that explains the researcher's ontological or epistemological views.

Research design is described as the plan that describes the conditions and procedures for collecting information (Mc-Millan & Schumacher, 2006). It is a tentative outline or as Kothari (2009) states, a conceptual structure of the proposed research.

Research method describes particular techniques that are chosen from the broad spectrum of methods to be used for the conduction of the research.

#### 4.2. The research question and research objectives

The research question to be answered here is: How does stress experienced in and out of work together with coping strategies (including some socio-demographic issues) relate to burnout and the resilience levels of volunteer caregivers in home-based care?

The research hypotheses and expectations are:

- I. Stressors in the form of care-giving experiences, challenges and unmet needs, employment status, dependants, hours spent at work, number of sick people in one's care, exposure to Aids-related deaths, and lack of support and training may distress and result in an experience of stress.
- II. In the absence of effective moderators or coping resources the stress can develop into burnout. Such burnout may lead to drop-outs or reduced

performance, ill-health or use of maladaptive coping such as use of drugs and alcohol for those carers who continue to give care.

- III. Burnout rates will have a strong negative correlation with resilience..
- IV. High burnout is associated with a high reduction of personal accomplishment and low resilience is also associated with high reduction in functioning.
- V. Younger caregivers score highly on stress levels. Differences in experience of work stress are also gender based and depend on cultural values, marital status, religious affiliation, training received, sources of income and number of patients that influence care-giving (Miller, 2000).

The answer will be obtained by:

Obtaining demographic profiles of home-based volunteer caregivers in HIV and Aids home-based care, which is, finding out about their age, gender, marital status, level of education and HIV and Aids training. An added demographic was determined by evaluating the participants' living standards and level of urbanisation using the 29 items of the Saarf Universal LSM of 2004 (Haupt, 2004). I will then establish the relationship between these demographics and the constructs Stress, Coping, Burnout and Resilience.

Assessing the relationship between stress (work -related, i.e., organisational functioning, task characteristics, physical working conditions, career matters, social matters, remuneration and non-work related stressors) and burnout (depersonalisation, emotional exhaustion and personal accomplishment)

Assessing the relationship between stress (work-related, i.e., organisational functioning, task characteristics, physical working conditions, career matters, social matters, remuneration and non-work related stressors) and total resilience.

Assessing the relationship between the coping strategies of volunteer caregivers and burnout

Assessing the relationship between the coping strategies of volunteer caregivers and total resilience and

Assess the relationship between work stress levels, coping strategies and burnout.

#### **4.3. The field of knowledge: Paradigms and epistemologies**

Trochim (2009) and Cousins (2002) identified three paradigms operating in social science: positivist, interpretive and constructivist paradigms. Each has a unique ontology and epistemology, and follows a differing methodology.

Paradigm is defined by Terre Blanche and Durrheim (1999, p.6) as “all-encompassing systems of interrelated practice and thinking that define for researchers the nature of their enquiry along three dimensions: epistemology, ontology and methodology”. Therefore, a paradigm is a system of thought, a basic belief system that guides scientists’ investigative actions.

As Trochim states, the term epistemology derives from the Greek word ‘episteme’ which means knowledge. Trochim (2009) describes epistemology as the branch of philosophy that studies the nature of knowledge, its foundations and its extent and validity. It specifies the nature of the relationship between the researcher (the knower) and what can be known, and is related to ontology and methodology. Ontology is a philosophy that addresses how different schools of scientific thought view reality. It specifies the nature of reality and what can be known about it. Methodology specifies how the researcher may go about practically studying whatever he or she believes can be known. Methodology identifies various practices used to attain knowledge of reality (Cousins, 2002).

Terre Blanche and Durrheim (1999, p.7) therefore state that, ‘paradigms help to determine questions researchers ask about constructs and how they go about answering them’. In the positivist paradigm that encompasses quantitative research, the object of study is independent of researchers. Knowledge is discovered and verified through empirical observation or by quantifying phenomena and critical

interpretation. The starting point would be to establish facts by taking apart an existing phenomenon to examine its factors parts. Here facts are observed phenomena and observation means what has been seen, heard or otherwise experienced by the researcher. A study that uses this approach is deductive-social as compared to inductive-social research. Inductive inquiry (also known as grounded research) is a model in which general principles (theories) are developed from specific observations. In deductive inquiry specific expectations of hypothesis are developed on the basis of general principles (i.e., social scientists start from an existing theory, and then search for proof.

Paradigms or points of view do not have to be mutually exclusive. Each has a role to play and each is better equipped to deal with differing research topics and situations. Therefore, the methodology chosen will depend on what the researcher is trying to do rather than on the commitment to a particular paradigm. Since this study is about testing theory rather than theory generation, this is what determined the paradigm that is suitable for the study.

#### **4.4. Research design and methodology**

A research design is an outline for conducting a study to maximise control over factors that could interfere with the validity of the findings (Burns & Grove, 2001, p.223). These authors also state that a research design also guides a researcher in planning and implementing the study in a way that is most likely to achieve the intended goal. The present study seeks answers by investigating the sources and levels of stress, burnout and resilience, as well as investigating coping and the relationship between stress and burnout/resilience and coping in HIV and Aids volunteers who do home-based care. The study also involved a collection of respondents' demographic data to determine the type of relationship that exists between stress, coping, burnout/resilience and volunteer biography.

##### **4.4.1. Descriptive and explorative designs**

According to Burns and Grove (2001), a descriptive research design provides an accurate portrayal or account of characteristics of a particular individual, situation or



group for discovering new meaning, describing what exists, determining the frequency with which something occurs and categorizing information. The important consideration in a descriptive study is to collect accurate information on the domain phenomena. The data collected are often quantitative, and statistical techniques are usually used to summarise the information.

Research is exploratory when you use no earlier model as a basis of your study. The most usual reason for using this approach is that you have no other choice. Normally you would like to take an earlier theory as a support, but there perhaps is none, or all available models come from wrong contexts. On the contrary, even when there *is* relevant theory and models, one may prefer not to use them. Reasons for this can be that: 1) one's goal is to document the object as completely as possible, not restricting the description to those topics that have been documented in earlier studies and 2) the object of study differs from all earlier studied objects. The goal of the study will be to describe its exceptional character which existing theories are unable to portray. In the light of existing theories the object of study appears as an inexplicable irregularity. 3) There is phenomenological pursuit into deep understanding and distrust on earlier descriptions and explanations. In this case the study is done as a survey to establish areas of concern (Walter, 2006).

This study therefore uses a combination of descriptive and exploratory research so that descriptive research can go further than examining the problem (establishing areas of concern) by ascertaining and describing the characteristics of the explored issue.

#### **4.4.2. Methodology: Quantitative research**

The research paradigm chosen for this inquiry is the 'quantitative' research paradigm. Quantitative research uses research questions that are focused and narrow, and seeks to obtain measurements of observable data on variables (Cresswell, 2003). The quantitative paradigm is characterised by an 'objectivist' approach, a belief that factual reality exists (Cresswell, 2003), and the relationship

between variables can be discovered through research. Pre-test theoretical information obtained through literature review is compared with post-test results.

#### **4.5. Research method**

The method involves a literature review and an empirical study. Literature review focuses on previous research that has been done on stress, burnout, coping and volunteerism. The results guided the present research on the relationship between stress, coping and burnout/resilience in volunteer care-giving.

##### **4.5.1. Study population and sampling**

###### **Population**

The focus of this study is the HIV and Aids community caregivers who work under NGOs that partner with SOS Children's Villages. The NGOs operate in Mamelodi (Gauteng), Ennerdale (Gauteng), Kwa-Magugu (Mpumalanga) and Pietermaritzburg (KwaZulu-Natal), Mathanjana (North West) and Sekhukhuni (Limpopo). Some of these NGOs that is, Mamelodi, Ennerdale and Pietermaritzburg are located in peri-urban township areas, while Kwa-Magugu, Mathanjana and Sekhukhuni are located in rural areas.

The population for this study is formed by non-professional people who volunteer of their own free will to do care-giving. They do not have any form of commitment, either by pledge or as a responsibility, as is the case with professional health workers and immediate, as well as extended family in some cultures. This category of caregivers offers help out of their own free will and they can stop being caregivers at any time without anyone accusing them of being neglectful or lacking commitment (Aggleton et al., 2005). They do not require any medical qualification even though they do get training in home-based care and community based care, as well as any other care-related training meant to promote home nursing. These volunteers are managed by NGOs.

## **Sampling**

Babbie and Mouton (2001) and Uys (2003) describe a sample as the number of units of the population that represents the characteristics of the population being studied. The authors also state that sampling is the process of selecting a portion of the population to represent the entire population.

Non-probability purposive convenience sampling was used to select participants for the study. Polit and Hungle (1999) state that non-probability sampling is the selection of subjects from a population using non-random procedures and that, in fact, non-probability sampling refers to an unknown level of probability of inclusion in the sample. Purposive sampling, sometimes called judgemental or theoretical sampling, is described by Haslam and McGarty (2003) and Mouton (2001) as a sampling method based on the judgement of a researcher regarding subjects that are typical or representative of the phenomenon being studied, or who are knowledgeable about the question at issue. Purposive sampling involves the conscious or subjective selection of the subjects by the researcher and is based on the belief that the researcher's knowledge about the population can be used to handpick the subjects to be included in the sample. The study used subgroups that are more readily accessible in the population, combining non-probability purposive sampling with some aspects of convenience sampling. Therefore, all volunteers within NGOs that partner with SOS CV were approached for participation in the study and those who were accessible were given questionnaires to complete.

One hundred and two (102) volunteer caregivers from six NGOs that partner with SOS CV were available to do the questionnaire. Similar studies that have used non-probability purposive sampling have also used a sample size between 100 and 200 (Vatiswa, 2006). There were between 15 and 22 participants from each of the 6 partnering NGOs. The researcher travelled to the different provinces where the NGOs are based. One is based in Mpumalanga, three in Gauteng (different) and two are in the North West provinces.

#### **4.5.2. Data collection process and instruments**

The study involves a collection of quantitative data on respondents' demographics, stress, coping strategies, burnout and resilience.

##### **Demographic information**

The study used a self-developed questionnaire to collect demographic information about age, gender, marital status, number of dependants, level of education, HIV and Aids care-related training and number of patients allocated to the individual. The income range for families of caregivers was determined by using the LSM, an instrument used in market research to divide populations according to wealth, degree of urbanisation, access to services, ownership of property, cars and other ornaments. The instrument is a checklist with 29 items that are allocated weights. The sum of all the weights of items ticked by test takers is then calculated and given a category that serves as an indicator of the level of income of each household.

##### **Stress**

Work-related and non-work related stress was measured using the Experience of Work and Life Circumstances Questionnaire (WLQ) by Van Zyl and Van der Walt (1991). The questionnaire was developed and tested in South Africa with fire fighters. As the authors state, the information from these questionnaires can be used to identify workers with high stress levels or to identify undesirable work characteristics.

The instrument is a self-rating questionnaire that gives an indication of stress levels and different possible causes of stress in the work situation. The first part of the questionnaire measures the way in which the job is experienced and gives an indication of the level of stress, measured on a five-point scale. The second part divided further into two sections measures circumstances and expectations of the job. The first subsection evaluates demands outside the work situation using one-scale covering matters such as family, finance, health, social situations, life space and transport. Demands from within the work situation are evaluated using six scales which are organisational functioning, task characteristics, physical working

conditions, career matters, social matters and remuneration. The questionnaire can be administered to individuals or a group.

### **Coping**

According to Ferguson (2001), coping can be assessed as a disposition, a trait, a style of dealing with challenges or an episodic indicator. Coping dispositions refer to tendencies of an individual to use a particular form of coping across a variety of stressful encounters. A person's coping ways can be determined by using a dispositional measure which is a manipulation that involves getting information about the person's daily life or by asking direct questions about how people dealt with a particular stress-evoking situation.

The brief form of the COPE questionnaire (Carver, 1997) was used to measure the coping strategies utilised by the volunteers included in this study. The questionnaire contains 28 items and evaluates 14 different coping strategies divided into 3 groups, namely problem-focused coping (active coping by taking action to deal with the stressor, thinking and planning on how to deal with the stressor, self-distraction, seeking instrumental support and information on how to deal with the stressor, religious activity, and making the best of the situation), Emotional Functioning (use of emotional support, positive reframing, acceptance and self blame) and dysfunctional functioning (venting of emotions, denial which is rejection of the reality of the stressor, behaviour disengagement by giving up, substance use to disengage from the stressor).

### **Burnout**

Maslach's Burnout Inventory (MBI) was chosen for this study to assess levels of burnout since it has been proven to be a reliable and valid instrument for measuring burnout (Lee & Ashforth, 1990, Maslach & Jackson, 1986).

### **Resilience**

Resilience was measured using a new rating scale, the Connor-Davidson Resilience scale (CD-RISC) which comprises 14 items. Each item is rated on a 7-point scale (0–7),

with higher scores reflecting greater resilience. Exploratory factor analysis suggested a possible three factor labelled as tenacity, strength and optimism (Connor & Davidson, 2003). These different factors were not considered as the scores to different items of the scale were added up to obtain a total resilience score and the higher the score, the stronger the resilience. This scale also showed high internal consistency (Cronbach's alpha = 0.92).

#### **4.5.3. Analysis**

Specifically, the following statistical analysis was done:

1. Determining frequency distributions and cross tabulations of the demographical variables of the research participants, for example, age, gender, marital status, level of education and HIV and Aids care-giving training and SU-LSM category.
2. Obtaining descriptive statistics (means and standard deviation) of the 8 Work and Life Circumstances Questionnaire subscales, the 3 subscales of coping strategies questionnaire, the 3 Maslach Burnout Inventory scales and resilience.
3. Cross-tabulations were performed to examine of frequencies of observations that belong to specific categories on more than one variable. By examining these frequencies, one can identify relations between cross-tabulated variables. Only categorical nominal variables or variables with a relatively small number of different meaningful values can be cross-tabulated. In the cases where a continuous variable was included, for example, it was first recoded into a particular number of distinct ranges (e.g., 1, 2, 3 and 4).
4. Reliability measures for the scales. Cronbach Alpha was used to assess reliability (internal consistency) of the scales of the four measuring instruments (Experience of Work and Life Circumstances, Brief Cope, Maslach and Resilience Scale).
5. Factor analysis of the scales and subscales to determine the factor structure of the instruments and the factor loadings of items in each factor. Factor

analysis was also performed on the whole model to determine subscales that hang together.

6. Inter-correlations (Pearson Product Moment) between Predictor variables (Stressors and Coping) and the Criterion (Burnout and Resilience). The measure gives an estimate of the degree and direction of the relations.
7. Multivariate analysis of variance to explore selected socio-demographics

#### **4.6. Research ethics**

Ethical standards of research were observed. The researcher is conversant with the ethical requirements for doing any social research as laid down by the professional Board for psychology or the HPCSA.

Firstly, clearance or permission to do the study was obtained from the directors and management of SOS CV and management of the partnering organisations. Secondly, a letter that includes a brief description of the study was sent to all potential participants and they were then contacted to set up appointments with time and place for the interview also agreed on.

Subjects are required to sign to sign an informed consent form before they can be used in the study. They should also be guaranteed confidentiality and anonymity. All information should be treated with confidentiality and be used only for the research purpose. Anonymity is ensured when participants are not required to give their names and any other identifying information. Completed questionnaires were dropped in a box that was provided. Participants who decided not to fill in the questionnaire were also asked to return the questionnaires and drop them in the box.

Other ethical factors found in the South African Medical Research Policy were also adhered to. They include: Autonomy (respect for the person – which is a notion of human dignity), beneficence (benefit to the research participant), non-maleficence (ensuring absence of harm to the research participant) and justice.

**Chapter summary**

This chapter discussed methodology. I described the research design, followed by research method and population sample. I also discussed the measuring instruments, data gathering, data processing and the selection and compilation of the sample. The empirical study should answer the research question that is also stated in this chapter.



## Chapter Five

### 5. Results

This chapter is an outline of a detailed description of the analysis and interpretation of data. All statistics were calculated using the Statistical Package for Social Sciences (SPSS 12). Frequencies and cross-tabulations are provided to describe the demographic and other descriptive measures of the participants. The internal reliability of the various questionnaires is discussed and construct validity for this group is investigated using factor analysis. Selected socio-demographics are explored using multivariate analysis of variance. Correlations and inter-correlations of all predictor and criterion variables are also investigated. These findings will then be discussed and interpreted in more detail in the next chapter.

#### 5.1. Socio-demographic data

The aim of this section is to provide some background information on the sample. It includes analysis of the socio-demographics which are age, gender, marital status, and church attendance, level of education, number of years in care, number of Aids patients allocated, living standard, and relevant training received.

##### 5.1.1. Frequencies and descriptive analysis

This is a brief presentation of frequencies and percentages for different socio-demographic variables. Mean and standard deviations are also given where it is found necessary. Sample sizes differ because of missing values. All missing values will be reported in respective tables.

**TABLE 5.1: Age distribution of the subjects**

Age		Frequency	Percent %
Valid	20—29	18	17.6
	30—39	30	29.4
	40—49	29	28.4
	50—59	20	19.6

	60 and more	5	4.9
	Total	102	100.0

Results show that age distribution of participants is almost even for all age ranges with the exception of over 60s with the lowest number of participants.

**TABLE 5.2: Gender**

		Frequency	Percent
Valid	male	6	5.9
	female	96	94.1
	Total	102	100.0

The sample consists mainly of women, and only 6% of the participant volunteer caregivers are male.

**TABLE 5.3: Marital status**

	Frequency	Percent
married	38	37.3
Single	45	44.1
divorced	2	2.0
widowed	3	2.9
separated	7	6.9
living together	7	6.9
Total	102	100.0

Results show that the greatest percentage of caregivers is single, followed by those who are married. Very few people are divorced or widowed or living together.

**TABLE 5.4: Church attendance**

	Frequency	Percent
I don't go to church	13	12.7
at least once a year	11	10.8

once a month	25	24.5
Weekly	53	52.0
Total	102	100.0

A sizeable number of participant caregivers (52 %) attend church weekly while 25% go monthly, and the lowest numbers either do not go to church (13%) or attend church once a year (11%).

**TABLE 5.5: Level of education**

		Frequency	Percent
	below Grade 10	35	34.3
	Grade 10–11	38	37.3
	Grade 12	27	26.5
	diploma	1	1.0
	university degree/s	1	1.0
	Total	102	100.0

The majority of participants, approximately 72% studied only up to Grade 11, 27% have Grade 12 while only 2% of them studied beyond Grade 12.

**TABLE 5.6: Home-based care training 1–3, training in counselling, training in HIV and Aids, first aid training and other care-related training (home care, 69/59 days, IMCI, Project Management, mother and child course, other**

	Home -based care training 1–3	Training in counselling	Training in HIV and Aids	First aid training
Duration of training	Frequencies and percentages			
No training	62 (60.8%)	60 (58.8%)	53 (52 %)	49 (48%)
1-day training	10 (9.8%)	1 (1.0%)		
1-week training	12 (11.8%)	4 (3.9 %)	13 (12.7%)	9 (8.8%)
2 to 3 weeks training	8 (7.8%)	30 (29.4%)	27 (26.5%)	21 (20.6%)
1–2 months training	7 (6.9%)	2 (2.0 %)	8 (7.8%)	23 (22.5%)
3 months training	2 (2.0%)	1 (1.0%)	1 (1.0%)	
6 to 12 months training	1 (1.0%)	4 (3.9 %)		

A list of frequently done training was given (home-based care, counselling, HIV and Aids and First Aid) and participants were requested to indicate the form of training they received and how long the training lasted. As shown in the table above, a high percentage (49% to 61%) of the caregivers reported that they did not receive training in any of the listed aspects of training. A considerable number 5% (counselling) and 22% (home-based care) received short training that lasted one day or one week. Participants were also asked to list other forms of training that they received. The list of other training was then compiled (home care, 69/59 days, Project Management, mother and child course, other care-related training). 45% of the caregivers did not give other subjects that they were trained in. Some people indicated that they had one more HIV and Aids-related training (29 %), others gave two (23 %) as shown in the table above. Those who gave three more HIV and Aids-related training were 2% and only 1 % of the participants received four more HIV and Aids related training from the list.

**TABLE 5.7: Aids patients allocated to a caregiver**

Number of patients	Frequency	Percent
0—5	58	57
6—10	36	35
11 and more	8	8
Total	102	100.0

58% of the caregivers reported that they were allocated less than 5 patients while 35% have between 5 and 9 patients and only 8% have more than 10 patients. The mean is 5.57 with standard deviation of 3.82

**TABLE 5.8: Number of years in care**

Years in care	Frequency	Percent
0–5 years	54	52.9
6–10 years	43	42.2
11–15 years	5	4.9
Total	102	100.0

Only 5% of the participants have been volunteer caregivers for more than 10 years. 42% of them have been in care for more than 5 years but less than 10 years and 53% have done this job for less than 5 years. On average, caregivers have cared for approximately six years where the mean number of years in care is 5.79 (SD=3.24).

**TABLE: 5. 9: Number of dependants**

Number of dependants	Frequency	Percent	Cumulative Percent
0	4	3.9	3.9
1	5	4.9	8.8
2	8	7.8	16.7
3	24	23.5	40.2
4	21	20.7	60.8
5	18	17.6	78.4
6	10	9.8	88.2
7	9	8.8	97.1
8	2	2.0	99.0
13	1	1.0	100
Total	102	100.0	

The table shows that a considerable number of caregivers live in households with between 0 and 4 dependants (children, adults and elders) and the scale registered a mean of 4.11, with standard deviation of 2.02.

**TABLE 5.10: Socio-economic: Living Standard Measure**

Description of life	Standard of life	Frequency	Percent
a) Household income R0—R1794.81- Rural, poor access to services, poor ownership of durables, radio, small house	Extremely poor	4	3.9
b) Household income R1794.81—R2535.68- semi-urban, electricity, water, flush toilet, TV set,	Very poor	24	23.5
c) Household income R2535.68—R3122.33 — above plus hot running water and one cell phone	Poor	20	19.6
D) Household income R3122.33—R5386.00 - c, plus more cell phones,	Medium	34	33.3
e) Household income R5386.00—R8667.33 - c, d, plus electronics	Above medium	9	8.8
f) Household income R8667.33-R12336.69 - c, d, e plus motor vehicle	Good	5	4.9
g) Household income R12336.69-R16296.05 and more – c, d, e, f plus DSTV, PC,	Very Good	4	3.9

The table shows that a considerable number of caregivers (47%) stay in poor to extremely poor households. 33% of the caregivers come from households with a medium standard of life and 18% of them live in households with an above medium standard of life. Those with good to very good living standards make 8.8% of the caregivers.

**TABLE 5.11: Number of breadwinners including the self**

Number of breadwinners	Frequency	Percent
0	3	2.9
1	37	36.3
2	50	49.0
3	11	10.8
6	1	1
Total	102	100.0

The outcome of this scale showed that a majority of caregivers, 49%, come from households that have two breadwinners whereas 39% are from households with

only one breadwinner. Almost 12% of the households have more than three breadwinners.

From the tables above it was found that almost all the caregivers, 94%, are female. There is an even distribution of caregivers between the ages 20–39 and 40–59, with very few of the caregivers (5%) being over the age of 60. A considerable group that makes up 45% of the caregivers consists of single people followed by another significant group that makes 38% who are married people. A majority of them, that is 47% of the caregivers, reportedly come from poor households and 42% have medium to above-medium living standards. About 39% are from households with no or only one breadwinner including the caregiver while 49% are from households with two breadwinners including the caregiver. Most of these households making 60.8% are small families with 0–4 dependants. Many (78%) attend church weekly or monthly while very few do not go to church at all. 73% are below grade 11 and the majority of them, that is 50% and above, did not have training in home-based care or counselling or HIV and Aids or First Aid. Another sizeable number (42%) did not have training in any other HIV and Aids-related field. About 53% of volunteer caregivers have been in care for less than five years and 47% have done care work for more than six years. Lastly, a considerable number (58%) are responsible for 0–5 patients and 36% care for 6–10 patients.

Questions that emanate from the tables in section 5.1.1 above will then be answered using cross tabulations. Some of the questions are: What percentage of younger/older caregivers are single and what percentage of them are married, Does the majority of poor caregivers come from families with one or two breadwinners, do these poor caregivers come from specified NGOs?

### **5.1.2. Cross-tabulations across age groups**

This analysis was done to compare age groups according to scores in living standard, marital status by NGO, number of dependants, breadwinners, level of education and number of years in care. Other factors: gender, church attendance and training will

not be considered for cross-tabulation because they did not come out strongly as sources of differentiation.

**TABLE 5.12: Comparing age groups by SU-LSM range**

	Living Standard Measure	20–29 yrs	30–39 yrs	40–49 yrs	50–59 yrs	> = 60 yrs	Total
SU-LSM group	Extremely poor	3 (16.7%)	0	0	1 (5.3%)	0	4
	Very poor	3 (16.7%)	12 (40%)	6 (20%)	3 (15.8%)	1 (20%)	25
	Poor	6 (33.4%)	3 (10%)	11 (36.7%)	1 (5.3%)	0	21
	Medium	2 (11.1%)	11 (36.7%)	8 (26.7%)	11 (57.8%)	2 (40%)	34
	Above medium	2 (11.1%)	1 (3.3%)	2 (6.7%)	2 (10.6%)	2 (40%)	9
	Good	1 (5.6%)	0	3 (10%)	1 (5.3%)	0	5
	Very Good	1 (5.6%)	3 (10%)	0	0	0	4
		18	30	30	19	5	102

This table shows that 68.8%, 50% and 66% of caregivers in the ages 20–29, 30–39 and 40–49 years come from poor to extremely poor households while 26% of young caregivers between 20 and 39 are from households with good to very good standards of life. About 69.7% and 80% of the elderly caregivers between 50–59 and 60 and above years of age are from households with good to medium living standards.

**TABLE 5.13: Comparing age groups by marital status**

		20–29 yrs	30–39 yrs	40–49 yrs	50–59 yrs	> = 60 yrs	Total
Marital status	Married	2 (11.1%)	8 (26.7%)	18 (60%)	9 (47.4%)	1 (20%)	38
	Divorced	0	0	1 (3.3%)	0	1 (20%)	2
	Widowed	0	0	1 (3.3%)	0	2 (40%)	3
	Separated	0	2 (6.6%)	1 (3.3%)	4 (21%)	0	7
	Living together	1 (5.6%)	2 (6.6%)	0	3 (15.8%)	1 (20%)	7
	Single	15 (83.3%)	18 (60%)	8 (26.7%)	4 (21.1%)	0	45
		18	30	30	19	5	102 (100%)



This table shows that the majority of younger caregivers (83.3% and 60%) who are in the age ranges 20–29 and 30–39 are single. Most (60% and 47%) of the older caregivers in the ages 40–49 and 50–59 are married and 60% of the oldest Caregivers are either divorced, separated or living together.

**TABLE 5.14: Comparing age groups by NGO**

		20–29 yrs	30–39 yrs	40–49 yrs	50–59 yrs	> = 60 yrs	Total
<b>NGO</b>	<b>NGO 1 (1–16)</b>	4 (22.2%)	6 (20%)	2 (6.6%)	4 (21.1%)	0	<b>16</b>
	<b>NGO 2 (17–35)</b>	8 (44.4%)	4 (13.2%)	5 (16.7%)	2 (10.5%)	0	<b>19</b>
	<b>NGO 3 (36–52)</b>	6 (33.3%)	6 (20%)	4 (13.2%)	1 (5.3%)	0	<b>17</b>
	<b>NGO 4 (53–67)</b>	0	5 (16.7%)	3 (10%)	3 (15.8%)	0	<b>11</b>
	<b>NGO 5 (68–80)</b>	0	4 (13.2%)	6 (20%)	3 (15.8%)	0	<b>13</b>
	<b>NGO 6 (81–103)</b>	0	1 (3.3%)	9 (30%)	7 (36.8%)	5	<b>22</b>
		<b>18</b>	<b>30</b>	<b>30</b>	<b>19</b>	<b>5</b>	<b>102</b>

All the young caregivers between 20 and 29 come from NGOs 1, 2 and 3 and the majority of caregivers between 30 and 39 come from NGOs 1 and 3. Many caregivers who are between 40 and 49 years of age are from NGOs 5 and 6. Caregivers from NGO 4 are distributed between ages 30 and 59. NGO 1 also has a considerable number of caregivers in the ages 50–59 that makes up 21% of the caregivers in this age group.

**TABLE 5.15: Comparing age groups by number of dependants**

		20–29 yrs	30–39 yrs	40–49 yrs	50–59 yrs	> = 60	Total
<b>Dependants</b>	<b>0</b>	0	2 (6.7%)	1(3.4%)	0	1 (20%)	<b>4</b>
	<b>1</b>	4 (22.2%)	1(3.6%)	0	0	0	<b>5</b>
	<b>2</b>	0	2(6.7%)	4(13.8%)	2 (10%)	0	<b>8</b>
	<b>3</b>	4 (22.2%)	6 (20%)	8(27.6%)	3 (15%)	3(60%)	<b>24</b>
	<b>4</b>	4 (22.2%)	11 (36.7%)	4(13.8%)	1 (5%)	1 (20%)	<b>21</b>
	<b>5</b>	4 (22.2%)	2 (6.7%)	5 (17.2%)	7 (35%)	0	<b>18</b>
	<b>6</b>	2 (11.1)	3 (10%)	3 (10.3%)	2 (10%)	0	<b>10</b>
	<b>7</b>	0	3 (10%)	3 (10.3%)	3 (15%)	0	<b>9</b>
	<b>8</b>	0	0	1 (3.4%)	1 (5%)	0	<b>2</b>
	<b>13</b>	0	0	0	1 (100%)	0	<b>1</b>

The majority of the caregivers in the ages 20–29 (66.6%), 30-39 (73.3%) and 40–49 (58.8%) come from households with between 1 and 4 dependants. Most of the older caregivers, 50–59 (65%) and 60 and above (80%), come from households with 5 and more dependants.

**TABLE 5.16: Comparing age groups by number of bread winners in the family**

		20–29 yrs	30–39 yrs	40–49 yrs	50–59 yrs	> = 60	Total
<b>Number of bread winners</b>	<b>0</b>	0	1 (3.3%)	1 (3.3%)	4 (21.1%)	0	<b>3</b>
	<b>1</b>	4 (22.2%)	10 (33.3%)	13 (43.3%)	6 (31.6%)	4 (80%)	<b>37</b>
	<b>2</b>	10 (55.5%)	15 (50%)	13 (43.3%)	11 (57.8%)	1 (10%)	<b>50</b>
	<b>3</b>	4 (22.2%)	4 (13.2%)	2 (6.6%)	4 (21.1%)	0	<b>14</b>
	<b>6</b>	0	0	0	1 (5.3%)	0	<b>1</b>
		<b>18</b>	<b>30</b>	<b>30</b>	<b>19</b>	<b>5</b>	<b>102 (100%)</b>

The majority of caregivers in age groups from 20 to 59 come from households with more than two breadwinners including the care giver and 80% of the over 60s belong to households that have one breadwinner, including themselves.

**TABLE 5.17: Comparing age groups by level of education**

		20–29 yrs	30–39 yrs	40–49 yrs	50–59 yrs	> = 60	Total
Level of education	Below Grade 10	4 (22.2%)	7 (23.3%)	7 (23.3%)	12 (63.2%)	5 (100%)	35 (34%)
	Grade 10–11	8 (44.4%)	10 (33.3%)	14 (46.6%)	6 (31.6%)	0	38 (37%)
	Grade11–12	6 (33.3%)	13 (43.3%)	7 (23.3%)	1 (5.3%)	0	27 (27%)
	Diploma	0	0	0	1 (5.3%)	0	1 (1%)
	Univ. Degree	0	0	1 (3.3%)	0	0	1 (1%)

This table shows that caregivers in all age groups studied up to Grade 11 and the older caregivers group studied only up to Grade 10.

**TABLE 5.18: Comparing age groups by number of years in care**

		20–29 yrs	30–39 yrs	40–49 yrs	50–59 yrs	> = 60	Total
Years of care	1–5 year	15 (83.3%)	21 (69.9%)	11 (36.7%)	7 (7%)	0	54 (54%)
	6–10 years	3 (16.6%)	7 (23.3%)	16 (52.8%)	12 (63.2%)	5 (100%)	43 (43%)
	11–15	0	2 (6.6%)	2 (6.6%)	1 (5.3%)	0	5
	Total	18 (18%)	30 (29%)	30 (28%)	19 (20%)	5 (5%)	102 (100%)

Many caregivers in the age ranges 20–29 and 30–39 have been in care for less than five years and older caregivers cared for six and more years.

The tables above show that the majority of younger caregivers 66.8% and 50% who are in the age range 20–29 and 30–39 belong to households categorised as poor to extremely poor while there is a small percentage who are from households with good to very good living standards. About 83% of the caregivers in the age range 20–29 are single and 88% of them are from families that have 1–5 dependants. On the contrary, a higher percentage of caregivers who are in the age range 40–49 and 50–59 and over 60s (that is 53.4%, 74.7% and 80%) are found in households with higher living standards. A majority of these caregivers are found in NGOs 6 and 5 and make up 95.5% and 69.2% of the caregivers in these NGOs. 69.9% of these 40–49 year olds

and 94.8% of the 50–59 year olds have low education levels of below grade 11. Most of them are married, have 1–4 dependants and they live in households where there is only one breadwinner. 59.4% of 40–49 year olds and 68.6% for the 50–59 year olds stayed in volunteer care-giving for more than 6 years.

More cross tabulations are discussed below.

### 5.1.3. Cross-tabulations across NGOs

In this case the intention was to determine whether marital status, living standard, number of dependants and patients allocated, as well as number of years in care differ per NGO.

**TABLE 5.19: Comparing NGOs by marital status**

		NGO 1	NGO 2	NGO 3	NGO 4	NGO 5	NGO6	Total
<b>Marital Status</b>	<b>Married</b>	8 (50%)	7 (36.8%)	4 (23.5%)	4 (26.7%)	8 (61.7%)	7 (31.8%)	<b>38 (37%)</b>
	<b>Divorced</b>	0	0	0	0	1 (7.7%)	1 (4.5%)	<b>2 (2%)</b>
	<b>Widowed</b>	0	0	1 (5.6%)	0	0	2 (9.1%)	<b>3 (3%)</b>
	<b>Separated</b>	0	0	1 (5.6%)	0	1 (7.7%)	5 (22.7%)	<b>7 (7%)</b>
	<b>Living together</b>	1 (6.3%)	1 (5.3%)	1 (5.6%)	1 (6.7%)	1 (7.7%)	2 (9.1%)	<b>7 (7%)</b>
	<b>Single</b>	7 (43.7%)	11 (57.9%)	10 (58.8%)	10 (66.7%)	2 (15.4%)	5 (22.7%)	<b>45 (44%)</b>
	<b>Total</b>	<b>16</b>	<b>19</b>	<b>17</b>	<b>15</b>	<b>13</b>	<b>22</b>	<b>100</b>

A greater percentage of caregivers in NGO 2, NGO 3 and NGO 4 (58%, 59% and 67%) are single. NGOs 1 and 5 have high percentages (50%, 62%) of married people.

**TABLE 5.20: Comparing NGOs by standard of living**

		NGO 1	NGO 2	NGO 3	NGO 4	NGO 5	NGO6	Total
<b>SU LSM group</b>	Extremely poor	1 (6.3%)	2 (10.5%)	1 (5.6%)	1 (6.7%)	0	0	<b>4 (4%)</b>
	Very poor	1 (6.3%)	2 (10.5%)	7 (41.8%)	7 (46.7%)	6 (46.2%)	2 (9.1%)	<b>24 (24%)</b>
	Poor	4 (25.0%)	1 (5.3%)	5 (29.4%)	1 (6.7%)	5 (38.5%)	4 (18.2%)	<b>20 (20%)</b>
	Medium	5 (31.3%)	5 (26.3%)	4 (23.5%)	5 (33.3%)	2 (15.4%)	13 (59.1%)	<b>34 (34%)</b>
	Above medium	3 (18.8%)	3 (15.8%)	0	1 (6.7%)	0	2 (9.1%)	<b>9 (9%)</b>
	Good	0	4 (21.5%)	0	0	0	1 (4.5%)	<b>5 (5%)</b>
	Very good	2 (12.5%)	2 (10.5%)	0	0	0	0	<b>4 (4%)</b>
	<b>Total</b>	<b>16</b>	<b>19</b>	<b>17</b>	<b>15</b>	<b>13</b>	<b>22</b>	

According to the table, in NGO 1, NGO 2 and NGO 6 where the caregivers stay in semi-urban areas or townships, the largest number of people 50%, 42% and 68% respectively come from households with medium to above-medium living standard. Moreover, NGO 6 has a bead-work project that generates some form of income for the volunteer caregivers. NGO 3 is in an informal settlement while NGOs 4 and 5 are in rural areas. The largest numbers of caregivers in these NGOs 77.1%, 60% and 85% live in households categorised as poor to extremely poor. NGO 1 has a distribution of house hold income groupings from low (extremely poor) to high (very good). The caregivers come from different residential areas. Some of them are from semi-urban townships with brick houses and some infrastructure while others are from surrounding rural areas and live in shacks.

**TABLE 5.21: Comparing NGOs by number of dependants**

<b>Dependants</b>	<b>NGO 1</b>	<b>NGO 2</b>	<b>NGO 3</b>	<b>NGO 4</b>	<b>NGO 5</b>	<b>NGO 6</b>	<b>Total</b>
<b>0</b>	0	0	3(17.6%)	0	0	1(4.5%)	4
<b>1</b>	2(2.5%)	1(5.3%)	1(5.9%)	1(6.7%)	0	0	5
<b>2</b>	1(6.3%)	1(5.3%)	1 (5.9%)	2(13.3%)	1(7.7%)	2(9.1%)	8
<b>3</b>	3 (18.8%)	6 (31.6%)	2 (11.8%)	4 (26.7%)	3 (23.1%)	6 (27.3%)	24
<b>4</b>	4 (25.0%)	3 (15.8%)	4 (23.5%)	3 (20.0%)	3 (23.1%)	4 (18.2%)	21
<b>5</b>	2 (12.5%)	2 (10.5%)	2 (11.8%)	3 (20.0%)	4 (30.8%)	5 (22.7%)	18
<b>6</b>	3 (18.8%)	2 (10.5%)	3 (17.6%)	1 (6.7%)	0	1 (4.5%)	10
<b>7</b>	1 (6.3%)	3 (15.8%)	1 (5.9%)	1 (6.7%)	1 (7.7%)	2 (9.1%)	9
<b>8</b>	0	1 (5.3%)	0	0	0	1 (4.5%)	2
<b>13</b>	0	0	0	0	1 (7.7%)	0	1
<b>Total</b>	<b>16</b>	<b>19</b>	<b>17</b>	<b>15</b>	<b>13</b>	<b>22</b>	<b>102</b>

The number of dependants is comparable in different NGOs with an almost even distribution between 1–4 dependants per NGO. The percentages are (NGO 1)52.6, NGO 2 (58), NGO 3 (64.7), NGO 4 (66.7), NGO 5 (53.9) and NGO 6 (54.6).

**TABLE 5.22: Comparing NGOs by number of patients allocated**

		NGO 1	NGO 2	NGO 3	NGO 4	NGO 5	NGO6	Total
<b>Patients</b>	<b>0</b>	1 (6.3%)	1 (5.3%)	1 (5.6%)	0	0	0	<b>3 (3%)</b>
	<b>1–5</b>	15 (93.7)	2 (10.5%)	6 (35.3%)	11 (73.3%)	8 (61.7%)	13 (59.1%)	<b>54(53%)</b>
	<b>6–10</b>	0	16 (84.2%)	4 (23.5%)	4 (26.7%)	5 (38.5%)	3 (13.6%)	<b>35 (34%)</b>
	<b>11–25</b>	0	0	2 (11.8%)	0	0	6 (27.3%)	<b>8 (8%)</b>
	<b>Total</b>	<b>16</b>	<b>19</b>	<b>17</b>	<b>15</b>	<b>13</b>	<b>22</b>	<b>100</b>

Most of the caregivers in NGOs 1, 4, 5 and 6 have fewer patients ranging between 1 and 5 though NGO 6 also has 6 caregivers who are allocated many patients (11–15 patients). A majority (84%) of caregivers in NGO 2 have many patients (6–10)

**TABLE 5.23: Comparing NGOs by number of years in care**

		NGO 1	NGO 2	NGO 3	NGO 4	NGO 5	NGO6	Total
<b>Years in care</b>	<b>1–5 year</b>	16 (100%)	12 (63.2%)	13 (76.5%)	2 (33.3%)	6 (46.2%)	2 (10%)	<b>51 (50%)</b>
	<b>6–10 years</b>	0	7 (36.8%)	4 (23.5%)	10 (66.7%)	5 (38.5%)	20 (90%)	<b>47 (46 %)</b>
	<b>11–15years</b>	0	0	0	3	2 (15.4%)	0	<b>5(4%)</b>
	<b>Total</b>	<b>16</b>	<b>19</b>	<b>17</b>	<b>15</b>	<b>13</b>	<b>22</b>	<b>102</b>

As can be seen, some organisations such as NGO 1, 2 and 3 have caregivers with very short years of service. NGOs 3 and 4 have a majority of longer-serving caregivers and in NGO 5 caregivers have varying years of service from short to long.

TABLE 5.24: Comparing NGOs by level of education

		NGO 1	NGO 2	NGO 3	NGO 4	NGO 5	NGO6	Total
Level of education	Below grade 10	10 (62.5%)	3 (15.8%)	1 (5.9%)	2(13.3%)	3 (23.1%)	16 (72.7%)	35 (34.3%)
	Grade 10–11	4 (25%)	13 (68.4%)	7 (41.2%)	5(33.3%)	6 (46.2%)	3 (37.3%)	38(37.3%)
	Grade 12	0	3 (15.8%)	9 (52.9%)	8 (53.3%)	4 (30.8%)	3 (13.6%)	27 (26.5%)
	Diploma	1 (6.3%)	0	0	0	0	0	1 (1%)
	Univ. degrees	1 (6.3%)	0	0	0	0	0	1 (1%)
	Total	16	19	17	15	13	22	102

The majority of caregivers who reported low levels of education come from NGOs 1 and 6 while most of the caregivers with grade 12 come from NGOs 3 and 4.

TABLE 5.25: Comparing NGOs by type of training

		NGO 1	NGO 2	NGO 3	NGO 4	NGO 5	NGO6
Home-based care	No	1	4	12	11	13	21
	< 1 week	14	5	2	1	0	0
	2–3 weeks	0	6	0	1	0	0
	1–2 months	1	4	0	2	0	0
	> 3months	0	0	3	0	0	0
Counseling	No	14	14	16	2	6	8
	<1 week	0	1	1	1	0	1
	2–3 weeks	0	4	0	7	6	13
	1–2 months	0	0	0	2	0	0
	> 3months	2	0	0	3	0	0
First aid	No	16	6	15	4	4	4
	1 week	0	5	1	3	0	0
	2–3 weeks	0	7	1	4	7	2
	1–2 months	0	1	0	4	2	16



	> 3months	0	0	0	0	0	0
HIV and Aids	No	14	15	10	2	8	4
	1 week	1	3	7	2	0	0
	2–3 weeks	0	1	0	5	5	16
	1–2 months	0	0	0	6	0	2
	>3months	1	0	0	0	0	0
Other	No	3	7	5	6	7	18
	1 more	4	10	4	8	3	1
	2 more	8	2	7	1	2	3
	3 more	1	0	1	0	0	0
	4 more	0	0	0	0	1	0

According to the information in this table, caregivers in NGOs 1, 2 and 3 reported no or low training in the three different aspects related to care-giving. NGO 6 reported fair training in all areas. The other NGOs reported fair levels of training in the chosen areas that are related to care. In all the NGOs many people reported that they had more other HIV and Aids-related training with the exception of NGO 6 where only 4 caregivers reported more types of training.

From the tables above one can deduce that some NGOs have high percentages of single caregivers (2, 3 and 4) while the majority in NGOs 1 and 5 are married. NGOs 1, 2 and 6 are in semi-urban areas and live in households with medium living standards whereas NGOs 4 and 5 are in rural areas and have poor to very poor living standards. Only NGO 2 caregivers have, on average, the highest workload with many patients. These caregivers also work night shifts at a hospice that has 28 terminally ill patients. The hospice patients could not be counted as being allocated to individuals because they are shared. NGOs 1, 2, 3 and 5 have many short-serving caregivers while the other two NGOs (4 and 6) have longer serving caregivers. Levels of education and training have been compared. It was found that there are NGOs that have poor levels of education (below grade 10) and poor or no training opportunities

(example NGO 1). Others have education levels between grade 11 and 12 with fair training (example NGO 4). Others have a combination of poor education with fair training, such as NGO 6, and there are those with education above grade 11 with poor training, such as NGOs 2 and 3. NGOs have different lengths of service which are found to be associated with the age of the NGO. For example, NGO 1 is a very young organisation while NGO 6 is much older. All caregivers in NGO 1 have the least number of patients of between 0 and 5 and are the shortest-serving caregivers (0–5 years). Yet, NGO 4 has the highest number of longest-serving caregivers (11–15 years) with a majority of the caregivers who are allocated very low numbers of patients (0–5 patients).

In summary, the tables above provided frequencies and comparisons of socio-demographic data to help us understand characteristics of the sample. It has been found that the majority of caregivers are female with an even distribution of age ranges from 20 to 59 for NGOs. Very few caregivers are above the age of 60. The caregivers are either single or married, with some NGOs having more single caregivers while others have more married caregivers. There are caregivers who are from households with poor or no sources of income and poor living standards. It has also been noted that many younger caregivers who are below the age of 39 are single and come from households classified as poor. Older caregivers have low education levels, most are married but they come from households with medium to above-medium living standards. Considering geographical areas of NGOs, it can be said that most of the caregivers from poor households belong to NGOs in rural areas. Compared with these caregivers, those who are from semi-urban areas have higher living standards (medium to above medium). Others still have better living standards because they have income generating projects that they are involved in to enhance their economic situation. Levels of education and relevant training also differ by NGO. There are caregivers who have low levels of education and have had poor or no work-related training. Others have higher levels of education of up to grade 12 and had a chance for fair work-related training. Work loads also differ per NGO. There are NGOs with a combination of poor levels of education and fair levels of

training and those with higher levels of education with poor training. Some caregivers, again depending on their NGOs, have high workloads with many patients to care for. NGOs have different lengths of service which are found to be associated with the age of the NGO. Lastly, most of the families of our caregivers are not big, with 1 to 4 dependants.

What follows is an examination of psychometric properties of the tests and measurement scales based on the sample.

## **5.2. Internal reliability and construct validity**

The reliability of scales has to be ensured with the study's sample because Carver (1997) reported that different samples can exhibit different characteristics. For this purpose, Cronbach Alphas and inter-item correlations are determined. A measure of 0.7 and above for bigger scales and 0.5 for smaller scales is recommended as an indication that the scale has internal consistency and therefore reliability (Streiner, 2003). Descriptive statistics, Alpha coefficients and inter-item correlations of the predictor and criterion variables for the whole group are given in the tables and outcomes are discussed below each table.

Validity is considered the most important quality of a measured variable. Construct validation of a measure is investigated whenever the universe of content (set of items used to define the attribute measured) is accepted as inadequate to define the quality of the construct measured (Clark & Watson, 1995). Construct validity determines whether the test measures attributes or construct that it purports to measure without bias.

There are several methods of construct validation; where one of them is group differences, due to expectations that different groups will have different scores for the construct that is measured. One can also use correlation matrices and factor analysis. Exploratory factor analysis is used to investigate interrelationships among a set of variables and confirmatory factor analysis is a way to confirm specific relationships using factor loadings. For factor extraction, Principal axis factoring (Kaiser-Meyer-Olkin), uses Eigenvalues and the Scree-plot techniques. Factors with

eigenvalues of 1.0 or more can be retained for further investigation. In the scree-plot, the plot is studied to find a cut-off point at which the curve changes direction drastically. Once the factors are extracted, Varimax factor rotation is used to get a pattern of loadings for interpretation and to name the factors comprising the grouped factors. According to Field (2000), one way to understand the process of factor rotation is to imagine that factors are axes in a graph on which original variables load. Rotation alters the pattern of factor loadings to improve interpretation. Varimax rotation is a form of orthogonal rotation used when no correlation between extracted factors is necessary.

### **5.2.1. Internal reliability and construct validity of the Work and Life Circumstances Questionnaire**

#### ***5.2.1.1 The internal reliability of Work and Life Circumstances Questionnaire***

The Work and Life Circumstances Questionnaire was used to measure stress levels and sources of stress. Psychometric properties of the scale, as reported in the manual, state that construct validity was determined using correlation among different fields or scales of the questionnaire and was found to be between 0.08 and 0.72 (absolute values). Reliability is reportedly satisfactory with internal consistency measured by Kuder Richardson that gave values in the range 0.62–0.80 (Van Zyl & Van der Walt, 1991).

The internal reliability of the scale as determined for each subscale and discussed below.

**TABLE 5.26: WLQSS1 – Level of stress**

Item	N	Mean	Median	SD	Corrected Item-Total Correlation	Cronbach's Alpha Item Deleted
a) I feel as if I come against a wall	102	2.1	2.0	1.0	0.40	0.89
b) I feel afraid not knowing of what exactly	102	2.3	2.0	0.9	0.26	0.89
c) I feel uncertain	102	2.1	2.0	1.1	0.30	0.89
d) I feel worried	102	2.9	2.0	1.2	0.43	0.89
e) I feel that my views clash with those of other people	102	2.3	2.0	1.0	0.18	0.89
f) I feel that I am experiencing conflict	102	2.4	2.0	0.9	0.07	0.89
g) I feel bored	102	2.3	2.0	1.0	0.55	0.89
h) I feel irritated	102	2.4	2.0	1.0	0.38	0.89
i) I feel that I have confidence in myself	102	1.9	2.0	1.0	0.30	0.89
j) I feel that I depend too much on the help of others	102	1.9	2.0	0.9	0.23	0.89
k) I feel alone	102	2.3	2.0	1.1	0.32	0.89
l) I feel that I would like to attack someone	102	1.8	2.0	1.0	0.17	0.89
m) I feel that I merely accept things as they are	102	2.4	2.0	1.2	0.28	0.89
n) I feel that I get disturbed whenever I work on something	102	2.7	2.0	1.2	0.46	0.89
o) You feel that you are losing control of your temper	102	2.2	2.0	0.9	0.41	0.89
p) You feel that no one wants to support you	102	2.4	2.0	1.1	0.32	0.89
q) You feel that your work situation compares unfavourably with those of others	102	2.5	2.0	1.2	0.34	0.89
r) You feel despondent	102	2.1	2.0	0.9	0.40	0.89
s) You feel that you have broken some rule or other	102	2.3	2.0	1.0	0.36	0.89
t) You feel inferior	102	2.2	2.0	1.1	0.46	0.89
u) You feel that someone is annoying you	102	2.6	2.0	1.1	0.47	0.89
v) You feel guilty	102	2.3	2.0	1.0	0.59	0.89
w) You feel downhearted	102	2.6	2.0	1.1	0.48	0.89
x) You feel fearful	102	2.4	2.0	1.0	0.61	0.88

y) You feel that you can do nothing about a situation	102	2.6	2.0	1.1	0.51	0.89
z) You feel aggressive	102	1.9	2.0	1.0	0.27	0.89
aa) You feel that you are getting sad	102	2.5	2.0	1.1	0.45	0.89
bb) You feel overburdened	102	3.1	2.0	1.2	0.46	0.89
cc) You feel angry	102	2.5	2.0	1.0	0.54	0.89
dd) You feel afraid not knowing of what	102	2.3	2.0	1.1	0.48	0.89
ee) You feel you are not exactly sure how to act	102	2.2	2.0	0.9	0.33	0.89
ff) You feel that you have trouble concentrating	102	2.7	2.0	1.1	0.44	0.89
gg) You feel that you have no interest in the activities around you	102	2.0	2.0	1.0	0.35	0.89
hh) You feel that you need assistance continuously	102	2.4	2.0	1.2	0.49	0.89
ii) You feel that you do not want to participate in anything	102	1.9	2.0	0.9	0.41	0.89
jj) You feel that you are afraid of colleagues/supervisors	102	1.8	2.0	1.1	0.33	0.89
kk) You feel that you will not be able to get out of the mess	102	2.3	2.0	1.0	0.38	0.89
ll) You feel dissatisfied	102	2.3	2.0	0.9	0.28	0.89
mm) You feel tearful	102	2.4	2.0	1.1	0.52	0.89
nn) You feel you have too many problems	102	3.4	2.0	1.3	0.45	0.89
<b>Subscale total</b>	<b>102</b>	<b>93.67</b>	<b>93.50</b>	<b>18.42</b>		<b>0.9</b>

Cronbach Alpha for the scale is high at 0.9 and this indicates good reliability/internal consistency. Item numbers 5, 6 and 12 have corrected item total correlation that is much less than 0.3 (the acceptable value for inter-items correlation). These items may therefore, on the basis of their low inter-correlations, be removed. However, removing these items does not cause dramatic changes in the value of Cronbach alpha. Therefore, all the items were ultimately retained. When item means were considered, it was found that there were items with high means that may have contributed more to the high total mean for the scale. These items are: You feel overburdened and you feel that you have too many problems. Items with the lowest

means are: You feel that you would like to attack someone and you feel that you are afraid of colleagues/supervisors.

**TABLE 5.27: WLQSS2 – Causes of stress outside work**

Item	N	Mean	Median	SD	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
a) You feel that the NGO as a whole does not function satisfactorily	102	2.2	2.0	1.1	0.32	0.83
b) You feel dissatisfied about the nature of your work	102	2.3	2.0	1.1	0.41	0.82
c) You encounter too much poor lighting, too much heat, overcrowding	102	2.4	2.0	1.2	0.52	0.82
d) Your weaknesses are overemphasised and you cannot move out of your situation	102	2.6	2.0	1.1	0.25	0.83
e) You find it difficult to deal with social matters such as socialising in a group	102	1.9	2.0	1.0	0.26	0.83
f) You are dissatisfied with your remuneration	102	3.8	<u>5.0</u>	1.5	0.26	0.83
g) You are dissatisfied with your working hours, conditions of employment, etc.	102	2.7	2.0	1.4	0.37	0.83
h) You feel that family crises, death, illness affect you adversely	102	3.3	3.0	1.4	0.29	0.83
i) Financial obligations such as payment of your house make life difficult	102	3.3	3.0	1.5	0.40	0.82
j) Your phase of life such as retirement or middle age makes life difficult	102	2.8	3.0	1.2	0.49	0.82
k) The economic situation in the country makes life difficult for you	102	3.6	<u>4.0</u>	1.3	0.37	0.83
l) Rapidly changing technology poses a problem for you	102	3.3	<u>4.0</u>	1.5	0.44	0.82
m) Facilities at home are unfavourable	102	3.0	3.0	1.5	0.33	0.83
n) Social issues with friends or relatives are difficult to handle	102	2.4	2.0	1.1	0.53	0.82
o) Your status among others is difficult to handle	102	2.4	2.0	1.0	0.37	0.83

p) You health does not allow you to do what you want to do	102	2.6	2.0	1.3	0.52	0.82
q) Your background causes you embarrassment	102	2.4	2.0	1.4	0.35	0.83
r) Your home life is affected adversely by you spending too much time at work	102	2.4	2.0	1.2	0.43	0.82
s) Problems with transport make life difficult for you	102	2.8	2.0	1.5	0.38	0.83
t) There is something wrong with your spiritual life	102	2.1	2.0	1.1	0.44	0.82
u) Your views often differ with those of others	102	2.5	2.0	1.0	0.28	0.83
v) Your accommodation is inadequate	102	2.8	2.0	1.5	0.44	0.82
w) There are too few recreational facilities for you to use	102	3.4		1.5	0.44	0.82
<b>Subscale total</b>	<b>102</b>	<b>63.07</b>	<b>65.00</b>	<b>13.61</b>		<b>0.83</b>

Cronbach Alpha for the scale is high at 0.83. All items correlate highly together at approximately 0.3 and more. All the items therefore appear to measure the same construct and may thus be retained. Items with high medians (higher than means) may skew the test thus prompting further investigation of these items.

**TABLE 5.28: WLQSS3 – Organisational functioning as stressors**

Item	N	Mean	Median	SD	Corrected Item-Total Correlation	Cronbach's Alpha:Item Deleted
a. You feel that you receive recognition for what you do	102	2.5	2.0	1.36	0.03	0.52
b. You are included in decision-making that affects you	101	2.8	2.0	1.33	0.31	0.42
c. You can trust your supervisor in all circumstances	102	3.0	2.0	2.41	0.25	0.46
d. The way things are organised helps in your achievement	102	3.1	3.0	1.34	0.32	0.42
e. Management believes that employees are reliable	101	3.1	3.0	1.55	0.28	0.43
f. Your good achievements are noticed	101	3.1	3.0	1.51	0.21	0.46
g. You can talk to your supervisor whenever you want	102	3.7	<u>4.5</u>	1.47	0.29	0.43
<b>Subscale total</b>	<b>102</b>	<b>21.33</b>	<b>21.00</b>	<b>5.61</b>		<b>0.49</b>



Cronbach Alpha is low at 0.496 and the scale has one item, item a, that correlates poorly with other items at  $r_{tt} = 0.03$ , and another that has a relatively low correlation of  $r_{tt} = 0.21$ . This measure is problematic and this should be noted in the discussion.

**TABLE 5.29: WLQSS4 – Task Characteristics as stressors**

Item	N	Mean	Median	SD	Corrected Item- T Correlation	Cronbach's Alpha if Item Deleted
a. You can get the work assigned to you done in time	102	2.8	2.0	1.33	0.41	0.51
b. You can do your job without standing for too long, lifting heavy objects, etc.	102	2.9	2.0	1.31	0.33	0.53
c. You can assume full responsibility for what you do	101	2.4	2.0	1.20	0.31	0.53
d. You can perform your work without endangering people's lives	102	2.8	2.0	1.38	0.26	0.54
e. You can function independently	102	2.8	2.0	1.42	0.39	0.51
f. Your work does not put your safety in danger	102	2.9	2.0	1.41	0.19	0.55
g. The nature of your work does not strain relations with other people	101	2.6	2.0	1.55	0.13	0.57
h. You do not receive contradictory instructions	101	2.6	2.0	1.22	0.44	0.51
i. You have enough information and knowledge to do your work well	102	3.6	2.0	1.55	0.23	0.54
j. Your tasks do not need intense concentration	101	2.8	<u>4.0</u>	1.38	0.05	0.58
k. You don't need too much time to perform your work	101	2.6	<u>3.0</u>	1.45	0.04	0.58
l. You have enough work to keep you busy	101	3.9	2.0	1.31	0.06	0.57
m. You can display initiative	102	3.4	<u>5.0</u>	1.69	0.06	0.58
n. You can be involved in different tasks	102	3.3	<u>3.0</u>	1.39	0.27	0.54
<b>Subscale total</b>		<b>41.14</b>	<b>41.00</b>	<b>7.59</b>		<b>0.56</b>

Five items (items 7, 10, 11, 12 and 13 correlate poorly with the other items of this scale. Their corrected Item Total correlation values are much less than 0.3. Dropping these items does not have any dramatic impact on the Alpha value. Many items have high medians. The scale is very problematic and this will have to be noted in discussions.

**TABLE 5.30: WLQSS5 – Physical work conditions as causes of stress**

Item	N	Mean	Median	SD	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
a. You have the necessary equipment for your job	102	2.7	2.0	1.4	0.21	0.66
b. Facilities such as toilets and kitchens meet your needs	102	2.6	2.0	1.5	0.25	0.65
c. You have sufficient equipment for your work	102	2.4	2.0	1.3	0.56	0.56
d. Physical working conditions are satisfactory	102	2.4	2.0	1.4	0.46	0.59
e. Decorations in your working area create a pleasant work environment	102	2.7	2.0	1.5	0.34	0.62
f. Your working tools are in working order	102	3.0	3.0	1.5	0.28	0.64
g. Your physical working conditions are adequate for your work	102	2.5	2.0	1.3	0.49	0.58
<b>Subscale total</b>		<b>18.10</b>	<b>19.00</b>	<b>5.69</b>		<b>0.65</b>

There are no problematic items here as almost all items have high correlations that are approximately equal to 0.3 and above. There is only one item that is different from others with an inter-item correlation of 0.2. This difference can therefore be ignored as the correlation is not too low.

**TABLE 5.31: WLQSS6 – Career matters as stressors**

Item	N	Mean	Median	SD	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
a. You can get the necessary training for you work	101	4.3	3.0	2.0	0.30	0.44
b. All your good qualities are used	101	4.4	3.0	1.9	0.23	0.46
c. Your abilities and skills are well developed	101	2.9	2.0	1.5	0.26	0.45
d. You are making progress	102	3.2	3.0	1.4	0.34	0.42
e. The requirements of your work correspond with what you can offer	101	2.8	2.0	1.5	0.02	0.54

f. Your post is essential and will be maintained	102	3.6	<u>4.0</u>	1.4	0.24	0.46
g. Your potential is used to the full	102	2.9	3.0	1.4	0.19	0.48
<b>Subscale total</b>		<b>23.57</b>	<b>24.00</b>	<b>5.47</b>		<b>0.50</b>

This subscale does not look good. The Alpha value is low and many items have low inter-correlation values. Dropping these items does not increase the reliability dramatically. The items can therefore be retained. Two items have unacceptable medians, one being very low and the other one is higher than the mean. The whole scale is problematic and this should be noted in the discussion.

**TABLE 5.32: WLQSS7 – Social matters as Stressors**

Item	N	Mean	Median	SD	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
a. You have status	102	2.8	2.0	1.5	0.40	0.60
b. You get along with your supervisor	102	2.7	2.0	1.5	0.36	0.61
c. You have good relations with your colleagues	102	3.6	4.0	1.4	0.42	0.59
d. Your colleagues consider you successful or hardworking	101	3.1	3.0	1.4	0.35	0.62
e. You can easily maintain good relations with people	102	3.5	4.0	1.5	0.28	0.64
f. You can maintain good relations with your supervisor	102	3.4	4.0	1.5	0.32	0.62
g. You can maintain good social relations with everybody	102	4.0	5.0	1.4	0.38	0.61
<b>Subscale total</b>	<b>101</b>	<b>23.27</b>	<b>23.00</b>	<b>5.79</b>		<b>0.649</b>

The Cronbach Alpha for this scale is acceptable as it can be approximated to 0.7. This subscale does not have problematic items as they all have high inter-correlations. All items measure the same construct and can therefore be retained.

**TABLE 5.33: WLQSS8 – Remuneration, fringe benefits and personnel policy as stressors**

Item	N	Mean	Median	SD	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
a. Regulations for personnel reflect well on the ??	102	2.5	2.0	1.4	0.20	0.47
b. Your remuneration is market-related	102	2.5	2.0	1.6	0.20	0.47
c. Your fringe benefits make you feel safe	102	2.4	2.0	1.4	0.20	0.47
d. Personnel regulations satisfy your needs	102	2.3	2.0	1.1	0.38	0.42
e. Your fringe benefits supplement your salary	102	1.6	1.0	1.2	0.17	0.48
f. Your salary is adequate and motivates you	102	1.8	1.0	1.5	0.27	0.45
g. Personnel regulations are satisfactory	102	3.0	3.0	1.5	0.16	0.49
h. Your input is adequately remunerated	102	1.8	1.0	1.2	0.34	0.43
i. You are happy with the nature of your fringe benefits	102	1.2	1.0	0.8	0.47	0.43
j. Your working hours are satisfactory	102	3.3	4.0	1.5	-0.08	0.57
<b>Subscale total</b>		<b>22.5</b>	<b>21.00</b>	<b>5.62</b>		<b>0.50</b>

This scale has a very low Cronbach Alpha and does not look good. Three items, (e, g and item j) are problematic as they have low inter-correlation values. If the last item whose correlation is extremely low and negative is dropped, the Alpha value will increase significantly to 0.57. The other items will not increase the alpha value significantly and may therefore be kept.

With regard to mean scores on the stress subscales, the following was found for all participants. A high total mean score of 93.7 on the level of stress subscale (WLQ SS1) indicates high levels of stress according to the guideline table in Appendix 2. Items that contributed more to the high mean were found to be “You feel overburdened” and “You feel that you have too many problems”. Secondly, the total mean scores of 63.1 on the stressors outside work subscale (WLQ SS2) and 22.5 for

remuneration, fringe benefits and personnel policy subscale WLQSS8 are according to the guideline table (see Appendix 2) indicative of very high stress caused by forces outside work and high stress caused by remuneration, fringe benefits and personnel policy issues. All the other subscales, Organisational Functioning WLQ SS3, Task Characteristics WLQ SS4, Physical Work Conditions WLQ SS5, Career Matters WLQ SS6 and Social Matters WLQ SS7 have scores that indicate normal stressors (21.3, 41.1, 18.1, 23.6, and 23.3 respectively). This shows that forces outside the work situation and issues of remuneration, fringe benefits and personnel policy contribute to the high stress levels found in participants.

Cronbach Alpha coefficients were determined to assess internal consistencies of the experience of work and life circumstances subscales. Four subscales (stress level, sources outside work, physical work conditions and social matters) have high internal reliability shown by high Alpha values of approximately 0.7 and their items inter-correlate fairly at 0.3. The other four sub-scales (organisational functioning, task characteristics, career matters and remuneration, benefits and policy) had low correlations that were below 0. Reliability tests also found a number of items that did not fit well with the rest of the subscales. These items that had a very low correlation coefficient were studied and found to be abstract as compared to others. Reasons for the poor performance in these items will be discussed in detail in Chapter Six. The poor reliability of the sources of stress within the work situation scales prompted a further investigation of these subscales. There was therefore a follow up by checking the construct validity of the subscales to see whether the 76 items measure the same construct (sources of stress at work). Factor analysis was used to divide the construct into meaningful parts that inter-correlate.

#### ***5.2.1.2. Factor analysis of the Work and Life Circumstances Questionnaire***

Factorial analysis was done to determine items that load most heavily on the same factors, which would mean that the items measure the same construct. The test was performed on the Work and Life Circumstances questionnaire's three main scales,

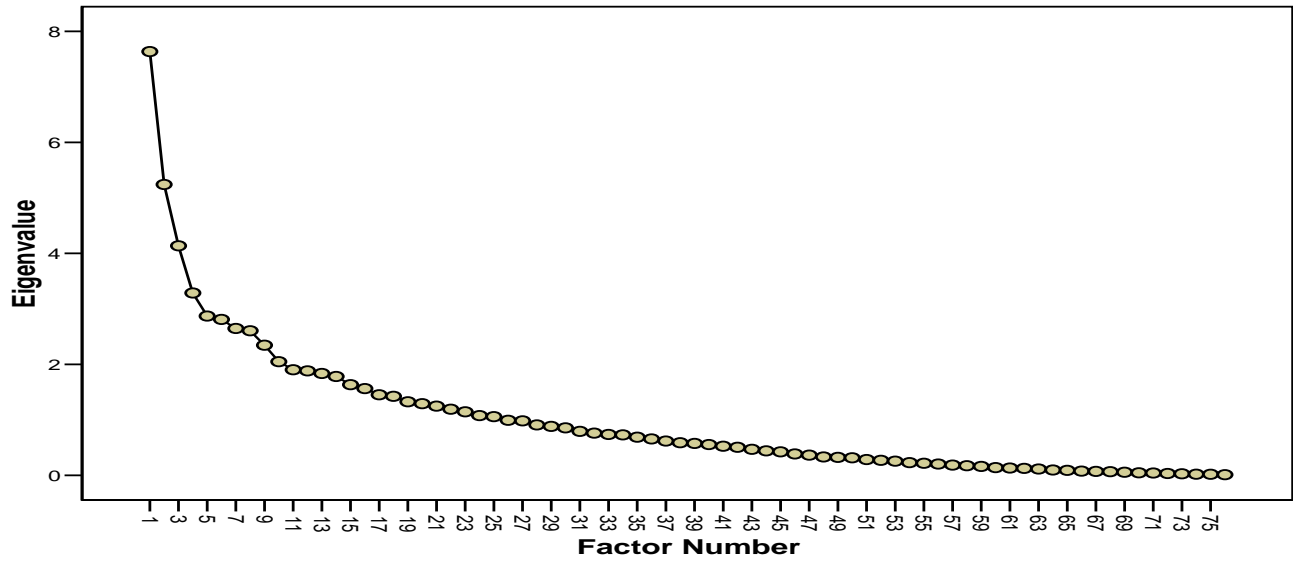
the level of stress subscale (40 items), sources outside work (23 items) and the 76 items of the sources of stress in the work situation. For the level of stress scale with 40 items, the Kaiser-Meyer-Olkin measure is found to be 0.71 approximated and the Barlet Test of Spherity is significant at ( $p < 0.001$ ). The eigenvalues and the scree plot for the test yielded one factor. Therefore, further analysis was not necessary. Secondly, the sources outside work scale gave a Kaiser-Meyer-Olkin value of 0.76 and the Barlet Test of Spherity was found to be significant at ( $p < 0.001$ ). The eigenvalues showed a possibility of three factors but the scree- plot had a perfect break after one factor. Therefore, factor rotation was again not necessary.

For the 76 item sources of stress in the work situation subscale, the value for the Kaiser-Meyer-Olkin measure is found to be 0.3 approximated and the Barlet Test of Spherity is significant at ( $p < 0.001$ ). Therefore, factor analysis could be done. The table below shows that 8 factors could be extracted to account for 34.5% of the variance. In agreement with the eigenvalues, the scree-plot also allows us to extract 8 factors.

**TABLE 5.34: Total variance explained**

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.636	10.047	10.047	4.366	5.744	5.744
2	5.240	6.895	16.943	3.950	5.198	10.942
3	4.135	5.441	22.384	3.584	4.715	15.657
4	3.285	4.323	26.707	3.531	4.646	20.303
5	2.871	3.777	30.484	3.162	4.161	24.464
6	2.810	3.697	34.181	2.689	3.539	28.002
7	2.646	3.482	37.663	2.534	3.334	31.336
8	2.605	3.427	41.090	2.379	3.131	34.467

Extraction Method: Principal Axis Factoring.

**Scree Plot****TABLE 5.35: Rotated Factor Matrix (a)**

	Factor							
	1	2	3	4	5	6	7	8
a. You feel that the NGO as a whole does not function satisfactorily- <b>SS2</b>	.011	.126	.122	.316	-.010	-.025	.291	-.277
b. You feel dissatisfied about the nature of your work- <b>SS2</b>	.189	.218	.105	.366	.058	-.167	-.009	-.234
c. You encounter too much poor lighting, too much heat, overcrowding — <b>SS2</b>	-.125	.414	.171	.327	.004	.094	.059	.018
d. Your weaknesses are overemphasised and you cannot move out of your situation — <b>SS2</b> -	.092	.273	-.094	.131	-.317	-.160	.121	-.186
e. You find it difficult to deal with social matters such as socialising in a group — <b>SS2</b>	.046	.013	-.018	.424	.041	-.039	-.127	-.065
f. You are dissatisfied with your remuneration — <b>SS2</b>	-.200	.244	.127	.075	.125	.110	.508	-.075
g. You are dissatisfied with your working hours and conditions of employment — <b>SS2</b>	-.023	.094	-.025	.487	-.096	-.018	-.020	.119
h. You feel that family crisis, death, illness affect you adversely — <b>SS2</b>	.033	.262	-.160	.302	-.037	.025	-.162	-.009
i. Financial obligations such as payment of your house	-.047	.468	.124	.204	-.036	-.172	.025	.438

make life difficult — <b>SS2</b>								
j. Your phase of life such as retirement or middle age makes life difficult — <b>SS2</b>	.055	.390	.096	.347	-.099	.190	.407	.123
k. The economic situation in the country makes life difficult for you — <b>SS2</b>	.176	.483	.175	.071	-.142	-.079	.126	.087
l. Rapidly changing technology poses a problem for you — <b>SS2</b>	.064	.468	.266	.191	.185	-.109	-.053	.043
m. Facilities at home are unfavourable — <b>SS2</b>	-.004	.451	.021	.069	.094	.050	.047	.020
n. Social issues with friends or relatives are difficult to handle — <b>SS2</b>	-.039	.388	.214	.429	-.022	.127	-.057	.130
o. Your status among others is difficult to handle — <b>SS2</b>	.042	.381	-.093	.176	.002	.037	.008	.075
p. Your health does not allow you to do what you want to do — <b>SS2</b>	-.088	.515	-.026	.320	.027	-.029	-.002	-.184
q. Your background causes you embarrassment — <b>SS2</b>	-.031	.122	.148	.409	.163	.213	-.117	.043
r. Your home life is affected adversely by you spending too much time at work — <b>SS2</b>	-.166	.258	.030	.394	.092	.111	.091	-.092
s. Problems with transport make life difficult for you — <b>SS2</b>	.082	.098	-.082	.540	.096	-.063	.043	-.036
t. There is something wrong with your spiritual life — <b>SS2</b>	.070	.081	.003	.616	-.024	-.004	.149	.111
u. Your views often differ with those of others — <b>SS2</b>	.325	.178	.220	.241	.045	-.025	-.115	-.146
v. Your accommodation is inadequate — <b>SS2</b>	.011	.502	.121	.166	-.142	-.208	-.022	-.090
w. There are too few recreational facilities for you to use — <b>SS2</b>	-.177	.299	.159	.328	.129	-.061	.152	-.130
x. You feel that you receive recognition for what you do — <b>SS3</b>	-.045	-.025	-.145	.147	.190	-.395	.265	.095
y. Regulations for personnel reflect well on the organization — <b>SS8</b>	-.011	.017	-.021	.267	.061	-.379	.099	.346
z. You can get the work assigned to you done in time — <b>SS4</b>	.555	.325	-.147	-.083	.228	-.166	.163	-.001
aa. You can do your job without standing for too long, lifting heavy objects, etc. — <b>SS4</b>	.114	.575	-.162	-.162	.256	.020	.135	-.088
bb. You can assume full responsibility for what you do — <b>SS4</b>	.187	.032	.092	-.017	.604	-.024	.110	-.105



cc. You can perform your work without endangering people's lives- SS4	.326	.195	-.058	-.001	.406	-.033	-.279	.099
dd. Your remuneration is market-related —SS8	-.328	.059	.043	-.154	.423	.048	.001	.180
ee. You can function independently SS4-	.187	.077	.181	.272	.394	.166	.252	-.066
ff. You have the necessary equipment for your job — SS5	-.025	.261	.256	-.174	.111	-.063	-.121	.230
gg. You can get the necessary training for you work — SS6	.098	.114	.109	.092	.277	.487	-.237	.114
hh. All your good qualities are used — SS6	.071	.216	-.045	.022	.038	.102	.028	.011
ii. You are satisfied that you have a chance for promotion — SS6	.330	.381	.190	.100	-.048	-.039	-.216	-.208
jj. Your fringe benefits make you feel safe — SS8	.039	-.027	.005	.095	.500	-.037	.059	-.106
kk. You have status — SS7	.172	.015	.128	-.074	.251	.318	.399	-.324
ll. You get along with your supervisor — SS7	.382	-.048	.041	-.083	.147	-.208	.522	.158
mm. Personnel regulations satisfy your needs — SS8	-.239	.062	.314	-.097	.239	.044	.104	.375
nn. Your work does not put your safety in danger- SS4	-.029	.062	-.057	-.100	.095	-.007	.472	.052
oo. You are included in decision-making that affects you — SS3	.207	.114	.361	-.056	.018	-.035	.083	-.226
pp. The nature of your work does not strain relations with other people — SS4	-.004	.024	.110	.025	.558	.097	.047	.139
qq. You do not receive contradictory instructions — SS4	.006	.276	.031	.246	.504	-.087	.265	.022
rr. You can trust your supervisor in all circumstances — SS3	.233	-.026	.255	-.264	-.069	.034	.304	-.070
ss. Facilities such as toilets and kitchens meet your needs — SS5	.289	-.002	.303	.106	-.126	-.080	.285	.169
tt. You have sufficient equipment for your work — SS5	-.047	.209	.719	.020	-.082	.112	.084	.096
uu. Physical working conditions are satisfactory — SS5	.086	.106	.525	-.014	-.111	-.165	.070	-.273
vv. Your fringe benefits supplement your salary — SS8	-.059	.035	.098	-.076	-.031	-.483	-.092	.097
ww. Your abilities and skills are well developed — SS6	.367	.044	.094	.092	-.085	.192	.280	-.177
xx. You have enough information and knowledge to do your work well — SS4	.356	.041	-.023	-.154	-.002	.269	-.016	-.209
yy. Your tasks do not need intense concentration- —SS4	-.015	-.123	.235	-.007	.187	.227	.084	-.259

zz. Decorations in your working area create a pleasant work environment —SS5	-.061	-.081	.415	-.018	.102	-.017	.013	-.136
aaa. You have good relations with your colleagues —SS7	.300	-.024	.002	-.080	.006	.315	.190	.141
bbb. Your colleagues consider you successful or hardworking — SS7	.273	.163	-.117	-.100	.195	.456	.091	.201
ccc. Your salary is adequate and motivates you — SS8	-.308	-.138	.340	.073	.125	-.239	-.072	.109
ddd. You are making progress — SS6	.349	.079	.167	-.171	.260	.153	.107	.044
eee. Your working tools are in working order — SS5	.288	-.120	.345	.158	.081	.001	.032	.042
fff. Personnel regulations are satisfactory — SS8	.161	-.048	.436	.313	.150	.265	-.004	.013
ggg. Your input is adequately remunerated- SS8	-.291	-.013	.409	-.229	.185	-.067	.060	.189
hhh. Your physical working conditions are adequate for your work — SS5	.094	.165	.656	.069	.271	.059	.062	-.147
iii. You are happy with the nature of your fringe benefits — SS8	-.158	.078	.251	.047	.270	-.282	-.117	.022
jjj. You don't need too much time to perform your work — SS4	.118	-.113	-.153	.001	-.050	-.046	.166	.620
kkk. The way things are organised helps in your achievement —SS3	.400	.045	.171	.195	.400	.045	.086	-.147
lll. management believes that employees are reliable — SS3	.417	-.311	.307	.021	.004	.242	.174	.197
mmm. You have enough work to keep you busy — SS4	.115	-.135	-.027	.192	-.134	.535	.037	.091
nnn. The requirements of your work correspond with what you can offer-SS6	.044	.080	-.107	-.012	.037	.114	-.190	.462
ooo. You can easily maintain good relations with people — SS7	.212	.057	.081	.063	.012	.130	.289	-.099
ppp. Your good achievements are noticed-SS3	.538	.061	-.162	.046	.086	.084	-.005	.010
qqq. You can display initiative — SS4	.252	.326	.040	-.078	-.367	.191	.131	.031
rrr. You can be involved in different tasks — SS4	.545	.169	-.157	.109	.004	.145	-.055	.130
sss. Your post is essential and will be maintained — SS6	.230	.129	.069	-.012	.114	.332	.226	-.029
ttt. Your working hours are satisfactory — SS8	.514	.025	.077	.081	-.054	.110	-.023	.094
uuu. You can maintain good relations with your supervisor	.560	-.127	.121	-.031	.060	.027	.006	-.167

— SS7								
vvv. your potential is used to the full-SS6	.268	.223	.262	.297	.120	-.005	.082	-.121
www. You can talk to your supervisor whenever you want — SS3	.231	-.203	.213	.069	.071	.051	.270	-.043
xxx. You can maintain good social relations with everybody — SS7	.430	-.029	.049	-.122	-.047	.255	.109	.129

Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalisation.

A rotation converged in 22 iterations.

In the table above, items are listed with their respective subscales. The items are organised as follows: Factor 1 has 12 items (u - SS2, z-SS4, ss - SS5, ww - SS6, xx - SS4, ddd - SS6, ll - SS3, ppp - SS3, rrr - SS4, ttt - SS8, uuu - SS7 and xxx - SS7), factor 2 has 13 items (c, i, k, l, m, o, p, v, all SS2, aa - SS4, ff - SS5, hh - SS6 and ii - SS6), factor 3 has 9 items (00 - SS3, tt - SS5, uu - SS5, zz - SS5, ccc - SS8, eee - SS5, fff - SS8, ggg - SS8 and hhh - SS5), factor 4 has items (a, b, e, g, h, n, q, r, s, t, w all SS2 and vvv - SS6), factor 5 has 9 items (d - SS2, bb, cc, ee, pp, qq, qqq all SS4 dd and jj both SS8), factor 6 has 8 items (x-SS3, y - SS8, gg- SS6, aaa - SS7, bbb - SS7, iii-SS8, mmm - SS4, sss - SS6), factor 7 has 8 items (f - SS2, j - SS2, kk - SS7, ll - SS7, nn - SS4, rr-SS3, ooo - SS7 and www - SS3) factor 8 has 4 items (mm - SS8, yy - SS4, jjj - SS4, nnn - SS6)

*Causes outside work situation (WLQ source of stress, SS2), Organisational Functioning (WLQ source of stress - SS3), Task Characteristics (WLQ source of stress - SS4), Physical Work Conditions (WLQ source of stress - SS5), Career Matters (WLQ source of stress - SS6), Social Matters (WLQ source of stress - SS7), Remuneration, fringe benefits and personnel policy (WLQ source of stress - SS8)*

Factor analysis of the 76 items yields 8 factors that are not easy to name and the grouping of items does not correspond with the expected scales as suggested by the WLQ manual. The outcome of factor analysis for this section of the Work and Life Circumstances Questionnaire was therefore ignored. It was concluded that the test does not measure the “Sources of stress within work situation” construct

adequately. The other subscales (stress level and the sources outside work scale) were not problematic as there was an indication that they measure single constructs. As a result, though all subscales of the Work and Life Circumstances Questionnaire are included in further analysis of the research model, outcomes that include these subscales will be viewed with scepticism.

### 5.2.2. Internal reliability and construct validity of Brief Cope

The **Brief COPE** is a **28**-item self-report measure of coping styles. The questionnaire was answered on a four-point Likert scale (see appendix). Coping strategies and the relationship between coping and stress, coping and burnout, as well as coping and resilience were studied.

#### 5.2.2.1. Internal reliability for Brief Cope

**TABLE 5.36: Internal Reliability for Brief Cope**

Items	N	Mean	Std. Deviation	Median	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1. I do other things to get my mind off things	99	2.70	1.102	3.0	.114	.545
2. I make efforts to do something about the situation	99	2.94	1.159	3.0	.272	.526
3. I say to myself this is not real	99	2.23	1.018	2.0	.357	.518
4. I drink alcohol or take drugs to forget things	99	1.55	.993	1.0	.075	.549
5. I get emotional support from friends or relatives	99	2.05	1.128	2.0	-.105	.571
6. I admit that I can't deal with it and quit trying	99	2.24	1.170	2.0	.045	.554
7. I take direct action to solve the problem	99	1.99	1.147	1.0	-.221	.584
8. I refuse to believe that it has happened	99	2.19	1.122	2.0	.370	.514
9. I discuss my feelings with someone	99	2.06	1.339	1.0	-.198	.588
10. I talk to someone who can do something with the problem	99	3.05	1.119	4.0	.288	.524
11. I drink alcohol or take drugs to get through it	99	1.49	.873	1.0	.153	.541
12. I look at it in a different light to make it seem more positive	99	2.82	1.146	3.0	.293	.523
13. I get upset and am really aware of it/ I criticise myself	99	2.38	1.140	2.0	.410	.508
14. I come up with a plan/strategy about what to do	99	2.95	1.082	3.0	.278	.526

15. I get sympathy or understanding from someone	99	3.36	2.981	3.0	.185	.555
16. I just give up trying to cope	99	2.34	1.117	2.0	.143	.542
17. I look for something good in what has happened	99	2.97	1.147	3.0	.270	.526
18. I joke about what has happened	99	2.86	1.134	3.0	.404	.509
19. I go to movies or watch TV to forget about it	99	2.38	1.226	20.	.410	.506
20. I get used to the idea that it has happened	99	2.78	1.074	3.0	.391	.513
21. I feel a lot of hurt/misery and express those feelings a lot	99	2.92	1.140	3.0	.035	.555
22. I find comfort in my religion	99	3.20	1.116	4.0	.072	.550
23. I get advice from someone about what to do	99	2.00	.990	2.0	-.183	.575
24. I learn to live with it	99	2.70	1.044	3.0	.111	.545
25. I think hard about what steps to take	99	3.15	.983	4.0	.230	.533
26. I blame myself for what has happened	99	2.57	1.135	2.0	.305	.522
27. I pray more than usual	99	1.80	.969	1.0	-.243	.580
28. I act as though it has not even happened	99	2.63	1.130	2.0	.234	.531
<b>Scale total</b>	<b>28</b>	<b>70.3</b>	<b>9.4</b>			<b>0.550</b>

Cronbachs Alpha for the whole scale is not very low at 0.6 approximated. However, many items do not inter-correlate strongly with the rest. The items are kept because dropping them does not cause any dramatic change in the reliability coefficient of the whole scale.

#### ***5.2.2.1. Construct validity: Factor analysis on Brief Cope***

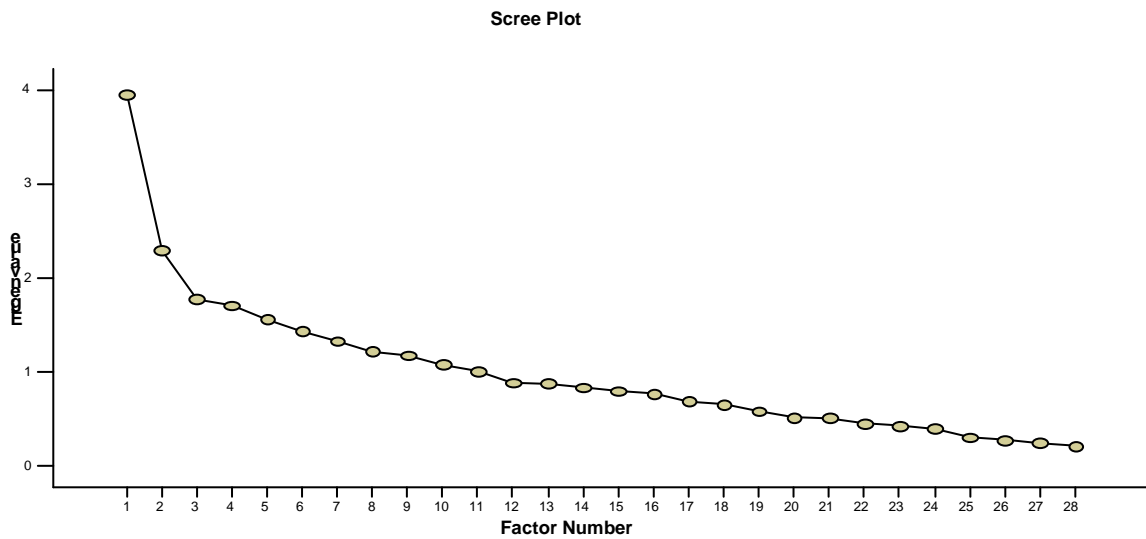
Construct validity is considered because the scale did not do well in internal consistency tests. The questionnaire evaluates 14 different coping strategies.

When factor analysis techniques are applied to this scale, the following is observed. The value for the Kaiser-Meyer-Olkin measure is found to be 0.6 approximated and the Barlet Test of Sphericity is significant at ( $p < 0.001$ ). There was a decision to continue with factor analysis. From initial eigenvalues, 11 factors are extracted. Looking further at the Scree-Plot, a significant break occurs between the third and the fourth factors. This allows us to extract three factors, without moving far from

the original factors of Lazarus and Folkman (1984). It was found that 11 items load strongly (above 0.4) on the first factors, 7 on the second factors, and 3 on the third factors. There is, however, another break after the fourth factors which is worthy to be explored further. Other authors, Gutierrez, Peri, Torres, Caseras and Valdez (2007) studied the three dimensions of coping and found three factors for the Cope scale. However, these authors' three factors are nothing like the three factors that this study found. Their factors are engagement, disengagement and help-seeking. Therefore, three factors were extracted.

**TABLE 5.37: Total variance explained**

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.947	14.098	14.098	3.431	12.254	12.254
2	2.295	8.197	22.295	1.753	6.260	18.514
3	1.778	6.350	28.646	1.292	4.614	23.128
4	1.708	6.100	34.746	1.170	4.180	27.308
5	1.560	5.572	40.318	1.040	3.713	31.021
6	1.435	5.126	45.444	.882	3.149	34.170
7	1.328	4.743	50.187	.801	2.859	37.029
8	1.219	4.353	54.541	.696	2.484	39.513
9	1.176	4.201	58.742	.623	2.223	41.736
10	1.079	3.855	62.597	.605	2.162	43.898
11	1.012	3.614	66.211	.455	1.626	45.524
12	.886	3.165	69.375			
13	.881	3.146	72.521			
14	.838	2.994	75.515			



Factor rotation is done for three factors.

TABLE 5.38: Rotated Factors Matrix (a) – Brief Cope

Item and number in the questionnaire	Factor 1	Factor 2	Factor 3
17. I look for something good in what has happened	.597		
10. I talk to someone who can do something with the problem	.594		
2. I make efforts to do something about the situation	.587		
12. I look at it in a different light to make seem more positive	.573		
13. I get upset and am really aware of it/I criticise myself	.481		
19. I go to movies or watch TV to forget about it	.479	.303	
18. I joke about what has happened	.470		
20. I get used to the idea that it has happened	.437		
28. I act as though it has not even happened	.408		
7. I take direct action to solve the problem	-.374	.357	-.332
15. I get sympathy or understanding from someone	.370		
22. I find comfort in my religion	.370		
26. I blame myself for what has happened	.368		
23. I get advice from someone about what to do	-.351		

9. I discuss my feelings with someone	-.343		
1. I do other things to get my mind off things			
11. I drink alcohol or take drugs to get through it		.671	
8. I refuse to believe that it has happened	.335	.522	
6. I admit that I can't deal with it and quit trying		.470	
5. I get emotional support from friends or relatives	-.339	.441	
4. I drink alcohol or take drugs to forget things		.362	
14. I come up with a plan/strategy about what to do	.467		.515
21. I feel a lot of hurt/misery and I express those feelings a lot.			.491
25. I think hard about what steps to take		.332	.477
16. I just give up trying to cope		.372	-.436
3. I say to myself this is not real		.311	.406
27. I pray more than usual.			.350
24. Negative of I learn to live with it??			-.342
<i>Extraction Method: Principal Factors Analysis. Rotation Method: Varimax with Kaiser Normalisation. Rotation converged in 6 iterations.</i>			

Outcomes of factor rotation show that 15 items load heavily on factors one and explain 13.9 % of the variance. The items are: I look for something good in what has happened, I talk to someone who can do something with the problem, I make efforts to do something about the situation and I look at it in a different light to make seem more positive. In factor two, 5 items account for 8% of the variance and in the third factor, 6 items account for 6.7% of the variance. Items forming the three clusters were not easy to name due to double and triple loadings. Other researchers like Lazarus and Folkman (1984) extracted four factors with bigger scales of 53 or more items, while others still, found five factors using HIV and Aids caregivers in Kenya (Asner-Self, Kimberly & Muthoni, 2011). An attempt to extract four factors yielded clusters that again could not be named with ease. The four factors option was thus also dropped. Further analysis was needed to obtain a suitable Cope measure.



The Brief-Cope scale is sometimes organised into 14 subscales of coping styles as: Self-distraction (1;19), using instrumental support (10;23), active coping (2;7), denial (3;8), substance use (4;11), self-blame (13;26), humour (18;28), planning (14;25), using emotional support (5;15), behavioural disengagement (6;16), positive re-framing (12;17), venting (9;21), Acceptance (20;24), religion (22;27). Responses to each of the items were added to give a score for that particular coping style. Coping styles for which individuals scored 7 or 8 are likely to be predominant ways of coping with events in participants' lives (Carver, 1997). When the pairs are compared with the table above, items that are paired together are thrown around in the table. For example, item 1 is grouped with item 19 but in the table item 19 loads in factor 1 while item 1 does not load with any factor. Another example is the pair (22, 27) religion items where one loads in factor 1 while the other one is in factor 3. There are, however, 3 pairs that stay together in factor analysis, which are substance use items (4; 11), self-blame (13;26) and humour (13;26). All the others are in disarray.

**TABLE 5.39:** Brief-Cope

	N	Mean	Std. Deviation	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
self-distraction	102	5.0	1.8	.359	.550
instrumental support	101	5.8	1.6	.091	.595
active coping	102	4.3	1.5	.433	.536
Denial	102	3.1	1.5	.089	.596
substance use	102	4.6	1.6	.194	.601
self-blame	100	5.2	1.6	.179	.582
Humour	102	5.2	1.5	.088	.599
Planning	102	5.1	1.5	.112	.595
emotional support	102	5.3	3.3	.352	.548
behavioural disengagement	101	5.3	1.7	.254	.570
positive reframing	101	5.6	1.8	.432	.536

Venting	102	5.6	1.6	.314	.559
Acceptance	102	4.6	1.4	-.083	.617
Religion	102	5.3	1.5	.485	.525
<b>Scale Total</b>	<b>14</b>	<b>70.2</b>	<b>9.8</b>		<b>0.592</b>

All the mean values for the subscales are not high (7–8). Medium values that are between 5 and 6 indicate medium use of the coping strategies. This scale remains problematic with many items that are correlating poorly with the rest of the scale.

The questionnaire in this sample was therefore heavily compromised as it did not perform as expected. This will be discussed in more detail in Chapter 6. A revised Cope scale was thus created since the Cope measure is essential in the research question: How does stress experienced in and out of work together with coping strategies (including some socio-demographic issues) relate to burnout and resilience of volunteer caregivers in home-based care?

A revised Cope scale was compiled by using correlation measures to determine items that link with predictive and socio-demographic subscales. Though it might seem unscientific, it was crucial to test the theoretical model of the study.

#### **Extracting the relevant subscales of the Cope scale**

A correlation table was generated to investigate the relationship between coping strategies and all other variables, that is, 5 socio-demographic scales, 3 burnout subscales and stress subscales. Pearson Product Moment coefficients were again considered. From this table all Cope items correlating significantly with other variables were extracted. Fourteen (14) items were selected and further analysis was performed on them.

**TABLE 5.40: Spearman correlations for cope against all variables**

		Age	Level of education	Aids patients	Number of years in care	SU-LSM group	Causes outside work situation	Career Matters	Task Characteristics	Physical Work Conditions	Organisational Functioning	Stress level	Social matters	Remuneration	Emotional Exhaustion	Personal Accomplishment	Depersonalisation
a.	Item 1	-.162	.017	-.050	.222(-*)	.035	-.117	.124	.199(*)	.246(*)	.057	.132	.074	-.059	.026	.081	.037
b.	Item 2	.136	.000	.135	.202(*)	-.005	-.105	-.031	-.205(*)	.092	.148	-.183	.029	.204(*)	-.060	-.097	-.002
c.	Item 3	.051	-.110	.012	-.094	.040	.110	.259(**)	.211(*)	.006	.003	-.094	-.051	-.062	.095	.011	-.069
d.	Item 4	.063	-.137	-.118	-.009	-.155	.002	-.029	.279(**)	-.111	.032	.016	.091	.014	-.049	.317(**)	.063
e.	Item 5	.147	-.179	-.090	.091	-.032	.088	.007	.007	.142	.298*	-.086	.167	.051	-.050	-.020	-.109
f.	Item 6	.072	-.199(*)	-.030	.027	.114	-.013	.057	.087	-.050	.012	.096	-.011	-.156	-.006	.127	-.087
g.	Item 7	-.016	.190	-.123	.007	.063	-.006	-.107	.148	-.036	.036	.047	.136	.116	-.140	.169	.189
h.	Item 8	.230*	.061	-.014	.211(*)	.102	-.109	.182	.133	.011	.201(*)	-.072	.089	.086	-.049	.160	-.008
i.	Item 9	.022	.151	-.146	.130	-.032	-.178	-.152	-.013	.056	-.065	.008	-.131	-.017	-.029	.084	-.020
j.	Item 10	.090	-.160	.193	.124	.011	.178	.107	.157	.066	.236(*)	-.041	.245(*)	.068	.112	.163	.142
k.	Item 11	-.076	-.025	-.130	-.032	.040	-.104	.154	.322(**)	.052	.087	.180	.062	.014	.169	.193	.091
l.	Item 12	.232(*)	-.097	.164	.138	.119	.063	.142	.101	.132	.119	-.010	.133	.025	-.123	-.041	-.221(*)

m.	Item 13	.203(*)	-.119	.041	.117	.030	-.021	.147	.021	.026	.172	-.265*	.126	.001	-.010	.032	-.074
n.	Item 14	-.016	-.150	.218(*)	.041	.072	.105	.094	.026	.067	.214(*)	-.042	.165	.268*	.115	-.066	.163
o.	Item 15	.265(**)	-.072	.113	.218(*)	.219(*)	.054	.095	.031	-.102	.086	-.101	.220(*)	.006	-.133	-.043	.118
p.	Item 16	.043	-.018	-.133	.231(*)	-.111	-.150	-.049	.006	.076	.052	-.025	-.054	.142	-.098	.095	.195
q.	Item 17	.215(*)	-.245(*)	.203(*)	.110	.048	.098	.230(*)	.028	.138	.206(*)	-.085	.112	.101	.101	-.113	-.230(*)
r.	Item 18	-.010	-.132	.188	.052	.063	.157	.295(**)	.192	-.150	-.038	-.009	.087	-.080	.166	.190	.043
s.	Item 19	.226(*)	-.159	.007	.237(*)	.107	-.078	-.037	.084	.154	.161	-.194	.095	-.020	-.097	.031	.011
t.	Item 20	.051	.110	.049	.023	.014	-.055	.187	.219(*)	-.005	.207(*)	.038	.072	.073	.051	.206(*)	.055
u.	Item 21	-.100	.082	.143	-.227(*)	.149	.030	.402(**)	.270(**)	.226(*)	.228(*)	.276(**)	.168	.235(*)	.179	.136	.043
v.	Item 22	.159	-.096	.110	.035	.091	-.036	.078	.115	.219(*)	.130	-.089	.165	-.057	-.080	.094	.045
w.	Item 23	-.122	.193	.030	-.136	.075	.037	.169	-.087	-.149	.210(*)	-.170	-.282**	-.143	.006	-.165	-.218(*)
x.	Item 24	-.104	.109	-.072	-.089	-.137	-.015	.011	.046	.044	.063	.007	.020	.053	-.037	.062	-.063
y.	Item 25	-.047	.078	.022	-.092	.136	.039	.190	.230(*)	.152	.185	.226(*)	.153	.200(*)	.080	.085	.251(*)

z. Item 26	.060	-.095	.072	-.009	-.036	-.166	.111	.169	.055	.104	-.077	.064	.082	-.118	-.304(**)	.066
aa Item 27	-.168	.032	-.060	-.138	-.162	-.109	-.035	.025	.124	.083	.123	.032	.096	.148	-.218(*)	.016
bb Item 28	.199(*)	-.182	.039	.215(*)	-.121	-.091	-.013	.000	-.072	.193	-.083	.078	-.070	.042	.062	-.082

\*. Correlation is significant at the 0.05 level (2-tailed). \*\*. Correlation is significant at the 0.01 level (2-tailed).

The table shows items a, b, h, n, o, q, t, u, w, y that correlate at least with three or more subscales in the model. These items and others that correlate highly with two subscales, such as items c, d, j, l, m, s, have also been chosen. These are the items that may be considered for an exploratory factor analysis. On prima facie grounds they seem to link as follows: The first seven items are direct coping measures, which mean facing the problem and attempting to deal with it directly – active coping (I make efforts to do something about the situation, I talk to someone who can do something with the problem, I come up with a plan/strategy about what to do, I look for something good in what has happened, I get advice from someone about what to do, I think hard about what steps to take, I get used to the idea that it has happened, I look at it in a different light to make it seem positive). The next six items are about doing things that will make you forget about the problem – avoidance coping (I drink alcohol or take drugs to forget things, I go to movies or watch TV to forget about it, I do other things to get my mind off things, I say to myself: This is not real, I refuse to believe that it has happened) and the last three are dysfunctional coping items (I get upset and am really aware of it, I feel hurt and misery and I express the feelings, I get sympathy and understanding from someone).

#### 5.2.2.2. Factor analysis on the 16 items extracted from the Cope measure

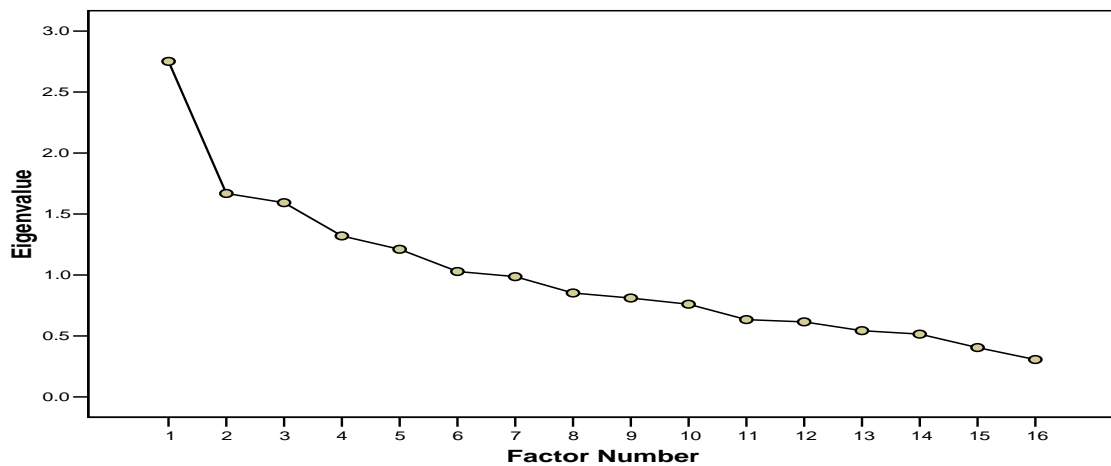
TABLE 5.41: Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.751	17.197	17.197	2.193	13.707	13.707
2	1.668	10.427	27.623	1.114	6.964	20.670

3	1.593	9.955	37.578	.975	6.093	26.763
4	1.320	8.251	45.829	.711	4.444	31.208
5	1.211	7.566	53.396	.631	3.946	35.153
6	1.029	6.429	59.824	.465	2.909	38.063
7	.986	6.165	65.989			
8	.852	5.326	71.315			
9	.811	5.068	76.383			

Extraction Method: Principal Axis Factoring.

**Scree Plot**



**TABLE 5.42: Rotated Factor Matrix (a)**

	Factor		
	1	2	3
a. I refuse to believe that it has happened	.575		
b. I get upset and am really aware of it/ I criticise myself	.547		
c. I make efforts to do something about the situation	.488	.396	-.322
d. I go to movies or watch TV to forget about it	.424		
e. I get used to the idea that it has happened	.385		
f. I get sympathy or understanding from someone	.316		
g. I do other things to get my mind off things			
h. I come up with a plan/strategy about what to do		.570	
i. I look for something good in what has happened		.535	

j. I talk to someone who can do something with the problem		.492	
k. I look at it in a different light to make it seem positive	.333	.437	
l. I get advice from someone about what to do			
m. I say to myself: This is not real	.409		.540
n. I think hard about what steps to take			.445
o. I feel a lot of hurt/misery and express those feelings a lot			.381
p. I drink alcohol or take drugs to forget things			

Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalisation.

A rotation converged in 8 iterations.

Factor rotation produced three factors with three of the items being thrown out as they do not load on any factor. This leaves us with 13 items. The three factors can be extracted and organised as:

1) Avoidance coping: I refuse to believe that it has happened, I get upset and am really aware of it, I go to movies or watch TV to forget about it, I get used to the idea that it has happened and I get sympathy or understanding from someone.

2) Active coping: I come up with a plan/strategy about what to do, I look for something good in what has happened, I talk to someone who can do something with the problem, I look at it in a different light to make it seem positive and I make efforts to do something about the situation.

3) Dysfunctional coping includes saying to me: This is not real, spending time thinking hard about what steps to take and expressing feelings of misery.

### ***5.2.2.3. Internal reliability for the three subscales***

**TABLE 5.43 Internal Reliability for the three subscales**

	N	Mean	Std. Deviation	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I refuse to believe that it has happened	102	2.2	1.2	.401	.380
I get upset and am really aware of it	102	2.4	1.1	.314	.408
I go to movies or watch TV to forget about it	102	2.4	1.2	.339	.402
I get used to the idea that it has happened	102	2.8	1.1	.293	.419

<b>Scale Total for avoidance coping</b>	<b>4</b>	<b>9.66</b>	<b>2.98</b>		<b>0.551</b>
I make efforts to do something about the situation	100	2.9	1.2	.377	.638
I come up with a plan/strategy about what to do	100	3.0	1.1	.408	.623
I talk to someone who can do something with the problem	100	3.1	1.1	.385	.633
I look for something good in what has happened	100	3.0	1.2	.501	.580
I look at it in a different light to make it seem positive	100	2.8	1.2	.439	.609
<b>Scale total active coping</b>	<b>4</b>	<b>14.7</b>	<b>3.1</b>		<b>0.668</b>
	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	Corrected Item-Total Correlation	<b>Cronbach's Alpha if Item Deleted</b>
I say to myself: This is not real	101	2.26	1.0	.218	.415
I feel a lot of hurt/misery and express those feelings a lot	101	2.9	1.1	.277	.354
I think hard about what steps to take	101	1.49	0.9	.226	.404
I drink alcohol to get through the problem	101	3.17	0.9	.297	.334
<b>Scale Total dysfunctional coping</b>	<b>4</b>	<b>9.8</b>	<b>2.5</b>		<b>0.447</b>

Items that represent avoidance coping gave an internal consistency coefficient of 0.474 with the item 'I get sympathy or understanding from someone' having a low correlation with the other items. The item was dropped and the Alpha value increased to 0.551, which looks good. The process of finding reliable and valid measures from the initial problematic Cope scale seemed to have been successful. The alpha value for the Avoidance coping subscale is not very low at 0.6 approximated, active coping scale has an Alpha value of 0.7 approximated and dysfunctional coping has a value of 0.5 approximated. Almost all items also inter-correlate strongly at above 0.3. The sub-scale therefore has internal reliability. The Dysfunctional coping subscale also has an acceptable Alpha value with the items correlating fairly with each other. Although it might be argued that this process is based on psychometrics, the findings are theoretically understandable. However, the possible reasons for the non-reliability and invalidity of the Brief COPE for this population are important, and will be discussed, in relation to three newly created



subscales in the next chapter.

### 5.2.3. Internal reliability and construct validity of the Maslach burnout inventory

#### 5.2.3.1. The internal reliability of the Maslach burnout inventory

Maslach burnout test is expected to provide a three-factor structure that has been found to be invariant across countries and occupations (Schaufeli, 2003). The three factors are: (1) emotional exhaustion – EE (the depletion of emotional resources, leading workers to feel unable to give of themselves at a psychological level); (2) depersonalisation – DEP (negative, cynical attitudes and feelings about clients); and reduced (3) personal accomplishment – PA.

The reliability of the Maslach that is reported with coefficients ranging from 0,70 to 0,90 is satisfactory. Construct and content validity have also been found to be acceptable (Schaufeli, 2003; Venter ,2000; Wissing, 1996). The reliability of this sample with tables is discussed below.

**TABLE 5.44: Internal reliability for the three Maslach subscales**

Items	N	Mean	Std. Deviation	Median	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1. I feel emotionally drained from my work	99	2.80	2.08	3.0	0.39	0.67
2. I feel used up at the end of weekday	99	3.88	1.87	4.0	0.31	0.68
3. I feel fatigued when I get up in the morning to face another day	99	4.22	6.55	4.0	0.20	0.74
4. Working with people all day is a real strain for me	99	3.16	2.36	3.0	0.45	0.66
5. I feel burned out/ exhausted from my work	99	2.88	2.27	2.0	0.38	0.67
6. I feel frustrated by my job	99	2.60	2.11	2.0	0.37	0.67
7. I feel like I am working too hard on my job	99	3.29	2.21	3.0	0.40	0.67
8. Working with people directly stresses me	99	3.22	2.09	3.0	0.38	0.67
9. I feel like I am at the end of my rope	99	2.93	2.35	3.0	0.40	0.67
<b>Subscale total: Emotional exhaustion</b>	<b>9</b>	<b>28.98</b>	<b>13.3</b>			<b>0.614</b>

10. I can easily understand how patients feel about things	99	4.33	2.00	5.0	0.29	0.68
11. I deal effectively with problems of my patients	99	4.38	1.86	5.0	0.18	0.69
12. I feel I am positively influencing other people's lives	99	3.78	2.19	4.0	0.34	0.68
13. I feel like I am very energetic	99	3.49	2.32	4.0	0.20	0.69
14. I can create a relaxed atmosphere with my patients	99	4.61	1.80	5.0	0.30	0.68
15. I feel happy after working with my patients	99	4.33	1.87	5.0	0.16	0.69
16. I have accomplished many things in my job	99	4.25	1.72	5.0	0.12	0.69
17. In my work I deal with emotional problems very calmly	99	4.43	1.96	6.0	0.19	0.69
<b>Subscale total: Personal accomplishment</b>	<b>8</b>	<b>37.7</b>	<b>10.8</b>			<b>0.738</b>
18. I feel I treat patients as if they were impersonal objects'	99	1.49	1.98	0.0	0.19	0.69
19. I have become more callous towards people since I took this job	99	2.17	2.25	2.0	0.34	0.68
20. I worry that this job is hardening me emotionally	99	2.84	2.29	3.0	0.33	0.68
21. I don't really care what happens to some patients	99	1.35	2.12	0.0	0.04	0.70
22. I feel patients blame me for some of their problems	99	1.91	2.23	1.0	0.13	0.69
<b>Subscale total: Depersonalisation</b>	<b>5</b>	<b>9.73</b>	<b>6.6</b>			<b>0.566</b>
<b>Scale total</b>	<b>22</b>	<b>72.36</b>	<b>20.0</b>			<b>0.693</b>

A Cronbach Alpha of 0.7 shows that the internal consistency of the scale is not bad. However, nine items show low inter-correlation with other items in the scale. If it was possible, these items would be dropped. Dropping them does not cause a big change in the Cronbach Alpha. When the three subscales suggested by Maslach and Jackson, (1986) are investigated separately, a different picture is observed. Alpha for the first subscale (items 1–9) as shown in the table above is 0.6. Only one item in this subscale (item 3) has a low inter-correlation with the other items. Dropping the item would increase the reliability of the subscale dramatically as the Alpha value

increases to 0.8 but since the original Alpha is acceptable, it is not necessary to remove the item. The second subscale (items 10–17) with an Alpha value of 0.74 does not have problem items as they all inter-correlate highly at values above 0.4. The third subscale (items 18–22) has an alpha value of 0.6 with two items (18 and 20) correlating poorly with the other items at 0.24 and 0.22. Dropping these items does not make any significant difference to the overall subscale. The items are retained.

The average score on emotional exhaustion is 28.9 and according to the Maslach scales and scoring key, it is an indication of high emotional exhaustion. The group also shows moderate levels of depersonalisation (average score 9.73) and moderate levels on personal accomplishment (average score of 37.7) (see Appendix 5).

#### **5.2.3.2. Factor analysis of Maslach**

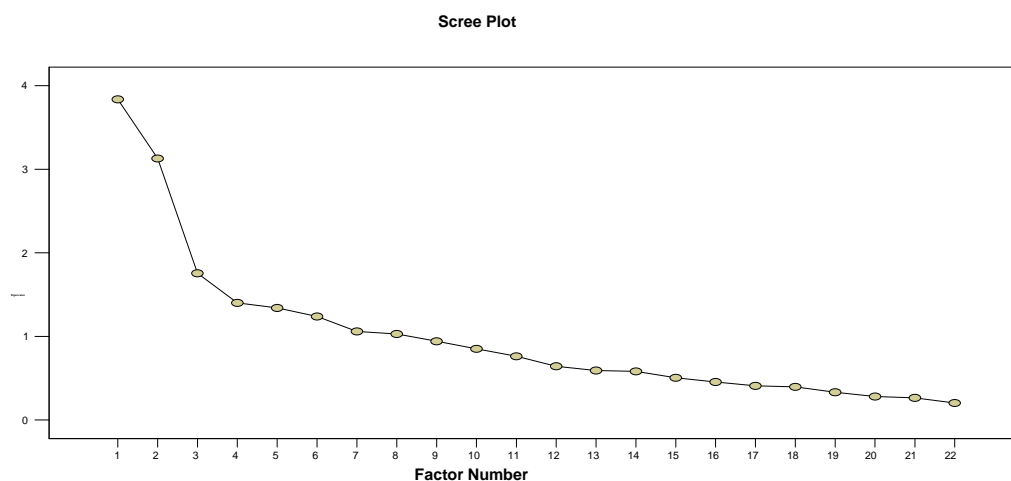
The Kaiser Olkin Measure for this scale is good at 0.7 and the Bartlett's Test of Sphericity is significant at 0.000 and was thus followed by factor analysis. From the total variance explained table obtained with factor analysis, 8 factors with Eigenvalues more than 1.0 can be extracted. However, the Scree-Plot gives us three to four factors where breaks can be considered.

**TABLE 5.45: Total Variance Explained**

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.837	17.440	17.440	3.837	17.440	17.440
2	3.129	14.221	31.661	3.129	14.221	31.661
3	1.755	7.977	39.639	1.755	7.977	39.639
4	1.401	6.368	46.007	1.401	6.368	46.007
5	1.340	6.093	52.100	1.340	6.093	52.100
6	1.238	5.626	57.726	1.238	5.626	57.726
7	1.059	4.815	62.541	1.059	4.815	62.541
8	1.029	4.677	67.218	1.029	4.677	67.218

9	.942	4.281	71.499			
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Extraction Method: Principal Axis factoring



**TABLE 5.46: Factor rotation on Maslach**

	<b>1</b>	<b>2</b>	<b>3</b>
I feel frustrated by my job	0.7		
I feel used up at the end of weekday	0.7		
I feel like I am working too hard in my job	0.7		
I feel like I am at the end of my rope	0.7		
I feel burned out/exhausted from my work	0.6		
Working with people all day is a real strain for me	0.5		
I feel emotionally drained from my work	0.4		0.4
Working with people directly stresses me	0.4		0.4
I can easily understand how patients feel about things		0.7	
I can create a relaxed atmosphere with my patients		0.7	
I feel happy after working with my patients		0.6	
I deal effectively with problems of my patients		0.6	
I have accomplished many things in my job		0.6	

In my work I deal with emotional problems very calmly		0.5	
I feel like I am very energetic		0.5	
I feel I am positively influencing other people's lives	0.3	0.5	
I have become more callous towards people since I took this job			0.7
I feel I treat patients as if they were impersonal 'objects'			0.6
I don't really care what happens to some patients		-0.4	0.6
I feel fatigued when I get up in the morning to face another day			0.5
I feel patients blame me for some of their problems			0.4
I worry that this job is hardening me emotionally	0.3		0.3
<b>Extraction Method: Principal Axis factoring. Rotation Method: Varimax with Kaiser Normalisation.</b>			

When 3 factors are extracted, the first factor has 8 items that account for 15% of variance. The 8 items represent emotional exhaustion. Factor 2 has 8 items that are found in the second subscale of Maslach and Jackson (1986), called personal accomplishment. These items account for 13% of the variance. The third factor has items found in the depersonalisation subscale of Maslach and Jackson (1986), and it accounts for 11% of the variance. When 2 factors, the outcome remains desirable. Factor 1 has 12 items that indicate tiredness and burnout. Factor 2 has 9 items that indicate accomplishment and less burnout. Items here include item number 21 which needs to be reversed to “I care what happens to my patients”. Three factors can be considered in line with Maslach and Jackson

*The three dimensions which are emotional exhaustion, personal accomplishment and depersonalisation correspond with those given by Maslach and Jackson (1986). The three-factor structure (emotional exhaustion, depersonalisation, reduced personal accomplishment) was confirmed by Kanste, Miettunen and Kynga (2006) when they investigated the factor structure of the Maslach Burnout Inventory in Human Services Survey (MBI-HSS) among Finnish nursing staff. The outcome of the study showed the best fit between the three factors, while the internal consistencies of the subscales were also found to be satisfactory.*

#### **5.2.4. Internal reliability and construct validity of the resilience scale**

Resilience is measured using a new rating scale, the Connor-Davidson Resilience scale (CD-RISC) which comprise 14 items. Each item is rated on a 7-point scale (0–7), with higher scores reflecting greater resilience. Exploratory factor analysis suggested a possible three-factor labelled as tenacity, strength and optimism (Connor & Davidson, 2003). These different factors cannot be considered as the scores to different items of the scale were added up to obtain a total resilience score and the higher the score the stronger the resilience. This scale also shows high internal consistency (Cronbach's alpha = 0.92).

#### ***5.2.4.1. Reliability for the resilience scale***

**TABLE 5.47: Reliability for the resilience scale**

<b>Items</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Median</b>	<b>Corrected Item-Total Correlation</b>	<b>Cronbach's Alpha if Item Deleted</b>
I manage one way or another	102	5.19	1.62	5.0	0.43	0.82
I feel proud I accomplished things	102	5.59	1.54	6.0	0.46	0.82
I take things at a pace	102	5.08	1.53	5.0	0.52	0.81
I am friends with myself	102	5.80	1.5	6.0	0.56	0.81
I can handle things at a time	102	4.52	1.78	5.0	0.36	0.82
I have enough energy	102	4.71	1.79	5.0	0.43	0.82
I can get through difficult times	102	5.48	1.60	6.0	0.59	0.81
I have self-discipline	102	5.62	1.51	6.0	0.42	0.82
I take things one day at a time	102	4.93	1.69	5.0	0.47	0.81
I usually find something to laugh about	102	4.93	1.85	5.0	0.46	0.81
My belief in myself gets me through hard times	102	5.34	1.53	5.0	0.34	0.82
In an emergency I can be relied on	102	5.25	1.63	6.0	0.35	0.82
My life has meaning	102	6.06	1.4	7.0	0.47	0.81
I find my way out of a difficult situation	102	5.69	1.47	6.0	0.57	0.81
<b>Scale total</b>	<b>14</b>	<b>74.2</b>	<b>12.5</b>			<b>0.83</b>

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The table shows that this measuring instrument has a high reliability indicated by a high Alpha value of 0.83, which is quite good. Items inter-correlate highly above 0.3. None of the items is problematic. The mean of 74.2 indicates a high reported level of resilience.

#### ***5.2.4.2. Factor analysis on resilience scale***

When factor analysis is done on this scale, KMO is found to be high at 0.776 and the Bartlett test is significant at 0.000. One factor is confirmed by the Scree Plot and it accounts for 31% of the variance. Factor analysis of the scale produces 1 factor. No further factor analysis will be done.

In summary, psychometric properties for some of the Work and Life Circumstances Questionnaire subscales, B=burnout subscales and the resilience scale are found to be acceptable though some measures have problems. High stress levels are indicated, attributable to sources outside work and remuneration, benefits and policy issues. Items that contribute more to the mean in the stress level subscale are: “You feel overburdened” and “You feel that you have too many problems”. Four scales (organisational functioning, task characteristics, remuneration, benefits and policy and career matters) indicate internal consistency problems that will be included in the discussion. The Cope scale proves to have very low reliability and is therefore changed by dropping all items with low correlation. All problems will be discussed in the next chapter. The new Cope measure has 14 items as compared to the original Brief Cope scale with 28 items.

The next section investigates measurements of these constructs to answer various hypotheses, comparing means to determine whether scores on the criterion variables differ significantly for different groupings.

### **5.3. Comparing means of criterion variables among groups**

#### **5.3.1. One way between groups’ multivariate analysis of variance**

A one-way between groups' multivariate analysis of variance is performed to investigate differences in criterion variables Emotional Exhaustion, Personal Accomplishment, Depersonalisation and Resilience among groups. Groups are based on the independent variables NGO, age, marital status, education level and number of patients, number of years in care and number of dependants. A number of tests are considered before means can be compared to obtain significant differences. The first test to be considered is the Box Test, to find values that are more than 0.001. The Multivariate test determines whether there are statistically significant differences among the groups in the dependent variables. The Wilks' Lambda as one of the commonly used statistics is necessary because the data has few problems. Values that are less than 0.05 indicate significant statistical differences that allow us to continue with the analysis. Otherwise if  $p > 0.05$  analysis should be stopped as there are no significant statistical differences. Once this is done it is necessary to investigate whether groups differ significantly in all dependent variables or in some of the variables. Alpha value with  $p < 0.05$  or a Bonferani adjusted value can be used, which will may give a higher alpha level to avoid some errors.

This study used the lower alpha level. Dependent variables that satisfy this level of significance were selected and their means were compared.

**TABLE 5.48: One-way between groups' multivariate analysis of variance**

Independent variable	Box Test	Levene's Test	Multivariate Tests (Wilks' Lambda)	Between subjects effects. p values	Selected Means Maximum and Minimum
NGO	0.579	$P > 0.05$ for all dependent variables	Wilks' Lambda = 0.681, $p = 0.016$ ,	Emotional Exh. $p = 0.09$ Personal Acc. $p = 0.05$ Depersonalisation $p = 0.49$ Resilience $p = 0.01$	Emotional Exh. (NGO 2=36.2, NGO 1=22.9) Personal Acc. (NGO 4=43.7, NGO 3=32.7) Resilience ( NGO 2= 81.6, NGO 6 = 68.7)
Age	0.974	$P > 0.05$ for all dependent variables	Wilks' Lambda = 0.770, $p = 0.456$ ,	No investigation	.....



<b>Marital status</b>	0.135	P < 0.05 for personal accomplishment	Wilks' Lambda = 0.861, p= 0.852,	No investigation	.....
<b>Education level</b>	0.029	P < 0.05 for emotional exhaustion and depersonalisation	Wilks' Lambda = 0.782, p= 0.115,	Emotional Exh. p= 0.458 Personal Acc. p=0.225 Depersonalisation p=0.086 Resilience p=0.238	Depersonalisation (Grade 10-11= 12.2, grade 12= 7.2
<b>Number of patients</b>	0.207	P < 0.05 for emotional exhaustion	Wilks' Lambda = 0.888, p= 0.512,	No investigation	.....
<b>Number of years in care</b>	0.535	P > 0.05 for all dependent variables	Wilks' Lambda = 0.863, p= 0.085,	Emotional Exh. p= 0.85 Personal Acc. p=0.20 Depersonalisation p=0.034 Resilience p=0.359	Depersonalisation (6-10yrs= 11.7, 11-15 yrs = 6.6
<b>Number of dependants</b>	0.145	P > 0.05 for all dependent variables	Wilks' Lambda = 0.888 p= 0.187,	No investigation	.....

The table shows that there is a statistically significant difference in dependent variables between NGOs.  $F(4) = 0.016$ , Wilks' Lambda = 0.681. However, differences to be considered are Emotional Exhaustion, Personal Accomplishment and Resilience. Caregivers in NGO 2 scored the highest on emotional exhaustion, and NGO 1 is the lowest, in personal accomplishment the highest score which means low accomplishment and high burnout goes to NGO 4. In Resilience the highest score is for NGO 2 where NGO 3 has the lowest score. There is also a statistically significant difference in dependent variables between different educational levels:  $F(4) = 0.115$ , Wilks' Lambda = 0.782. However, differences to be considered are depersonalisation where caregivers with educational level between Grades 10–11 scored the highest. Another statistically significant difference in dependent variables is between different numbers of years in care. Differences to be considered are depersonalisation where caregivers with 6–10 years of care scored the highest.

### 5.3.2. Comparison of means using means, standard deviation and medians

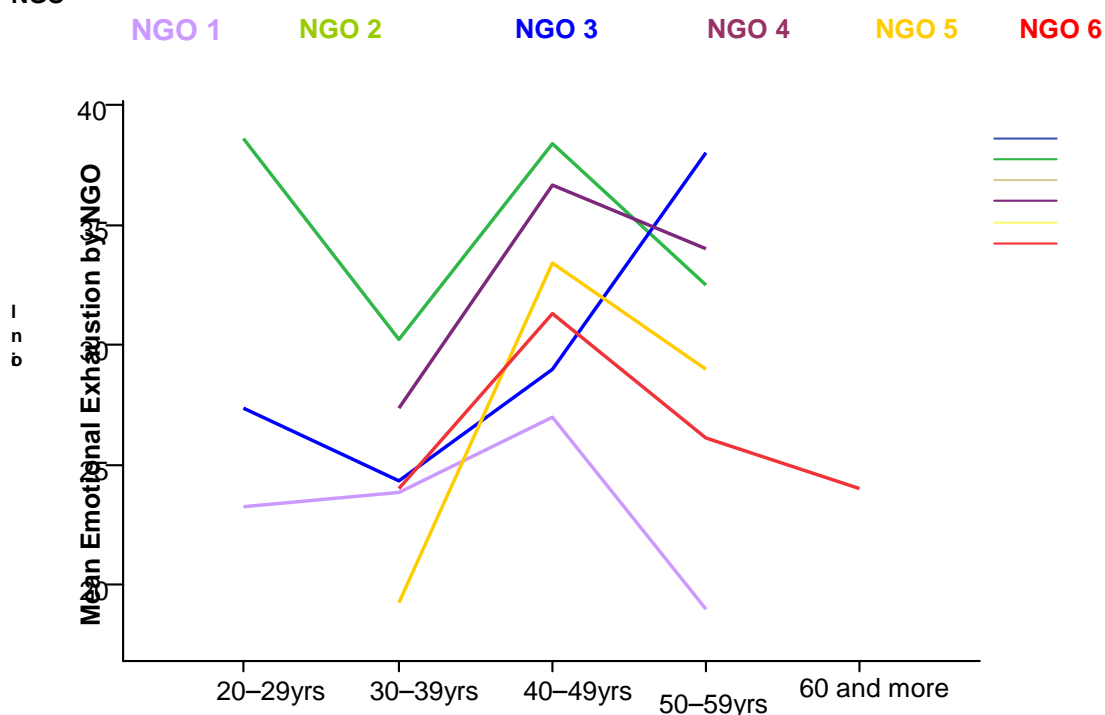
Means are compared to further investigate whether groups in certain variable measures differ. Groupings that will be considered here are: age, marital status, church attendance and training, number of patients, number of dependants, standard of living and number of breadwinners. These are groups that were not confirmed in the one-way multivariate analysis of variance. Further investigations of mean scores are done with consideration that high scores on emotional exhaustion indicated high burnout, while high scores in personal accomplishment and depersonalisation indicated medium burnout.

**TABLE 5.49: Emotional exhaustion by age**

Age	Mean	N	Std. Deviation	Median
20–29	31.4	18	12.4	33.5
30–39	25.2	30	13.6	23.6
40–49	33.1	27	16.1	31.0
50–59	28.0	19	9.8	26.0
60 and more	24.0	5	8.3	27.0
Total	28.8	99	13.7	27.0

Caregivers in the age ranges 40–49 and 20–29 tend to score high on Emotional Exhaustion as compared to others except for 60 years and older Caregivers who, because of their comparatively very small number, have a very low mean. A graphical investigation of emotional exhaustion per NGO in every age group is done to look deeper into the age subgroups that are indicated above.

Figure 6: Graph for Emotional exhaustion by partnering NGO



The graph shows that caregivers who are in the age range 20–29 years and 40–49 years coming from NGO 2 scored the highest in emotional exhaustion. Caregivers from NGO 2 contributed more to the high scores for caregivers in the age ranges 20–29 and 40–49 and in the high emotional exhaustion mean for the study. 40–49 year olds in NGO 4 also score consistently high and 50–59 year olds in NGO 3 also score high in emotional exhaustion.

TABLE 5.50: Emotional Exhaustion by Marital status

Marital status	Mean	N	Std. Deviation	Median
married	30.8	37	16.1	27.0
single	27.8	44	11.7	25.0
divorced	35.5	2	4.9	35.5
widowed	30.3	3	8.5	27.0
separated	22.7	7	14.2	20.0
living together	38.0	6	10.3	38.0
Total	28.81	99		

People who are divorced and those living together with partners without being married tend to score high on Emotional Exhaustion.

**TABLE 5.51: Personal accomplishment by marital status**

Marital status	Mean	N	Std. Deviation	Median
married	38.0	37	10.3	39.0
single	36.5	44	11.7	35.5
divorced	45.5	2	3.5	45.5
widowed	36.0	3	14.7	44.0
separated	43.7	7	3.4	45.0
living together	39.5	6	10.9	43.0
Total	28.81	99		

People who are divorced and those who are separated from partners tend to score high on Personal Accomplishment. High scores represent low personal accomplishment and high burnout.

**TABLE 5.52: Depersonalisation by marital status**

Marital status	Mean	N	Std. Deviation	Median
married	10.5	37	6.5	9.0
single	9.1	44	6.9	8.5
divorced	15.5	2	6.4	15.5
widowed	9.7	3	6.0	9.0
separated	8.4	7	6.5	5.0
living together	10.3	6	7.5	9.0
Total	28.81	99		

People who are divorced tend to score high on depersonalisation

**TABLE 5.53: Depersonalisation by age**

N	Mean	N	Std. Deviation	Median
20–29	8.7	18	6.5	8.5
30–39	7.2	30	6.2	5.5
40–49	11.5	27	6.1	11.0
50–59	12.2	19	6.9	11.0
60 and more	10.6	5	7.6	9.0
Total	10.0	99	6.7	9.0

Caregivers between 40 and 59 years of age tend to score high on depersonalisation as compared to others. According to the score sheet, these scores represent moderate levels of depersonalisation and moderate burnout levels.

From the tables above it is evident that people who scored high on emotional exhaustion are caregivers who are in the age range 20–29 years and 40–49 years coming from NGO 2 and caregivers who are divorced and those living together with partners without being married. Caregivers who scored high on depersonalisation are in the age range 40–59, with educational levels between Grade 10 and 11, as well as caregivers who have worked for 6–10 years in care-giving. Thirdly, in Personal accomplishment, people with low accomplishment meaning high burnout are caregivers in NGO 4 and those who are divorced or are separated from partners.

What follows is a discussion of inter-correlations between predictor variables and criterion variables to establish relationships that exist between these variables.

#### **5.4. Inter-correlations between all predictor variables and criterion variables**

This is an investigation of relationships between predictors: Socio-demographic factors (age, number of patients, marital status, number of years in care and standard of living) stress (with 8-subcales level of stress, causes outside work, organisational functioning, task characteristics, physical work conditions, career

matters, social matters and remuneration), coping (avoidance, active coping and dysfunctional coping), Burnout with 3-subscales (emotional exhaustion, personal accomplishment and depersonalisation) and resilience.

A correlation matrix was generated using SPSS to examine correlation among variables. Pearson Product Moment correlation coefficients between each pair of variables listed above is determined. For each pair, the r-value, significance level and number of cases are given. Cases with missing data on any of the variables are usually removed but in our study all cases were reported. Correlation also considers the direction of the relationship and this is shown by the sign in front of the r-value. The strength of the relationship is given by the absolute value of r which varies from 0 to 1. The smallest value, which is 0, indicates no relationship and 1 represent a perfect relationship. The middle values are interpreted differently by authors but the guideline that is used the most is the one by Cohen (1988) where:  $r = -0.1$  to  $0.1$  is small correlation,  $r = -0.3$  to  $0.49$  is medium correlation and  $r = -0.5$  to  $1.0$  shows a large correlation. It is also stated that the interpretation relies a lot on the size of the sample. Our sample was large, therefore, small correlations of below 0.3 are considered strong enough to be statistically significant.

TABLE 5.54: Correlation of all variables

	A	b	c	D	e	f	g	H	i	J	k	l	M	n	O	p	q	r	s	t
a.	1.00 0																			
b.	-.329( **	1.00 0																		
c.	.015	.088	1.0 00																	
d.	.506 (**	-.111	.152	1.00																
e.	.175	-.230 *	-.046	.114	1.00															
f.	.135	.015	.083	.004	.23*	1.00 0														
g.	-.133	.055	.120	-.3*	.041	.048	1.00 0													
h.	.073	-.023	-.058	-.14	-.03	-.032	.513 (**	1.00	.											
i.	.062	.015	-.104	.038	-.08	-.003	-.063	.061	1.00											
j.	.236 (*)	.076	-.061	.193	-.12	-.074	.081	.262 (**	.432 (**	1.00 0										
k.	-.096	.107	-.33	-.2*	-.02	.069	.064	.275 (**	.383 (**	.172	1.00 0	.								

			**																	
<b>l.</b>	.272 (**	- .094	.03 4	.1 26	.052	.034	.052	.315 (**	.307 (**	.620 (**	.240 (*)	1.00								
<b>m.</b>	.087	.194	.09 7	.1 9*	-.03	.017	- .146	.005	.494 (**	.575 (**	.215 (*)	.38* (*)	1. 00							
<b>n.</b>	- .142	- .045	- .10 3	- .1 5	.120	.030	.301 (**	.111	.110	.033	.314 (**	.044	- .0 9	1. 00						
<b>o.</b>	- .008	.090	.12 4	.0 13	-.08	- .038	.163	.375 (**	- .161	.080	- .022	- .072	- .0 3	- .0 6	1.00 0					
<b>p.</b>	.013	.177	- .00 4	.1 64	.148	.078	- .26(* *	.106	.088	.231 (*)	.119	.25*	.4* *	- .0 2	.120	1. 00				
<b>q.</b>	.220 (*)	- .154	.03 7	.1 69	.22*	.036	.155	.141	- .198 (*)	.076	- .057	-.06	- .1 4	.0 7	.382 (**	- .2* )	1. 00			
<b>r.</b>	- .113	.112	.14 7	- .0 8	-.06	.077	.113	.120	.062	.208 (*)	.013	.089	.1 82	.0 18	.226 (*)	.3* *	- .0 3	1. 00		
<b>s.</b>	- .046	- .107	.06 4	.0 56	-.06	- .178	- .029	- .157	- .093	.043	.23(* )	-.01	.1 00	- .0 3	- .007	.0 48	- .0 6	- .1 2	1.00 0	
<b>t.</b>	.261 (**	- .051	.03 9	.2 4*	-.11	.102	.172	.164	.059	.270 (**	- .193	.135	.0 47	- .0 6	.188	- .0 1	.3* *	.0 81	.036	1.00 0
<b>u.</b>	.191	- .179	.27 3(* *	.1 84	.100	.062	.150	.029	.158	.278 (**	- .106	.197	.2 1*	.0 55	- .042	- .0 5	.0 91	.1 49	.074	.348 **
<b>v.</b>	-	-	.03	-	.032	.126	.447	.43*	.179	.211	.224	.146	.1	.1	.179	.1	.1	.3*	.010	.158



	.079	.016	7	.18			(**	*		(*)	(*)		62	95		05	08	*		
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\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

Variables in the table are a = Age, b= level of education, c = Number of Aids patients, d= number of years in care,

E = standard of life-SULSM, f = number of dependents, g = level of stress, h = causes outside work,

I = organisational functioning, j = task characteristics, k = physical work conditions, l = career matters, m = social matters, n= remuneration and fringe benefits, o = emotional exhaustion, p = personal accomplishment,

q = depersonalisation, r= resilience, s = marital status, t = avoidance coping, u = active coping, v = dysfunctional coping.

The table above shows correlations between variables where a positive correlation means that people who scored high in one variable also scored high in the other variable, and the same is true for low values. A negative correlation shows that a high score in one variable goes with a low score in the other variable. Correlations with organisational functioning, task characteristics, career matters and remuneration, benefits and personnel policy will only be mentioned and will not influence the use of correlations towards answering the research question because these scales were found to have internal consistency problems.

Causes of stress outside work correlate significantly with emotional exhaustion and dysfunctional coping. The correlation is positive, which means that caregivers who score high on stressors outside work also tend to score significantly high on emotional exhaustion and dysfunctional coping. A negative correlation value between level of stress and personal accomplishment shows that people with high stress levels obtained low scores (indicating high) on personal accomplishment and

there was a strong positive correlation with dysfunctional coping. This correlation is significant at 5%. High scores on task characteristics relate to high scores on personal accomplishment, which means low accomplishment and high scores on resilience, and all forms of coping. Scores on stressors from career matters also increase with personal accomplishment, indicating low accomplishment. Another strong significant positive relationship exists between social matters as stressors and personal Accomplishment, as well as with resilience. Organisational functioning (was found to be a problem instrument with the sample) relates negatively with depersonalisation. Of all the socio-demographic factors entered into the correlation matrix, only number of years in care, standard of living subscales, age and number of patients correlate with other variables significantly. Age correlates significantly with task characteristics, career matters, depersonalisation and avoidance coping. Number of Aids patients correlates negatively with physical work conditions, and positively with active coping. Number of years in care correlates negatively with physical work conditions, positively with social matters and positively with avoidance coping. Standard of life correlates positively with depersonalisation.

Avoidance coping has a high positive correlation with depersonalization while dysfunctional coping correlates positively with resilience. Dysfunctional coping correlates highly with most variables. There is positive correlation between resilience and emotional exhaustion and another positive relationship is found between Personal Accomplishment (have low accomplishment) and Resilience.

To summarise, inter-correlations between variables did not yield good outcomes. Firstly, the correlation indexes are not high (less than 0.5, which could mean medium to low correlation). Dysfunctional coping correlates positively with most stress variables, and with one burnout variable. A number of relationships (positive and negative) are also found to be between stress and burnout, as well as between stress and resilience. Most of the relationships with Resilience do not make much sense as they indicate high burnout and high resilience going together. This could be a sign of psychometric problems that were not shown by any of the tests for reliability and

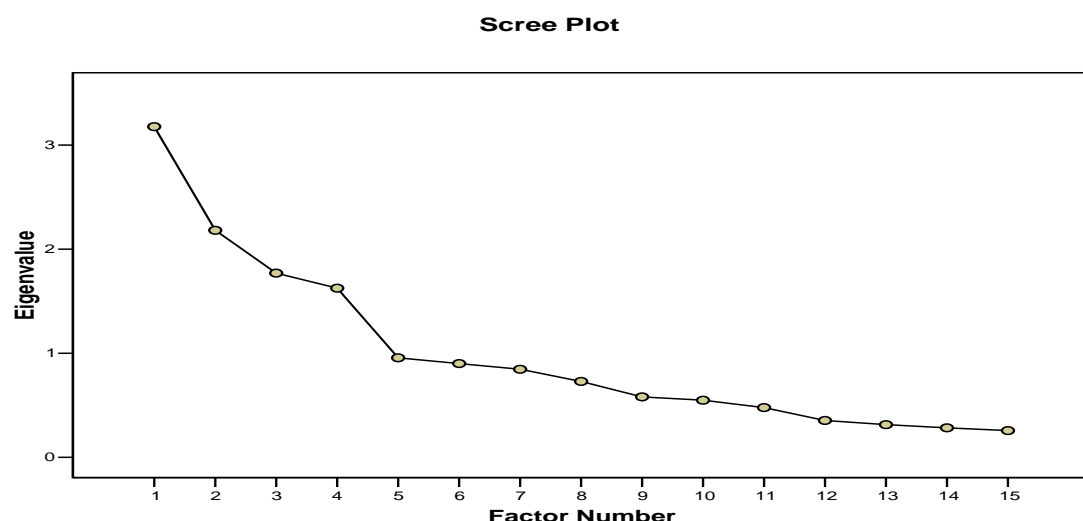
validity. Relationships between age and coping, as well as Depersonalisation make sense. Yet another relationship is found between standard of living, and number of years in care with Burnout. These relationships will be discussed in detail in Chapter Six.

What follows is factor analysis of the whole model to determine variables that can be grouped together.

### 5.5. *Factor analysis of the whole model*

This factor analysis was performed for four subscales from the Work and Life Experiences Questionnaire and all the other scales in the model, to establish whether there are constructs in the model that can be grouped together because they have a common factor. Rotated factor matrix produced five factors where each factor combines scales from different variables.

The value for the Kaiser-Meyer-Olkin measure is found to be 0.65 approximated and the Barlet Test of Sphericity is significant at ( $p < 0.001$ ). Next is a look at Factor analysis.



The Scree-Plot shows a break after five points, meaning that five dimensions can be extracted from the model.

**TABLE 5.55: Total variance explained**

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.176	21.176	21.176	2.233	14.889	14.889
2	2.181	14.541	35.717	1.609	10.724	25.613
3	1.770	11.798	47.514	1.277	8.515	34.128
4	1.625	10.835	58.349	1.266	8.442	42.570
5	.956	6.374	64.724	1.215	8.103	50.673
6	.901	6.006	70.730			
7	.846	5.641	76.370			
8	.729	4.860	81.231			
9	.581	3.870	85.101			
10	.549	3.659	88.759			
11	.478	3.185	91.945			
12	.354	2.361	94.306			
13	.314	2.093	96.399			
14	.283	1.888	98.287			
15	.257	1.713	100.000			

Extraction Method: Principal Axis Factoring.

**TABLE 5.56: Rotated Factor Matrix (a)**

	Factor				
	1	2	3	4	5
Task characteristics	.799	.129	.187	.232	
Social matters	.672	-.112	.315	-.162	
Organisational functioning	.617			-.207	.254
Career Matters	.597	.153			.126
Active cope	.398		-.336	.296	-.177
Level of stress		.937	-.142	.103	
Causes outside work situation	.112	.552	.267	.212	.166
Dysfunctional cope	.196	.471	.319		.221
Personal accomplishment	.218	-.105	.645	-.132	
Level of resilience	.123	.128	.445		
Depersonalisation	-.103			.740	
Emotional exhaustion	-.188	.107	.443	.480	
Avoidance	.202			.436	-.165
Physical work conditions	.206	.109			.941
Remuneration, fringe benefits & personnel policy		.297			.325

Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalisation.

A rotation converged in 10 iterations.

Factor rotation yields Factor 1, which includes these subscales with factor loadings given in brackets: Active coping (0.4), personal accomplishment (0.2), task characteristics (0.8), social matters (0.7), organisational functioning (0.6) and career matters (0.6). Factor two includes these subscales with factor loadings given in brackets: dysfunctional coping (0.5), stress levels (0.9), causes outside work (0.6), remuneration fringe benefits and policy (0.3). Factor three includes these subscales

with factor loadings given in brackets: Dysfunctional coping (0.3), active coping (-0.3), personal accomplishment (0.7), emotional exhaustion (0.4), causes outside work (0.3), social matters (0.3). Factor four includes these items with factor loadings given in brackets: Avoidance coping (0.4), active coping (0.3), depersonalisation (0.7) and task characteristics (0.2). Factor five includes these items with factor loadings given in brackets: Dysfunctional coping (0.2), Physical work conditions (0.9) Remuneration fringe benefits and policy (0.3), Organisational functioning (0.3).

The analysis above suggests that the subscales from stress, coping and burnout can be put together and be given a label. Subscales that cluster together can be used to measure some attribute of the participant. They also show that the theoretical model that formed the basis of this study can be translated into actual measurable bundles. For example, the subscales hanging together in factor one can be used to measure achievement-oriented behaviour in the workplace and factor two variables make up the construct out of work living conditions that influence levels of stress in the workplace.

### **Summary of the analysis and the new model**

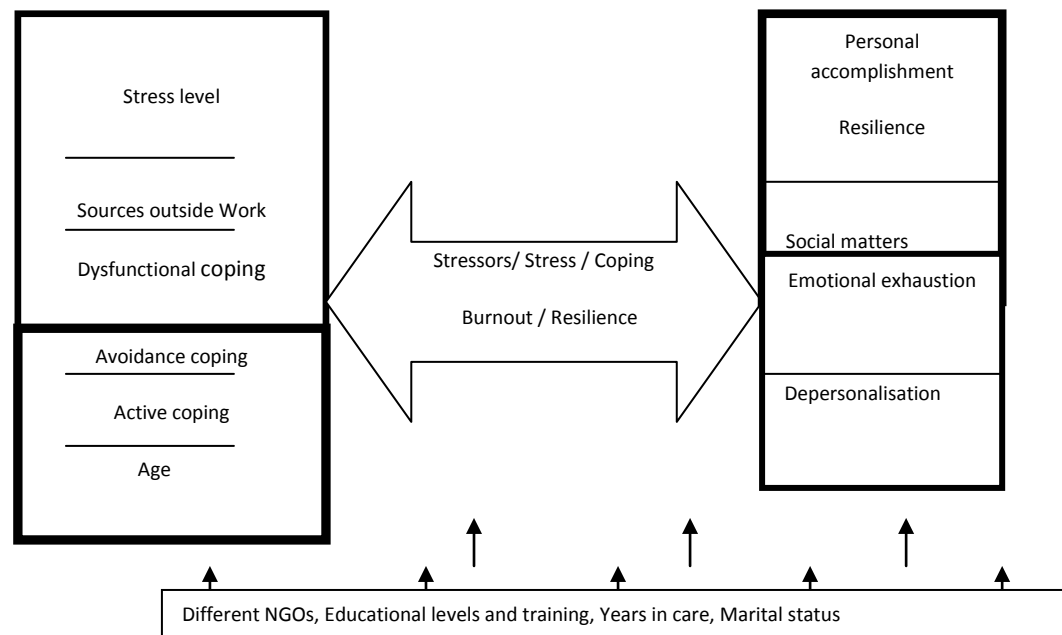
Only 4 subscales of the stress scales passed the tests for internal consistency. These tests, which are level of stress-WLQSS1, Sources outside work-WLQSS2, Social matters- WLQSS7 and Physical work conditions WLQSS5, are considered for further analysis.

Inter-correlations of the four stress scales, three coping scales (active coping, avoidance coping and dysfunctional coping), socio-demographic factors (number of years in care, standard of living subscales, age and number of patients) as predictors or independent variables, three burnout subscales (emotional exhaustion, depersonalisation and personal accomplishment) and Resilience as outcome measures/dependent variables show significant correlations.

Level of stress and personal accomplishment ( $r = -0.26$  and  $p < 0.01$ ). Level of stress correlates strongly with dysfunctional coping ( $r = 0.447$ ,  $p < 0.01$ ). Causes of Stress outside work correlates strongly with emotional exhaustion ( $r = 0.375$  and  $p < 0.01$ ). Causes of stress outside work correlates strongly with and dysfunctional coping, ( $r = 0.43$  and  $p < 0.01$ ). Social-matters as stressors and personal accomplishment ( $r = 0.4$  and  $p < 0.01$ ). Social matters correlate with Active coping at ( $r = 0.21$   $p < 0.05$ ). Physical work conditions correlates with Dysfunctional coping ( $r = 0.224$  and  $p < 0.05$ ). Avoidance coping has a high positive correlation with Depersonalisation ( $r = 0.3$  and  $p < 0.01$ ). Dysfunctional coping correlates positively with Resilience( $r = 0.3$  and  $p < 0.01$ ). Age correlates significantly with Depersonalisation ( $r = 0.220$  and  $p < 0.05$ ). Standard of life correlates positively with Depersonalisation( $r = 0.22$  and  $p < 0.05$ ).

Factor analysis of the whole model is done with subscales that inter-correlated significantly, which are: Level of stress, sources outside work, social matters, physical work conditions, avoidance coping, Active coping and dysfunctional coping, age, standard of life, emotional exhaustion, personal accomplishment, depersonalisation and resilience. Rotated factor matrix yields four factors which account for 38% of the variance. The distribution is as follows: 12% for factors 1, 10% for factors 2, 9% for factors 3 and 8% for factors 4.

Factors 1 (level of stress, sources outside work, dysfunctional coping) and factors 2 (avoidance coping, active coping, age) both represent sets of predictors where one is problems and problematic behaviour that causes stress and the other predictor is ways of coping influenced by certain attributes, such as energy levels and experience. Factors 3 (personal accomplishment, social matters and resilience) represents an outcome of strength which is self-esteem and strong social relationships and Factors 4 represents burnout. These two factors are both outcomes and dependent variables. One stress subscale, physical work conditions, is thrown out as it does not load on any factor.

**Figure 7: The new model**

Other factors that may be affecting the outcome of the predictors are: Working for different NGOs in different geographical areas, educational levels of participants, number of years in care and marital status of participants.

## Conclusion

This chapter sketches the descriptive and inferential statistics used to analyse the data, as well as the outcome of the analysis. The outcome is summarised below.

Reliability (internal consistency) and validity (construct validity) for some of the measuring scales are not good. For example, work-related sources of stress, subscale' with 76 items, was found to be problematic with our sample. Though the scale has internal consistency, factorial analysis used to test the construct validity does not give acceptable outcomes. Three subscales (organisational functioning, task characteristics and career matters) indicate internal consistency problems that will be included in the discussion. These subscales are used despite problems presented. The Brief Cope scale is also problematic with our sample as it lacks internal consistency and validity.



Thus, the cope measure had to be transformed by dropping 14 of the 28 items. The third scale that also proves to be problematic is the Resilience scale which, though it has internal reliability and construct validity, does not correlate well with other scales. Therefore, the scale shows predictive validity problems.

A look at means of subscales indicates a high level of stress that is attributable to sources outside work and remuneration, benefits and policy issues. Items that contribute more to the high mean in stress level are: “You feel overburdened” and “You feel that you have too many problems”. High burnout is also indicated, and attributed to high emotional exhaustion.

Differences between various groups have also been explored and highlighted. It is evident that participant volunteer caregivers have got different levels of burnout that is associated with high levels of stress and unfavourable conditions in the different environments where they operate, level of education and age, length of service, N=number of patients and living standard. Some differential scores are also based on the marital status of the caregivers. The caregivers also show high levels of resilience amid high levels of stress and high burnout. All forms of coping are used to deal with stress, while the role of coping as a moderator or mediator cannot be clearly ascertained.

Inter-correlations between variables are not very good either. There are low and non-significant correlation indices. However, relationships between stress (stress level, sources outside work, organisational functioning, task characteristics, social matters, career matters, remunerations, benefits and policy subscales), coping (avoidance, active and dysfunctional strategies), burnout (emotional exhaustion, personal accomplishment and depersonalisation) and resilience have been established. There are significant correlations between causes of stress outside, emotional exhaustion and dysfunctional coping.

Some relationships are not easy to understand, for example, high burnout relates with high resilience.

Lastly, factor analysis of all subscales with significant inter-correlations produced a new model that shows relationships between stress, coping and demographic factors as predictors of burnout and resilience for the participants. In the next chapter these findings are brought to bear with the research questions and the theoretical considerations from the literature review.

## Chapter Six

### 6. Discussions of results

#### 6.1. Introduction

The aim of this study was to explore the relationship between stress, coping and demographic factors as predictors of burnout or resilience in volunteer home-based care. The focus of the study was to identify sources and levels of stress, levels of burnout and resilience, as well as coping strategies of volunteer caregivers who work for home-based care organisations that partner with SOS CV in South Africa. Socio-demographic factors were investigated to determine whether stress levels, burnout, resilience and coping differed on the basis of age, gender, cultural values, marital status, religious affiliation, training received sources of income and number of patients cared for. The study had to establish whether stressors in the form of caregiving experiences, challenges and unmet needs, employment status, dependants, hours spent at work, number of sick people in one's care, exposure to Aids-related deaths, and lack of support and training may distress and result in an experience of stress. Further on, there was a need to find out whether without effective moderators or coping resources, stress can develop into burnout resulting in drop-outs or reduced performance, ill-health or use of maladaptive coping such as use of drugs and alcohol for those carers who continue to give care. Lastly, there was need to establish if there is a significant negative correlation between burnout and resilience so that high burnout is associated with a high reduction of personal accomplishment and low resilience is also associated with high reduction in functioning.

#### 6.2. Discussion

The survey established that volunteer caregivers experience high stress levels that result from outside work problems such as personal stressors, country specific issues and global economic issues compounded by poor remuneration as an organisational issue. Personal issues include family crises and financial obligations, country specific issues are socio-political and economic conditions and technological advancement.

As discussed in Campbell et al., (2005), the economic and material stress is compounded by the fact that the incentives that volunteers get are little and cannot meet their basic needs. These authors also say that the financial strains become worse when volunteers find themselves spending their money to support their patients because of the situation of poverty that these care receivers face. All these factors together add to internal stressors to cause high levels of stress.

It has been established that the majority of caregivers (80%) staying in rural areas come from medium to extremely poor households with poor or no sources of income. When these caregivers find themselves in such challenging situations, organisational weaknesses such as poor functionality and lack of incentives become overemphasised. For example, volunteers registered high dissatisfaction with conditions of work and lack of steady income or stipends. They reported that they sometimes get finances from the Department of Health though the income lacks consistency, leaving them with many months of what they refer to as a “dry season”. When this survey was conducted, they were in one of the dry seasons.

However, it is a known fact that in South Africa, volunteer workers, unlike community health workers, do not receive payment for the work they do. Akintola (2004a, p.38) refers to a case where an NGO almost lost funding for a project when it included a stipend for volunteers in its proposal. The donor told the NGO to remove this cost factors or lose the funding. Caregivers do not have to be dependent on gifts to support their families. They can try different forms of income-generation projects to create income for their families. Furthermore, all NGOs that partner with SOS CV are assisted by the organisation to start up income-generating projects that offer some form of relief. SOS CV also pays them, annually, a lump sum of what they refer to as ‘a service grant’. All these forms of assistance and incentives amount to nothing for caregivers who are already overwhelmed.

Socio-demographic factors were studied to establish the characteristics that have an influence on the relationship between stress, coping and burnout/resilience. These

factors are important for this study because they constitute a high percentage of issues that affect caregivers outside work. As confirmed by Pearlin, Mullan, Semple and Skaff's caregiver stress model in (Oyebode, 2003), background factors which are normally sources of strength and support, add to coping factors to contribute to low burnout or high resilience. If the background is not good or rich with support, it becomes difficult for the caregivers to approach the situations they face directly and employ efficient problem-solving strategies as coping measures.

Consistent with Levine (2004) and Patel and Wilson (2004), this study found that socio-demographic issues such as single parenthood for younger caregivers and the burden placed on older caregivers to care for big families, low levels of education, unemployment with people depending on money transfers for sources of income, high levels of poverty characterising households of caregivers all contribute to the poor background or context in which caregivers function.

Long-term exposure to sick people and their ultimate death have been found not to aggravate stress. Older care givers have many other issues that relate to higher levels of burnout. Prabha et al. (2004), found that the number of years of working with HIV and Aids did not correlate with psychological distress. They found that the extended work time spent with some of the Aids patients relates to many changing levels of depression for caregivers. As Doka and Davidson (2001) assert, the ultimate death of the patient brings feelings of relief. The high stress, which relates to the age of caregivers, can therefore be associated with other factors such as previous life experiences and a build-up of psychological stress from many years of exposure to difficult situations, compounded by the burden bigger families.

However, concentrated exposure to sick people as a result of very high workload proved to be a source of high stress levels and burnout. This issue is discussed further in the upcoming paragraphs as it impacts on burnout.

Furthermore, there is a significant negative correlation between stress levels and training in counselling, First aid and HIV and Aids. People who scored high on training

in these areas, scored low on stress levels. Therefore, as supported by Oyeboode (2003), people who received sufficient work-related training have less stress or people with less stress do attend training sessions that are optional. This study found that many participant caregivers who did not have good work related training also did not have a sound basis in education. The level of training evidently depends on being well equipped educationally to be able to learn what is required in care-giving quickly (Akintola, 2004b). Otherwise training itself can easily cause a lot of anxiety and become another source of stress. As a result, people will refuse to attend training whenever it is suggested.

Care-related conditions such as lifting of patients and walking long distances to the homes of patients reportedly contribute to strains and high levels of stress (Akintola, 2004a, Oyeboode, 2003). Fear of becoming infected through intensified exposure to sick people, as confirmed by Miller (2000), also contributes to high levels of stress. However, this study failed to identify these task-related issues as sources of stress within work situations. Reasons for this shortfall are discussed in the next section on measurement instruments.

Some caregivers indicated that patients allocated to them either never tested for HIV or concealed their HIV status for fear of social exclusion or discrimination associated with stigma. When patients use ineffective coping strategies, such as denial and concealment, this manifests as a secondary stressor to the caregivers causing them to focus on acquiring hands-on experience to become competent caregivers (Storm & Rothman, 2003). Active coping in the transformed cope scale means, getting emotional support or giving meaning to the problem and maybe learning from what is happening. Once issues are resolved or understood through these coping means, caregivers can look back to see how much they have achieved because they are result-oriented. Participants found to be using a lot of active coping, dealing directly with the challenges they are faced with, tend to have high levels of professional efficacy. The use of active coping is also associated with a sense of mastery over the stressor (Carver, 1997).

People who use active coping are those who want to deal directly with problems or issues that cause stress in their work situation. Otherwise if active coping does not work and the situation gets out of hand to the extent that they start treating the patients as less human, caregivers will then employ avoidance or dysfunctional coping. This evolving nature of coping, whereby coping changes to suit situations as perceived by the volunteer caregivers, is supported by Lazarus and Folkman's (1984) theory which states that coping is a process which changes as stressful encounters unfold.

The three coping strategies: active coping, avoidance coping and dysfunctional coping all have an effect on the stress-personal accomplishment, stress-depersonalisation and stress-emotional exhaustion equations respectively. These three forms of coping contribute, as indicated by high correlations, towards the variance in depersonalisation, personal accomplishment and emotional exhaustion of caregivers. Active coping has been found to correlate negatively with personal accomplishment where low scores on personal accomplishment mean high accomplishment. Decreased accomplishment can also be associated with lower levels of education, lack of sufficient training and low socio-economic status.

As indicated in discussions above, avoidance is used when caregivers have to deal with a conflict situation whereby they are tempted to direct their frustrations towards their patients but instead choose to use avoidance. In our transformed cope scale avoidance, coping represents the items: "I admit that I can't deal with it and quit trying, I refuse to believe that it has happened, I go to movies or watch TV to forget about it and I act as though it has not even happened". In this study increased use of avoidance coping is associated with low depersonalisation, which is the interpersonal dimension of burnout whereby feelings of being drained and used up would make caregivers interact with others in a negative and cold-hearted manner.

Some of the volunteers in this study deal with physical stressors by employing dysfunctional coping strategies such as denial of their responsibilities in the work situation, drinking a lot and expressing their emotions a lot. Instead of solving the situations, strategies used cause more problems and more stress for the volunteers. The strain that they have to take affects relationships within the work situation, as well as within their families. From a different angle, the dysfunctional and avoidance strategies that volunteers employ may help them to continue to care for their patients regardless of high levels of exhaustion, and high resilience will be reported. This may conceal inadequacies in coping as issues may not be dealt with sufficiently. Ultimately, the health and wellbeing of both the patient and the caregiver may be affected. Such a situation highlights the need to have psychosocial support for the volunteers.

Farber (2000) cautions that when the satisfaction derived from work is not sufficient to balance the stressors and is perceived to be disproportionate with the demands made of workers, the results may be emotional and physical distress, ceasing to care, loss of motivation to work hard, and ultimately burnout. High levels of burnout have also been found to go with age, length of service or concentrated exposure to dying patients (Akintola, 2004a). Prabha et al. (2004) and Port (2006) found that caregivers who work with HIV and Aids experience burnout as a function of concentrated exposure to very sick and dying Aids patients. Going with this argument, this study found that when mean scores for burnout are compared, there is a noticeable relationship between depersonalisation and length of service. Another confirmation is the significant positive correlation that is found between number of years in care and depersonalisation. For example, caregivers below the age of 39 score low on depersonalisation. Most of these younger caregivers have not spent a long time doing care-giving to be feeling drained and used up as yet, thus the low scores on depersonalisation. Again when mean scores on subscales of burnout are compared by NGO, it is found that caregivers in one NGO score the highest on emotional exhaustion and depersonalisation. Caregivers in this NGO encounter concentrated exposure to sick patients because they do home-based care during the day (with 6–



10 patients per caregiver on average) and they also work at the NGO's hospice in the evening where they together care for about 28 patients. The long time that they spend with sick people causes tiredness and negative feelings, thus affecting their relationships with others.

In cases where high levels of stress do not lead to burnout, there was a need to know what happens to the caregivers. Therefore, resilience was also put into the equation for investigation. The average score for the scale was found to be high at 74.2, with each item recording a mean score of approximately 5 and above. This shows that participants answered positively to a high percentage of the 14 statements that described how they are able to bounce back after experiencing stressors. Bonanno (2004) suggests that positive emotion and humour play a part in resilience, since the negative aspects of the event are laid to rest and the negative emotion is cancelled out. In this study high resilience is associated with dysfunctional coping and emotional exhaustion, where dysfunctional coping represents expressing emotions a lot, thinking a lot about what to do or saying to oneself: "this is not real". Now if these two ways of coping can lead to a build-up of strength, therefore definitions of what works and what does not work in coping need to be reconsidered.

The resilience of these volunteers can be explained by a combination of factors at work within systems emanating from the responsibilities of volunteers such as: strong unselfish and humanitarian motivations and the lack of employment in our communities, all of which have not been explored in this study but have been investigated elsewhere (Akintola, 2008). These pretentious attitudes will result in issues of concern not being attended to; causing exaggerated psychological distress in the volunteer caregivers, which becomes a threat to home-based care.

### **6.3. Measurement instruments**

#### **6.3.1. The Work and Life Experiences Questionnaire**

Stress in this study is considered as a result of imbalances between demands (within and outside the work situation) and an individual's inability to cope. Stress was measured using the Work and Life Experiences Questionnaire (WLQ) by Van Zyl and Van Der Walt (1991). The scale has eight subscales that measure level of stress, sources of stress outside work and six sources of stress within work situation, which are organisational functioning, task characteristics, physical work conditions, career matters, social matters and remuneration – personnel policies.

Some of the subscales such as task characteristics, organisational functioning and career matters did not show good reliability and validity with the sample. The subscales have got items that may have contributed to bias in the scales because of being poorly constructed. For example, one item's wording is "You feel that you receive recognition for what you do", without being specific about how such recognition can be observed by the caregiver. Another item is worded as "You can display initiative" and again the statement is not specific about how such initiative would be displayed. Other difficult items include: "You can assume full responsibility for what you do", "The requirements of your work correspond with what you can offer" and many more others whose mean scores differed from the rest. The questions are abstract and it is possible that they were not understood and therefore interpreted the same way by participants. This can also be due to poor language proficiency and low language understandings, resulting from the low educational levels of most participants. Most participants are below Grade 10 while the manual recommends that the minimum requirement for respondents be Grade 10 and not below this level. Clark and Watson (1995) confirm this by stating that good items should be simple, straightforward and appropriate for the reading level of the target population.

Subscales that failed to meet psychometric expectations were therefore left out when the was tested.

### **6.3.2. Maslach**

The Maslach instrument with 22 items was used to measure burnout. Participants obtained an average score that indicates high emotional exhaustion and therefore high burnout. The group also reported moderate to high levels of depersonalisation and personal accomplishment. From the high average scores on emotional exhaustion and moderate scores on depersonalisation and personal accomplishment, it is evident that though a large proportion of caregivers experience high levels of burnout, they still interact with their patients in a humane way while they maintain some level of self-esteem.

### **6.3.3. Resilience**

While resilience has been defined as resistance to illness, adaptation and thriving, the ability to bounce back or recover from stress is closest to its original meaning. To test resilience, a new brief resilience scale was used. The brief resilience scale with 14 items (BRS-14) was created to assess the ability to bounce back or recover from stress (Connor & Davidson, 2003). The BRS-14 measures a unitary construct and this was confirmed by factor analysis. As supported by other research, (Lamond et al. 2008), participants obtained high scores from the measurement scale.

Correlations between resilience and other variables suggest that there is a problem with the measure. People with high emotional exhaustion and (low personal accomplishment) also scored high on resilience. Besides this relationship, there are no other significant relationships that can be considered. Therefore the scale had problems with validity and could not be used to predict other scores.

### **6.3.4. Cope measure**

Coping was measured using the brief cope instrument with 28 items. Due to problems with the scale whereby reliability could not be confirmed, it had to be altered and cut down to 14 items that seemed to correlate better with other variables in the model.

First, the brief cope questionnaire failed to meet psychometric requirements because of poor conceptualisation caused by low language proficiency and low language understandings related to low educational levels of most participants. This may have resulted in failure to relate item statements with own daily coping behaviours. In such cases people will just choose any answer without considering what it means.

Second, some of the coping strategies referred to in some items may be linked to higher levels of functioning and life styles. For example, people functioning at low levels will not see themselves as planners and strategists but they see themselves as executors of strategies drawn up by those in higher positions. Therefore, answering questions about such issues may have been impossible.

Coping is culture specific, just as behaviour is. Cultural bias causes a diversified interpretation of items and may result in items being thrown around and others that are paired by other authors lacking consistency or measuring different constructs. For example, the responses to two items on alcohol and drugs were not consistent. Furthermore, the low scores on these items may have resulted from the fact that the questions were double-barrelled, assessing two characteristics (alcohol and drugs) where the use of drugs is seen as crime and as more unacceptable than the use of alcohol.

Performance on items that measure emotional coping was also poor and inconsistent. The reason may be that people in other cultures are very careful with issues of emotions. For example, in some African cultures, open expression of emotions is seen as a sign of weakness and people are always encouraged to be strong. Moreover, participants are caregivers who are expected to control the expression of emotions particularly in the presence of patients.

Inconsistency in the scores on items about religion is a result of poor phrasing where one item says: "I find comfort in my religion" which is not specific and the other item: "I pray more than usual" which may not be the way many caregivers deal with

problems. The fact that many of them attend church many times, weekly or monthly, while they do not necessarily pray more than usual when faced with stressors may indicate that people go to church for other reasons than to pray for the challenges in their lives.

It has been established through the literature review that coping repertoires are partly situation specific and content dependent, meaning that the care-giving situation of volunteers with its unique challenges as discussed above will determine ways to deal with the stressful situations (Doka & Davidson, 2001). The authors specifically mention spirituality and social support as the coping ways normally used by caregivers. This study failed to confirm these beliefs. There are no specific forms of coping or coping repertoires used by caregivers. All categories of coping are found to be used moderately and there is no coping strategy that stands out as being used highly by most caregivers. The absence of specific ways of coping for caregivers can be a result of the variety of situations in their lives, which demand to be handled in different ways. Moreover, the choice of a coping style is based on an individual's subjective experience of each specific situation.

In the transformed Cope measure, the grouping of items seems to make more sense, thus reducing this biasing factor found in the original cope measure. The item on talking to someone who can do something with the problem is grouped with items that indicate active coping. This is in fact the case in close communities where people depend on others, especially their neighbours, for emotional support when tragedy strikes. According to literature (Thupayagale & Rampa, 2005), this is how volunteerism started. In addition, the item about expressing emotions a lot is grouped with the items on dysfunctional coping. From the perspective of ensuring a safe environment for all as a human right, this is understandable because showing one's emotions excessively, whether it is happiness, sadness or anger, can be harmful to people around you while it does not help resolve your problematic situation.

This study found that measuring coping directly is associated with problems and in most cases there is a need to shift focus from how people control stressors to the outcomes of coping and non-coping such as health, happiness and productivity. Moreover, this study failed to establish situations where different forms of coping are applied. Such an investigation will therefore use more direct questions about the coping strategies used when faced with a specific challenge. In this way it will be possible to differentiate coping by level of stress or by amount of burnout.

## **Chapter Seven**

### **7. Limitations, recommendations and conclusion**

#### **7.1. Limitations**

The low level of education of some of the volunteer caregivers was a limitation of this study. With the questionnaires being written in English and the content of some of the items that were abstract and not specific, it was difficult for some of the participants to understand and so answer all questions properly.

Another limitation was the length of the survey instrument. This problem was picked up in the feedback obtained from the participants where many of them complained that “the survey was too long”. The length of the whole instrument was made worse by the fact that the researcher had to go through all the questions with the participants, sometimes translating to make sure that they understood all statements.

In most cases participants complained about tiredness and the un-conducive conditions under which they took the survey. These conditions were aggravated by the heat as the surveys were done mid-day in most cases, in the months of September and October when the temperature was above 25 degrees Celsius and took place in unventilated venues.

Despite all these problems, the study does, however, indicate the need for further research with more appropriate measurement scales. The refined study will also look deeper, perhaps using combined methods, to get more specific and in-depth answers to the problems that have been identified.

#### **7.2. Recommendations**

1. Training on problem-solving skills is suggested.
2. Caregivers need to be encouraged to utilise help channels, such as counselling and other community support structures, to deal with the

negative effects of stress and burnout. They have to be given access to proper counselling so that they can become acquainted with emotionally-focused strategies rather than always relying on ineffective coping strategies that make them more vulnerable to burnout. They should also be encouraged not to mask their feelings and to use coping to deal with their problems. This can be achieved by connecting counselling with relevant training programmes designed to facilitate caregivers.

3. Training to equip volunteer caregivers well for the work should start with proper selection procedures and making sure that those who are recruited have a minimum level of education. Anyone who did not complete mainstream schooling should be encouraged to register with any ABET centre. The ABET centres may conduct placement tests to determine the learner's level.
4. Training them, for example as HIV counsellors, should be followed by encouraging them to have a clear career path or job security, than being seen as mere "volunteers".
5. Remuneration is a necessity. A pay of some sort could be arranged to show recognition for the good work they do. If issues of remuneration are addressed, the impact of stressors outside work or secondary stressors can be minimised.
6. For sources of income needed to sustain their own families, NGOs can be helped to intensify income-generating and economic enhancement projects. They can be helped to access finance made available by finance institutions such as the Development Bank of Southern Africa and other external associations, such as the Austrian Development Agency (ADA) and the Norwegian Agency for Development Corporation (NORAD). Care should be taken not to let them lose focus by making sure that they can access this help while they continue to be volunteer caregivers.



7. Create awareness of the personal needs of caregivers who volunteer to care for the needs of others and encourage support from the general public, government structures and big agencies such as UNICEF and others who can afford to help them meet these personal needs to minimise stress
8. For control and to help protect volunteer caregivers against being over-utilised and overworked, advocate for their registration with relevant professional bodies the way it is done with professional nurses. This may ensure recognition as caregivers. The work that they do is not illegitimate as they are also community development workers and special public servants who live in and work in their respective communities.
9. For proper working space, help them to raise funds or acquire donations of old office furniture or access and make use of the community resources available in their areas.

### **7.3. Conclusion**

Volunteer caregivers registered high levels of stress associated with external stressors, as well as high burnout. The volunteers use a variety of coping strategies that include active coping to deal directly with challenges, dysfunctional coping and avoidance, which represent doing nothing to deal with situations in their lives as caregivers. They also registered high levels of burnout associated with the three defined ways of coping, while no specific coping strategy could be linked with low burnout. This suggests that support is needed to help volunteers to deal with challenges of care giving. Capacitation through training in problem-solving skills, exposure to different forms of coping, counselling and psychosocial support will help caregivers to face their challenges without masking or pretending to be coping well. Government and public lobbying for support, registration with relevant professional bodies, furnished offices, reasonable recruitment requirements and compensation are needed to prevent environmental stressors from putting pressure on volunteers, causing them to experience stress and then burnout.

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## Appendices:

### Appendix 1: Socio Demographic information code sheet

Question/Item — information	Coding
Age	.....years
Gender	Male
	Female
Marital status	Married
	Single
	Divorced
	Widowed
	Separated
	living together
How often do you go to church?	i don't go to church
	at least once a year
	at least once a month
	weekly
What is your highest standard passed?	
List diploma/s	
List university degree/s	
List other qualifications	
List all HIV and Aids related training and duration of training	1.
	2.
How many HIV positive sick people do you care for?	
How many shared HIV/Aids patients?	
How long have you been a carer?	
Number of dependent- children in the family i.e. 0-18 years	
Number of dependent- adults in the family i.e. 19-55 years	
Number of dependent – elders in the family i.e. 55 years and above	
How many bread winners in the family- including yourself if you earn a salary or stipend	

**Thank you**

## Appendix 2: Standard of Life Questionnaire and score sheets

LSM Descriptors			
1. Hot running water		16. Have a tumble dryer	
2. Have a washing machine		17. 3 or more cell phones in household	
3. Have an electric stove		18. 2 Cell phones in household	
4. Computer/laptop at home		19. VCR in household	
5. None or only one radio		20. Water in home or on stand	
6. No domestic worker		21. Home security service	
7. Flush toilet in house or on plot		22. Fridge/freezer	
8. Have TV set(s)		23. Have a deep freeze	
9. 1/more motor vehicles		24. Rural rest (excl. W Cape & Gauteng)	
10. Vacuum cleaner/floor polisher		25. Built-in kitchen sink	
11. Microwave oven		26. Home theatre system	
12. Have M-Net and/or DSTv		27. Have a Telkom telephone	
13. House/cluster/ town house		28. Have a dishwasher	
14. Metropolitan dweller		29. Hi-Fi or music centre	
15. DVD player			
LSM weights Score sheet			
0.175948		0.155577	
0.150871		0.162906	
0.152859		0.114391	
0.292790		0.106354	
-0.249135		0.129953	
-0.285068		0.142203	
0.108169		0.117871	
0.122145		0.092228	
0.165298		-0.121163	
0.124924		0.131772	
0.118531		0.096205	
0.144010		0.090032	

0.119211		0.160906	
0.084234		0.061801	
0.094933			

	Penetration			Ave HH Income		
	2006RA	2007B	2008A	2006RA	2007B	2008A
SU-LSM 1	6.1	4.1	3.4	R 999.06	R 1,028.15	R 1,080.45
SU-LSM 2	12.2	9.8	8.7	R 1,214.18	R 1,275.25	R 1,401.29
SU-LSM 3	12.6	10.8	9.4	R 1,521.09	R 1,638.06	R 1,794.81
SU-LSM 4	14.9	13.8	14.6	R 1,939.68	R 2,140.55	R 2,535.68
SU-LSM 5	13.5	14.5	15.5	R 2,681.45	R 2,952.07	R 3,122.33
SU-LSM 6	14.4	17.3	17.9	R 4,404.25	R 5,096.28	R 5,386.00
SU-LSM 7	7.8	9.3	9.4	R 6,840.77	R 8,320.26	R 8,667.33
SU-LSM 8	5.7	6.7	6.9	R 9,251.86	R 11,227.27	R 12,336.69
SU-LSM 9	6.7	7.6	8.1	R 12,557.86	R 14,740.73	R 16,296.05
SU-LSM 10	6	6.1	6.1	R 19,817.03	R 20,902.03	R 23,053.57

**Appendix 3: The Resilience Scale (RS)**

Please read the following statements. To the right of each you will find seven numbers, ranging from “1” (strongly disagree) on the left to “7” (strongly agree) on the right. Circle the number which best indicates your feelings about that statement. For example, if you strongly disagree with a statement, circle “1”. If you are neutral, circle “4”, and if you strongly agree, circle “7”, etc.

	Strongly disagree				Strongly agree		
1. I usually manage one way or another	1	2	3	4	5	6	7
2. I feel proud that I have accomplished things in life	1	2	3	4	5	6	7
3. I usually take things in stride	1	2	3	4	5	6	7
4. I am friends with myself	1	2	3	4	5	6	7
5. I feel that I can handle many things at a time	1	2	3	4	5	6	7
6. I have enough energy to do what I have to do	1	2	3	4	5	6	7
7. I can get through difficult times because I’ve experienced difficulty before	1	2	3	4	5	6	7
8. I have self discipline	1	2	3	4	5	6	7
9. I take things one day at a time	1	2	3	4	5	6	7
10. I can usually find something to laugh about	1	2	3	4	5	6	7
11. My belief in myself gets me through hard times	1	2	3	4	5	6	7
12. In an emergency, I am someone people can rely on	1	2	3	4	5	6	7
13. My life has meaning	1	2	3	4	5	6	7
14. When I am in a difficult situation, I can usually find my way out of it	1	2	3	4	5	6	7

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## Appendix 4

**Research letter – To NGO Managers and the FSP Manager**

Dear Sir/Madam,

This study is in partial fulfilment of the requirements for the degree MA Research Psychology at the University of South Africa. The study is therefore supervised by the Faculty of Psychology at the University.

This research is aimed at exploring Stress and coping in Volunteer HIV and Aids Home Based Care.

The study consists of a questionnaire that will be administered to participants and I know that many of you are under pressure of time, but I would appreciate it if you as the facility manager could:

- Choose and arrange for a day or two when the majority of staff will be available to complete the questionnaire
- Give us advice on when and how we can get maximized participation to ensure that the outcome is representative of SOS CV SA largely.

The questionnaire is completely anonymous and the information provided will be treated with high degree of confidentiality. The questionnaire is voluntary and it is important that the Volunteers know that they will not be victimized if they choose not to participate. This is not a test. There are no wrong or right answers, so please feel free to express your true feelings in your answers, as honestly as you can.

Therefore, your assistance and cooperation is greatly appreciated.

If you would like any further information on the study or the results of the study please feel free to contact me on 0118010100.

Thank you for participating in the study.

Yours faithfully,

Mosa Z. Moremi (Master's Student)

**Research letter –  
To the Volunteers**

Dear Sir/Madam,

This study is in partial fulfilment of the requirements for the degree MA Research Psychology at the University of South Africa. The study is therefore supervised by the Faculty of Psychology at the University.

The research is aimed at exploring the influence of Stress and coping on Volunteering in HIV and Aids Home Based Care.

The study consists of a questionnaire/s that will be administered to participants and I know that many of you are under pressure of time, but I would appreciate it if you could take the time to complete the questionnaire for me. The questionnaire is completely anonymous and the information provided will be treated with high degree of confidentiality. As a result the information which is utilized in the dissertation cannot be used by your employer to your disadvantage or to prejudice you in anyway. The questionnaire is voluntary and it is important that you answer all questions.

This is not a test. There are no wrong or right answers, so please feel free to express your true feelings in your answers, as honestly as you can. Therefore, your assistance and cooperation will be greatly appreciated.

If you would like any further information on the study or the results of the study please feel free to contact me on 0826360148/ 0118010100.

Thank you for participating in the study.

Yours faithfully,

Mosa Z. Moremi  
Masters Student  
Department of Psychology  
UNISA  
Pretoria

## **An Informed Consent Form**

### **Volunteer Stress and Coping in HIV and Aids Home Based Care**

Principal Investigator: Mosa Moremi. MA Research Student

#### **Introduction:**

This consent form contains information about the research named above. In order to be sure that you are informed about being in this research, I am asking you to read the consent form. When you agree to be part of this study, we will give you a copy of the consent form to sign. If there is anything that you do not understand about this research, please feel free to ask and it will be explained to you.

#### **Confidentiality**

Information about you and your taking part will be protected as best as we can. Also, your name will not be given out when results are compiled. Only authorised persons involved in the study will have access to the results. Unauthorised persons might ask you questions about being in the research, but you do not have to answer them.

#### **Possible benefits and compensation**

Although you won't be paid for participating, I hope that the information that you provide will help you and other Volunteers to be aware of issues that affect home-based Caregivers. They will know about the coping strategies that other people use.

#### **Feedback on the research outcomes**

The results of the research as well as any other information that will be inferred from those results will all be discussed with you in your groups. Such results may be of help to you in your work as a caregiver and even in your life away from giving care to the sick people.

#### **Other Questions**

Other questions about this research can be directed to Mosa Moremi

#### **Consent**

I .....agree that I am not in any way forced to participate in this research and I therefore agree to take part out of my free will.

Signed.....(Researcher).

Department of Psychology