Thesis

By

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SECONDARY TRAUMATIC STRESS AMONG YOUNG PEOPLE ORPHANED BY AIDS IN KENYA: PREVALENCE, SEVERITY AND PREDICTORS

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DECLARATION

Candidate's Declaration

This thesis is my original work and has not been presented for a degree in any other University or any other award.

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Supervisors' Declaration

We confirm that the work reported in this thesis was carried out by the candidate under our supervision.

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DEDICATION

To all young people orphaned by AIDS whose sense of humanity have been shaken, yet in their inspirational struggles are rebuilding their lives one day at a time

and

To Grace my love.

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ACRONYMS AND ABBREVIATIONS

ADF	African Development Forum
AIDS	Acquired Immune Deficiency Syndrome
ANOVA	Analysis of Variance
BO	Burnout
CF	Compassion Fatigue
CS	Compassion Satisfaction
DC	District Commissioner
DEO	District Education Officer
DO	District Officer
HBC	Home-Based Care
HIV	Human Immunodeficiency Virus
IEC	Information, Education and Communication
IGA	Income Generating Activity
KAIS	Kenya AIDS Indicator Survey
KDHS	Kenya Demographic and Health Survey
KIE	Kenya Institute of Education
MOE	Ministry of Education
MOH	Ministry of Health
MOHA	Ministry of Home Affairs
NACC	National AIDS Control Council
NASCOP	National AIDS/STDs Control Programme of Kenya
NGO	Non-Governmental Organization

NRC	National Research Council
OVCs	Orphans and other Vulnerable Children
PLWHAs	People Living with HIV/AIDS (People Living with Hope)
QOL	Quality of Life
RoK	Republic of Kenya
SPSS	Statistical Package for the Social Sciences
STI	Sexually Transmitted Infection
STS	Secondary Traumatic Stress
STSD	Secondary Traumatic Stress Disorder
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
VCT	Voluntary Counselling and Testing
VT	Vicarious Traumatization
WHO	World Health Organization

ABSTRACT

Recent advances in Psychological research suggests that family, friends and professionals are susceptible to developing traumatic stress symptoms from being empathetically engaged with victims of traumatic events. The phenomenon of learning about another's traumatic ordeal, and in the process, experiencing traumatic stress is called Secondary Traumatic Stress (STS), and the condition of AIDS orphans is suspect to this. Many are dispossessed of their parents' property and must contend not only with the normal stress, dissatisfaction or work, but also with the emotional and personal feelings for their parent(s) and suffering sibling(s). This study assessed prevalence and extent of severity of STS among young people orphaned by AIDS, thereby identifying factors that predispose them to STS. Some 309 orphans from Rachuonyo District in Kenya participated in the study. The single cross-sectional survey adopted the questionnaire as the main tool for primary data collection. Quantitative data were collected using the STS test at three levels: burnout (BO), compassion satisfaction (CS) and compassion fatigue (CF). These were analyzed quantitatively. Based on results, orphans exhibited at least 17 of the 30 symptomatologies of STS investigated at a level that is comparable to people who would seek treatment for those symptoms. On the overall, more males (57.7%) than females (42.3%) exhibited symptoms of STS. The respondents also reported experiencing moderate levels of risk for BO (mean=25.6616), high levels of potential for CS (mean=27.7374), and high levels of risk for CF (mean=29.940). Greatest risk for STS was associated with BO and CF whereas the least risk for STS was associated with CS. Average scores of the participants were significantly higher on all the three sub-scales while the observed differences were statistically significant at $\alpha = 0.01$ (2-tailed); and at $\alpha = 0.05$ (2-tailed) ($p<0.001$). Regarding the relationship between STS symptoms and the development of STS, the study established that CF was more strongly correlated to STS (correlation=0.875; $p<0.001$) [$\alpha = 0.01$ (2-tailed); and at $\alpha=0.05$ (2-tailed)] than BO, which was more strongly correlated to STS (correlation=0.633; $p<0.001$) than CS (correlation=-0.148; $p<0.05$). Further relationships were established between STS and sex of the respondents ($F=4.947$; $p= 0.027$), level of formal education attained ($F=3.013$; $p=0.034$), number of years of paternal orphanhood ($F=4.812$; $p=0.003$), number of hours per day spent in caregiving ($F=9.827$; $p= 0.000$), person(s) to whom such care was rendered ($F=9.202$; $p=0.000$) and the involvement with household chores ($F=3.348$; $p=0.021$). The major predictors of STS were established, thus: sex ($t=-2.083$; $p=0.045$), level of formal education attained ($t=-2.019$; $p=0.051$) and number of years of paternal ($t=2.199$; $p=0.035$) and maternal ($t=2.702$; $p=0.011$) orphanhood. Thus, there is need for additional studies about the process of how some orphans develop STS symptoms while others appear not to be in distress. Research on emotional expression will offer important conceptual understandings by providing evidence to support the deleterious effect that orphanhood-realted emotions have on overall well-being of AIDS orphans. Research to help develop theory related to STS will be worthwhile in addition to a longitudinal study to help clarify the cumulative effects of STS.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Recent advances in Behavioural Medicine research suggests that family, friends and professionals are susceptible to developing traumatic stress symptoms (otherwise called Secondary Traumatic Stress- STS) from being empathetically engaged with victims of traumatic events. As a result, several authors have argued that traumatic stress symptoms are contagious and can produce similar effects in those who interact with trauma victims. This phenomenon of secondary trauma is more likely to emerge among families in conditions of stress and social isolation, and when there is a chronically ill parent (Barnett & Parker, 1998; Carroll & Robinson, 2000; Chase, 1999; Mayseless, Bartholomew, Handerson, & Trinke, 2004). All these conditions are highly prevalent among families with a parent living with HIV/AIDS- PLWHA (Mumah, Muga, Wasanga, & Kathungu, 2007; Mumah, 2003a; Mumah, 2003b; Mumah, 2004a; Mumah, 2004b; Mumah & Kigen, 2005; Mumah & Muga, 2007; Mumah & Munyana, 2006; Mumah, Kigen, & Ongeko, 2004; Mumah, Lelach, & Gahagan, 2003).

The impact of HIV/AIDS on young people is both complex and multifaceted. They may suffer psychological distress and increasing material hardship and may be pressed into service to care for ill and dying parent(s). Girls are more likely to drop out of school to help with farm work or household chores, and experience declining access to food and healthcare services (K'Okul, 2001; Odiwuor, 2000; UNICEF, 2000; UNICEF/UNAIDS/WHO, 2002). However, these young people have the potential and the right not only to survive to adulthood, but also to develop their

abilities and play a useful and fulfilling role in society. Instead, they face the prospect of a relentless struggle in their physical survival, for basic education, for love and affection, the risk of exclusion and for protection against exploitation, abuse, discrimination and stigma (Mumah & Kigen, 2004; Rau, 2003).

According to Mumah and Kigen (2005), HIV/AIDS pushes the poor deeper into poverty as it claims primary wage earners and diminishes resources. A parent's HIV/AIDS illness and eventual death has long-term effects on a child and subsequent viability of the household. As parents fall ill and die, family burdens shift to these young ones, plunging millions of them deeper into destitution and desperation; as their labour power weakens, incomes dwindle, assets shrink and households disintegrate (Gregon & Garnett, 1994; Hunter & Williamson, 2000; UNAIDS, 2002). Additionally, they have to live with stigma and changed social roles (Mumah, Mwaniki, Desai, Tumuti, Orago, Muoma, & Waswa, 2003). Moreover, stigmatization can make the procurement of care from extended family, friends and the community at large difficult for the orphans.

Some households draw on savings or sell assets to cope with the loss of a primary wage-earner (Juma, 2001). The roles of parent and child become reversed, as young people take on the responsibility of supporting and caring for their siblings. Children's care functions expand dramatically when parents fall sick, stretching their ability to perform their care functions for their siblings. For many, neither money nor time is available to continue with school (UNICEF/UNAIDS/WHO, 2002). Consequently, leaving school may help with cash needs over the short term but, in the long run, it exacerbates household poverty, and thereby puts young

people at greater risk of becoming infected with HIV/AIDS. Girls in particular may have no means to support themselves after their parents' die, which often forces them into commercial sex and increases their risk of HIV infection. Poverty exposes children to abuse and exploitation even while the parents are still alive as girls are married off early to relieve the family of economic 'burden' of feeding and educating them (RoK, 2003).

Inevitably, these orphans have fewer opportunities to learn essential skills, such as how to use and sustain land on which they farm. The loss of adults often leads to a shift in cropping patterns. In many cases, this often means switching from cash crops to subsistence farming. It can also reduce investment in soil enhancements, irrigation and other capital improvements, which have long-term impacts on output (Mukoyogo & Williams, 1996). HIV/AIDS also forces families to sell livestock; including equipment and land to cover HIV/AIDS related illness expenses, leaving surviving family members in poverty and destitution (Decosas & Adrien, 1999; The Policy Project, 1999; World Bank, 2000). The widespread loss of this intangible, but essential good leads to severe and long-lasting consequences on household food security; further reinforcing some of the conditions in which the odds of HIV infection thrive (Grassly & Timaeus, 2002; UNICEF, 2002; UNICEF, 2003).

Bereft of food and other essential necessities, orphans are compelled to adopt survival strategies that further endanger their lives. It is not uncommon for young people orphaned by AIDS, tender in age, to work for several hours in a neighbours' garden in return for a little cash or food. Some also resort to stealing food crops from their neighbours' gardens. In extreme cases, which are all too numerous, orphans turn to the streets or migrate to urban slums where hunger and financial

desperation make them vulnerable to marginalization, crime, substance abuse and sexual exploitation. Young girls are forced, as a last resort, to barter sex for jobs, food and other basic essentials (Mumah, Mwaniki, & Mutua, 2003; UNICEF, 2003), placing a significant number of them at risk of contracting HIV through virtually inescapable income generating prostitution. The net result is a vicious circle linking poverty, food security and HIV/AIDS, manifested in human costs that may be associated with distress.

Additionally, early and inevitable premature assumption of parental roles and adult responsibilities among orphaned youth before they are emotionally or developmentally prepared for such roles is obvious, and may simultaneously be expected to provide nurturance and care to the sick parent(s) (Mayseless, Bartholomew, Henderson, & Trinke, 2004). They may reverse roles by assuming a caretaker parental role, a spousal role in which they become confidante of the parent, or an adult role with responsibilities within the household (Barnett & Parker, 1998; Carrol & Robinson, 2000; Chase, 1999; Mayseless *et al.*, 2004; Stein, Riedel, & Rotheram-Borus, 1999). As a result, physical, emotional and spiritual fatigue or exhaustion may take over the affected thereby cause a decline in their ability to experience joy.

As with other families with chronically ill parents, young people orphaned by AIDS experience high levels of stress and may be at high risk for long-term negative outcomes associated with it (Rotheram-Borus, Leonard, Lightfoot, Franzke, & Tottenham, 2002; Harris, 1998; Raphael, Cubis, Dunne, Lewin, & Kelley, 1990; West, Sandler, Pillow, Baca, & Gersten, 1991). They are constantly confronted with suffering and intense reactions for the loss of their parent(s); thus, may be susceptible to developing secondary trauma from being empathetically engaged with

their sick. They begin to feel helpless or powerless and start to lose their belief in the sense and the success of their actions. Their view of themselves and the world changes and become so badly shaken that they, themselves, may develop symptoms of trauma that require swift and decisive interventions to help them heal and grow beyond the traumatic experiences. Consequently, it would be interesting to explore the extent to which this negative trend is true of young people orphaned by AIDS.

1.2 Statement of the problem

Available literature indicate that studies on STS have been limited by sample sizes and by their skewed focus on professionals (Beaton & Murphy, 1995; Bryant & Harvey, 1996; Chrestman, 1995; Dyregrov & Mitchell, 1992; Follette, Polusny, & Milbeck, 1994; Harvey, 1996; Hodgkinson & Shepherd, 1994; Kassam-Adams, 1995; Lundin, 1995; Marmar, Weiss, Meltzler, Ronfeldt, & Foreman, 1996; McCarroll, Ursano, Fullerton & Lundy, 1993; McCarroll, Ursona, & Fullerton, 1993; Moran & Britton, 1994; Munroe, 1990; O'Rear, 1992; Pearlman, 1995; Wilkinson, 1983) thereby failing to acknowledge that other persons who work directly with or have direct exposure to trauma victims on a regular basis may just be as likely as the primary victims to experience traumatic stress symptoms and secondary traumatic stress disorder. Additionally, although the phenomenon of STS has received a great deal of theoretical and clinical attention; there exists a glaring paucity of empirical research investigating the impact of exposure to traumatic material on young people orphaned by AIDS. A review of the traumatology literature revealed no such published empirical studies in Kenya and very few, rather remotely linked studies elsewhere in Sub-Saharan Africa. Therefore, there is limited investigation, empirical, epidemiological, or phenomenological, to guide our understanding and

intervention in STS, particularly with regard to the problem of AIDS orphanhood. Consequently, in-depth study of STS and how it impacts on populations working directly with or have direct exposure to individuals affected by HIV/AIDS, in this case young people orphaned by AIDS is warranted. The present study was designed to fill this gap in knowledge by exploring the experience of young people orphaned by AIDS in Rachuonyo District, Kenya.

1.3 Purpose of the study

The purpose of the study was to assess the prevalence and extent of severity of secondary traumatic stress (STS) symptoms among young people orphaned by AIDS in Kenya thereby identifying factors that predispose AIDS orphans to STS.

1.3.1 Specific objectives of the study

More specifically, the objectives of the study were to:

a. Explore the demographic indicators of young people orphaned by AIDS.
b. Assess the prevalence of STS symptoms among young people orphaned by AIDS.
c. Assess the extent of severity of STS among young people orphaned by AIDS.
d. Explore the differences in STS between genders among young people orphaned by AIDS.
e. Establish the relationship between STS symptoms and the development of STS.
f. Investigate and document the predictive factors of STS among young people orphaned by AIDS.

1.3.2 Research questions

The study addressed the following research questions:

a. What are the demographic profiles of young people orphaned by AIDS in Rachuonyo District, Kenya?
b. To what extent do young people orphaned by AIDS exhibit symptoms consistent with those of STS?
c. What is the prevalence and extent of severity of STS symptoms among young people orphaned by AIDS?
d. Are there gender differences in STS among young people orphaned by AIDS?
e. Is there any relationship between STS symptoms and the development of STS?
f. What are the predictive factors of STS among young people orphaned by AIDS?

1.4 Justification of the study

The justification of this study is anchored on its core purpose: the assessment of the extent to which negative trends of secondary trauma is true of young people orphaned by AIDS in Rachuonyo District, Kenya, the crux of which was the exploration of prevalence and extent of severity of secondary traumatic stress among young people orphaned by AIDS.

There is, certainly, a lack of information regarding such a possibility. So far traumatology literature has shown that investigations to this effect only target members of the helping professions. The study is interested in filling this knowledge gap in order to clear this silent but obvious confusion regarding the transmission of secondary traumatic stress.

It is also evident that the area of trauma as it relates to AIDS orphanhood is poorly researched in Africa, long considered the epicentre of HIV/AIDS (UNAIDS, 2004) and Kenya in particular,

where HIV/AIDS has long been declared a national disaster (Republic of Kenya, Ministry of Health, 1999). It was thus hoped that the findings of this research would not only add to existing knowledge in the area of orphan care by identifying factors that predispose them to STS, but also open a new area for possible further investigations.

Instead of confining STS research to professionals working in helping professions, the researcher felt the need to collect tangible data capable of illuminating the problem of secondary trauma beyond this group of individuals to the actual picture on the contemporary experience of young people orphaned by AIDS. The extent to which their experience is similar to or different from samples taken from members of the helping professions, and from the Western cultures would be interesting to explore.

Further, the findings of this study would make a contribution to secondary traumatic stress theories from a Kenyan perspective and from the front of a very unique sample of young people orphaned by AIDS, which would certainly help improve on the nature of care given to young people orphaned by AIDS in Kenya and beyond.

Moreover, a study on secondary trauma is important because it relates to the core field of Behavioural Medicine. In essence, the findings of such a study that involved the application of rigorous psychological research and methods would go along way in:

1) The promotion and maintenance of health, especially of young people orphaned by AIDS.

2) Prevention and management of STS among young people orphaned by AIDS and similar samples of distressed individuals.
3) The identification of factors contributing to STS among young people orphaned by AIDS.
4) The improvement of the health care system through a consideration of issues of STS; and
5) The formulation of health policies with psychological problems of young people orphaned by AIDS (for instance, STS, STSD, and so on) in consideration.

1.4.1 Significance of the study

The significance of this study, which was an inquiry into the prevalence and extent of severity of STS symptoms among young people orphaned by AIDS in Rachuonyo District, Kenya, is embedded in the following areas:

1) The current study has brought new evidence to bear on a new problem in that although the problem of STS has been recognized among members of the helping professions; this is the first time its documentation has been done outside the sample of professionals and among young people orphaned by AIDS in Kenya.
2) The study has significantly contributed to the worldwide war against HIV/AIDS in that not so much attention has been given to the emotional and developmental problems of young people whose parents die of AIDS. The study has highlighted the need to involve professionals to assess the needs of young people orphaned by AIDS and to help plan appropriate responses.

3) All those taking care of young people orphaned by AIDS have been made aware of the possible and variety of emotional distress among this group and ways of helping them through providing the support they require.
4) The current study has brought new insights in the area of traumatology research: the relationship that exists between burnout, compassion satisfaction and compassion fatigue in a way that has never been done before.
5) In the current socio-political climate, no public system has been able to address adequately the issues related to development of cumulative stress and STS in young people orphaned by AIDS. A lack of economic and personnel investment in front-line services for high-risk orphaned youth has only exacerbated the situation. Luckily, the present study has endeavoured to fill this gap in knowledge by addressing these problems so as to create a positive living-environment for young people orphaned by AIDS.
6) Paying special attention to vulnerable orphans and those at especially high risk was vital and a key concern of this study. This was informed by the researcher's conviction that the starting point for responding effectively to AIDS orphans' problem lay on recognizing the problem of secondary trauma among them and acknowledging that households are the first line of response. It is at this level that the problems arising from HIV/AIDS and orphanhood are first encountered; first tentative solutions tried out, and more permanent solutions institutionalised.

1.5 Assumptions of the study

In this study the following assumptions were made:

(i) That young people orphaned by AIDS, just like people in families with chronically ill parents, are vulnerable to secondary trauma.

(ii) That AIDS orphanhood adversely affects young people who became orphaned.

(iii) That the research tool used in this study yielded valid and reliable data.

(iv) That the respondents gave correct information about themselves and their orphanhood experiences.

(v) That the levels of STS, if any, differ significantly among young people orphaned by AIDS.

(vi) That the findings from this study can be generalized to the entire population represented by the study sample, that is, all young people orphaned by AIDS.

1.6 Scope and delimitations of the study

1.6.1 Scope of the study

The study was carried out in Kakelo Location, Kasipul Division of Rachuonyo District, Nyanza Province, Kenya between June 2006 and January 2007.

1.6.2 Delimitations of the study

Study findings were subject to at least four delimitations. First, due to some logistic considerations, the study was limited to Kakelo Location only. This may have implications for the generalization of study findings. Secondly, data applied only to young people orphaned by AIDS. Therefore, although the researcher selected the subjects based on many of the key characteristics found in the study area, caution will have to be exercised in generalizing study findings to all young people orphaned by AIDS in Kenya and the rest of the world.

Additionally, the study used only one measure of STS (the STS test). It would have been better if at least two measures of STS were used, so that the results thereof would be compared, thus establishing the concurrent validity of the measure. Further, due to ethical technicalities, it was not possible to segregate young people orphaned by AIDS by their HIV serostatus. As a result, there were no comparative clinical data or a comparison group to test if the AIDS orphans differed from their cohort who are not orphaned (or orphaned by other causes).

Finally, the biggest limitation of the study was that the study could not measure change. To measure change it would be necessary to have at least two data collection points- that is, at least two cross-sectional studies, at two points in time, on the same population.

1.7 Definition of terms

AIDS orphan – A person under 24 years who has lost his/her father and/or mother both to HIV/AIDS

Community leader – A person who holds social position and influences decisions that affect the community

Division – An administrative unit of a district in the Kenyan system of governance headed by a District Officer (DO)

Double orphan – A person under the age of 24 years whose father and mother have died both of HIV/AIDS

Household – A group of persons living together under the responsibility of the same family head and share common labour, food, income and time

Maternal orphan - A person under the age of 24 years whose mother has died of HIV/AIDS

Orphan – A person under the age of 24 years whose father and/or mother have died of whatever cause

Paternal orphan - A person under the age of 24 years whose father has died of HIV/AIDS

Secondary Traumatic Stress, STS – The phenomenon of learning about another person's traumatic ordeal and, in the process experiencing stress

STS prevalence – the frequency of occurrence of an STS symptom

Youth -The terms 'youth', 'young people' and 'adolescents' are defined variously. WHO refers to people between the ages 10-19 as adolescents and the larger age group 10-24 as youth or young people, a definition that this thesis adopts.

In chapter two (2), the writer presents a review of literature related to the study. This was guided by theories presented at the beginning of the chapter, thus presenting the case for STS.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of some of the literature related to the study. The chapter begins with a discussion of the theoretical framework and a review of studies related to this study. It concludes with a summary of literature reviewed, and a presentation of the conceptual framework based on the reviewed literature.

2.2 Theoretical framework

The study was guided by two (2) theories, namely: Secondary Traumatic Stress (STS) Theory and Grounded Theory. Information drawn from these theories guided the researcher in setting out the conceptual framework for the study, and in the selection of research instruments (and specific questionnaire items) that were used during data collection. This information further guided the discussions articulated when data were collected and analysed. Finally, vital information obtained from these theories also guided the researcher in theory testing, drawing up of conclusions and making of recommendations at the end of the study (as presented in Chapters Four and Five).

2.2.1 Secondary Traumatic Stress (STS) theory

According to Figley's (1995a) Secondary Traumatic Stress (STS) theory, persons who work directly with or have direct exposure to trauma victims on a regular basis are just as likely as the primary victims to experience traumatic stress symptoms and disorders. "People can be

traumatized without actually being physically harmed or threatened with harm. They can be traumatized simply by learning about the traumatic event" (p.4). Furthermore, Figley recognized that individuals who are exposed to traumatized persons are especially vulnerable to the noxious side effects of Secondary Traumatic Stress Disorders (STSD). It is on this premise that AIDS orphans were viewed as likely victims of secondary traumatic stress by the researcher.

2.2.2 Grounded theory

Grounded theory was originated by Glaser and Strauss (1967). The theory takes a case rather than variable perspective, meaning, in part that, the researcher takes different cases to be wholes, in which the variables interact as a unit to produce certain outcomes. According to Glaser (1992), Strauss and Corbin (1990) and Strauss and Corbin (1994), basing theory on primary data ties it to the data and makes it irrefutable. It reduces the opportunistic use of available theories or the force-fit of popular theories to the data and further avoids 'exampling', the often-easy task of finding examples to fit any theory. Consequently, the researcher was guided by this approach in all the stages of this study.

2.3 Review of literature related to the study

In this section, the researcher reviews literature on secondary traumatic stress and its predictors. This is immediately followed by a review of studies related to the concept of secondary trauma that were conducted in the context of the purpose of the present study, that is, the assessment of prevalence, extent of severity and predictive factors of secondary traumatic stress. Considered during this review were demographic indicators of various samples, sex differences in such indicators, situations of samples of various studies and locations from where they were drawn.

2.3.1 Secondary Traumatic Stress

In 1978, Figley suggested that family, friends, and professionals are susceptible to developing traumatic stress symptoms from being empathetically engaged with victims of traumatic events. Since then, several authors (Beaton & Murphy, 1995; Danieli, 1985; Dunning & Silva, 1980; Dyregrov & Mitchell, 1992; Eth & Pynoos, 1985; Gersons, 1989; Hartsough & Meyers, 1985; Herman, 1988; Hodgkinson & Shepherd, 1994; Lundin, 1995; McCann & Pearlman, 1989; McFarlane, 1986; Miller, Stiff, & Ellis, 1988; Munroe, 1990; NiCathy, Merriam, & Coffman, 1984; O'Rear, 1992; Pearlmann & Saakvitine, 1995; Pynoos & Nadar, 1988; Raphael, Singh, Bradbury, & Lambert, 1984; Remer & Elliot, 1988a, 1988b; Stamm, 1995; Utterback & Caldwell, 1989) have argued that traumatic stress symptoms are contagious and can produce similar effects in those who interact with trauma victims.

The phenomenon of learning about another's traumatic ordeal and, in the process, experiencing traumatic stress is what Figley (1995a) refers to as Secondary Traumatic Stress (STS). STS is defined as

> the natural, consequent behaviours and emotions resulting from knowledge about a traumatizing event experienced by a significant other. It is the stress resulting from helping or wanting to help a traumatized or suffering person (Figley, 1995b, p. 10).

The pathological response of being exposed to another's traumata is called Secondary Traumatic Stress Disorder (STSD). STSD is

> a syndrome of symptoms nearly identical to Post Traumatic Stress Disorder except that exposure to knowledge about a traumatizing event is associated with the set of STSD symptoms (Figley, 1995a, p. 8).

STS occurs when one is exposed to extreme events directly experienced by another and is overwhelmed by this secondary exposure to trauma (Figley & Kleber, 1995). STS symptoms or STSD can occur when a system of at least two people is formed, one of whom has been traumatized and one who is helping or who wants to help. Accordingly, the caregivers' empathy level with the traumatized individual plays a significant role in this transmission. Therefore, families, friends, mental health professionals, and others who work with traumatized people are vulnerable to STS symptoms and STSD. Such traumas can result in symptoms of Post-traumatic Stress Disorder (PTSD).

Post-Traumatic Stress Disorder is an anxiety disorder that can develop after exposure to a terrifying event or ordeal in which grave physical harm occurred or was threatened. Traumatic events that may trigger PTSD include violent personal assaults, natural or human-caused disasters, accidents, or military combat (National Institute of Mental Health- NIMH, 2008). Available literature points to the fact that PTSD can result from a variety of traumatic incidents, such as mugging, rape, torture, being kidnapped or held captive, child abuse, car accidents, train wrecks, plane crashes, bombings, or natural disasters such as floods or earthquakes.

According to NIMH (2008), people with PTSD may startle easily, become emotionally numb (especially in relation to people with whom they used to be close), lose interest in things they used to enjoy, have trouble feeling affectionate, be irritable, become more aggressive, or even

become violent. They avoid situations that remind them of the original incident, and anniversaries of the incident are often very difficult. PTSD symptoms seem to be worse if the event that triggered them was deliberately initiated by another person, as in a mugging or a kidnapping (Rando, 1996). Most people with PTSD repeatedly relive the trauma in their thoughts during the day and in nightmares when they sleep through flashbacks. Flashbacks may consist of images, sounds, smells, or feelings, and are often triggered by ordinary occurrences, such as a door slamming or a car backfiring on the street (Janoff-Bullman, 1992). A person having a flashback may lose touch with reality and believe that the traumatic incident is happening all over again.

Post-traumatic stress affects individuals differently but is identified by three categories of symptoms: intrusive thoughts, images and sensations; avoidance of people, places, things and experiences which elicit memories of the traumatic experience, and in negative arousal in the forms of hypervigillance, sleep disturbances, irritability and anxiety (Figley & Kleber, 1995). These symptoms combine to form a state of physical, emotional, cognitive and spiritual volatility in traumatized individuals, families and groups. Thus, persons who work closely with these traumatized individuals and/or groups are vulnerable to the contagion of this volatility. Figley further asserts that whereas some caregivers appear to be more resilient than others to the transmission of traumatic stress; any caregiver however, who continually works with traumatized individuals is at-risk for STS. This proposition by Figley gives insight into how young people orphaned by AIDS might equally fall victims of secondary trauma and of secondary traumatic stress disorder. However, the critical issue, with regard to the African (and Kenyan) sample for that matter is, to what extents are they caught up in this regard?

2.3.2 HIV/AIDS and Psychological distress

DeCarlo and Folkman in 1994 issued a questionnaire concerning job stress to 68 employees of Casy House Hospice, Toronto, Ontario, Canada. Multiple patient deaths per month were listed as a source of stress for 78.3% of the survey respondents. Other sources of stress included young age (70.2%); sexual orientation (64.6%) and AIDS treatment approach (63.6%).

Further, in a phenomenological study of vicarious traumatization amongst psychologists and professional counsellors working in the field of sexual abuse in western Australia, Steed and Downing (1998) found that therapists responses to hearing traumatic client material were predominantly affective, and included, pain, frustration, sadness, shock, horror and distress. On the basis of these findings, the researcher investigated demographic characteristics, among them age and the level of formal education attained as possible determinants of secondary traumatic stress among young people orphaned by AIDS.

Other researchers have studied and written about the effects of caring for trauma victims (e.g., Hartsough & Myers, 1985; Jay, 1995; Remer & Elliot, 1998a, 1988b; Miller, Stiff, & Ellis, 1988; NiCathy, Merriam, & Coffman, 1984; and Van der Kolk, 1996). Pearlman and Saakvitne (1995) suggest that therapists who are exposed to "graphic descriptions of violent events, realities of people's cruelty to one another, and trauma related re-enactments" (p.31) may suffer from vicarious Traumatization (VT). "Vicarious traumatization is a process through which the therapist's inner experience is negatively transformed through empathic engagement with clients' trauma material" (p.279). And as Stamm (1995) asserts, "care giving can be a stressful

experience that may produce a situation ripe for a traumatic stress response that may or may not lead to a traumatic stress disorder" (p.xviii).

Thus, in one study, the Italian Versions of the AIDS Impact Scale (AIS) and the Maslach Burnout Inventory (MBI) were used to assess the role of psychological stress as determined by involved relationships with HIV infected patients, and possibility of socio-demographic factors as predictors of burnout among 410 nurses working in 19 departments treating infectious diseases in Italy. Findings indicated that the impact of working with HIV infected patients' causes psychological stress as measured with the AIS (DeCarlo & Folkman, 1996).

It is important to note from the foregoing review that studies concerning secondary exposure to traumatic material have focused primarily on the traumatization of crisis workers (i.e., paramedics, fire-fighters, emergency medical technicians, police officers, rescue workers, disaster response teams) and psychotherapists. AIDS orphans, however, may just be as likely as crisis workers and psychotherapists to be directly exposed to a number of their parents' traumas and their own personal traumas on a daily basis throughout their orphanhood. While attending to and helping/caring for their PLWHAs or listening to their case ordeals, orphaned youth learn details of stressful events and are forced to acknowledge cruelty to HIV/AIDS victims in society. While reconstructing their lives after parents' ultimate death, orphans are often placed in compromising situations (attributable partly to stigma and discrimination) that result in physical harm or threatened harm, thus further increasing their exposure to traumatic stressors. Therefore, it seemed appropriate to think that AIDS orphans would be as vulnerable as other types of trauma workers to suffer from secondary traumatic stress symptoms. Consequently, this

study examined the effects of working with, in essence helping/taking care of, traumatized parents of young people orphaned by AIDS and the eventual death of these parent(s).

2.4 AIDS orphanhood and Secondary Traumatic Stress

Research in the area of secondary trauma has produced several generalizations about the effect of working with traumatized persons. First, people who work with traumatized persons can exhibit the same range of symptoms as victims. Second, the longevity and severity of these symptoms will vary with the individual. Third, female trauma workers are more likely to exhibit secondary trauma symptoms than their male colleagues. Finally, people working with trauma victims are more likely to exhibit symptoms if they have been personally traumatized than if they have not had that experience. This section summarizes the studies that have examined these four areas.

2.4.1 Prevalence and extent of severity of Secondary Traumatic Stress

Researchers have found that individuals exposed to traumatic material experience the same array of traumatic stress symptoms as those reported by victims of traumatic events (Beaton & Murphy, 1995; Dunning & Silva, 1980; Dyregrov & Mitchell, 1992; Gersons, 1989; Hodgkinson & Shepherd, 1994; Horowitz, 1974; Lundin, 1995; O'Rear, 1992; Raphael *et al.*, 1984). Disturbed sleep, anger, fear, suppression of emotions, nightmares, flashbacks, irritability, anxiety, alienation, feelings of insanity, loss of control, and suicidal thoughts have been experienced by crisis workers and therapists following exposure to trauma victims. The extent to which the exhibition of such symptoms is true of young people orphaned by AIDS was therefore a key interest of the present study.

Also, a number of researchers have reported that similar to primary victims, the longevity and severity of symptoms that people experience varies from person to person. In particular, researchers have found a positive correlation between longevity of career, large caseloads, increased contact with clients, and long work hours and the longevity and severity of STS symptoms among professionals (Beaton & Murphy, 1995; Bryant & Harvey, 1996; Chrestman, 1995; Dunning & Silva, 1980; Follette, Polusny, & Milbeck, 1994; Harvey, 1996; McCarroll, Ursona, & Fullerton, 1993; Hodgkinson & Shepherd, 1994; Marmar, Weiss, Meltzler, Ronfeldt, & Foreman, 1996; Moran & Britton, 1994; Munroe, 1990; Pearlman, 1995; Wilkinson, 1983). For example, in her study of distress among therapists who were indirectly exposed to trauma, Chrestman (1995) reported a relationship between increased professional experience, the number of clients in therapists' caseloads, and increased STS symptoms. She also reported a relationship between higher percentages of time spent at work and an increase in avoidance symptoms in therapists.

Similarly, in Hodgkinson and Shepherd's (1994) study of British social workers who provided support to primary victims of the Piper Alpha North Sea Oil platform explosion, the authors found a significant relationship between the number of years on the job and symptomatology. In their study of police officers, fire-fighters, paramedics, emergency medical technicians, and California highway department workers who responded to the Loma Prieta earthquake, Marmar *et al.* (1996) found that working long shifts with few breaks and harsh climactic conditions were associated with greater depersonalization, memory disturbances, altered body image experiences, and an altered time sense in workers. These findings created in the researcher the need to study the role of the number of work hours and duration of caregiving, duration of orphanhood

(number of years since being orphaned) and the nature of orphanhood (be it paternal, maternal and/or double) in addition to the nature and type of care work that these orphans got involved with, played in AIDS orphans' traumatic stress experiences of young people orphaned by AIDS, if any.

2.4.2 Gender and Secondary Traumatic Stress

Symptoms of Secondary Traumatic Stress Disorder have been found to be more prevalent among female rather than male trauma workers and other professionals (Kassam-Adams, 1995; McCarroll, Ursano, Fullerton & Lundy, 1993; Martin, McKean & Veltkamp, 1986), which points out the need for a gendered analysis of AIDS orphans' traumatic stress responses. In a study of psychotherapists who treat sexual trauma victims, Kassam-Adams (1995) noted that female therapists reported greater PTSD symptoms than male therapists. Likewise, in a study of Operation Desert Storm (McCarroll *et al.*, 1993), female solider mortuary workers also reported higher levels of distress than males. Further, female police officers were found to be more likely to report symptoms than male officers (Martin *et al.*, 1986). These findings led the researcher to hypothesize that there exists a significant gender difference in STS levels among young people orphaned by AIDS in Rachuonyo District, Kenya.

2.4.3 Predictive factors of Secondary Traumatic Stress

Finally, factors other than exposure have also been found to have an impact on the severity of STS symptoms in workers. Researchers have established that workers who have experienced a personal trauma are more likely to suffer from severe STS symptoms than workers who did not

have a personal trauma history (Follette *et al.*, 1994; Kassam-Adams, 1995; Marmar *et al.*, 1996; Moran & Britton, 1994; Pearlman & Saakvitne, 1995; Schauben & Frazier, 1995).

Moran and Britton (1994) surveyed 210 Australian State Emergency Services and Volunteer Bushfire Brigade Unit workers. The authors reported that workers who had a personal trauma history experienced higher levels of STS symptoms after responding to disasters than those without a trauma history. Kassam-Adams (1995) reported a relationship between therapists' personal trauma history and severity of STS symptoms while Follette *et al.*, (1994) determined that both mental health and law enforcement professionals with personal trauma histories had significantly higher levels of trauma-specific symptoms than professionals not reporting prior traumas. This underscores the present study's concern with the question: to what extent are the predictive factors of STS symptoms among young people orphaned by AIDS explained by their personal history of trauma or by exposure to their parent(s)' trauma.

Research has further shown that individuals do suffer from the traumatic impact on those who feel the intensity of the traumatic event through another person. According to Perry (2003), children of parents suffering from chronic, painful medical conditions can become vicariously traumatized. This further point to the danger of exposure for young people orphaned by AIDS, since, as Perry (2003) observes, young people are completely dependent on adults for their emotional and physical needs. Therefore, when these adults suffer and die, it evokes a strong reaction in these vulnerable young ones because they, as other human beings, posses a sense of decency and morality; interference of which is bound to shake their very sense of humanity.

2.5 Summary of literature review

The above studies provide some evidence on the effects of exposure to trauma material. However, it is important to note that, in summary:

(i) Several of the studies reviewed in this section were limited by sample sizes and by their skewed focus on professionals thereby failing to acknowledge that other persons who work directly with or have direct exposure to trauma victims on a regular basis (like AIDS orphans) may just be as likely as the primary victims to experience traumatic stress symptoms and secondary traumatic stress disorder.

(ii) Although the phenomenon of STS has received a great deal of theoretical and clinical attention; there exists a glaring paucity of empirical research investigating the impact of exposure to traumatic material on young people orphaned by AIDS. A review of the traumatology literature revealed no such published empirical studies in Kenya and elsewhere in Sub-Saharan Africa.

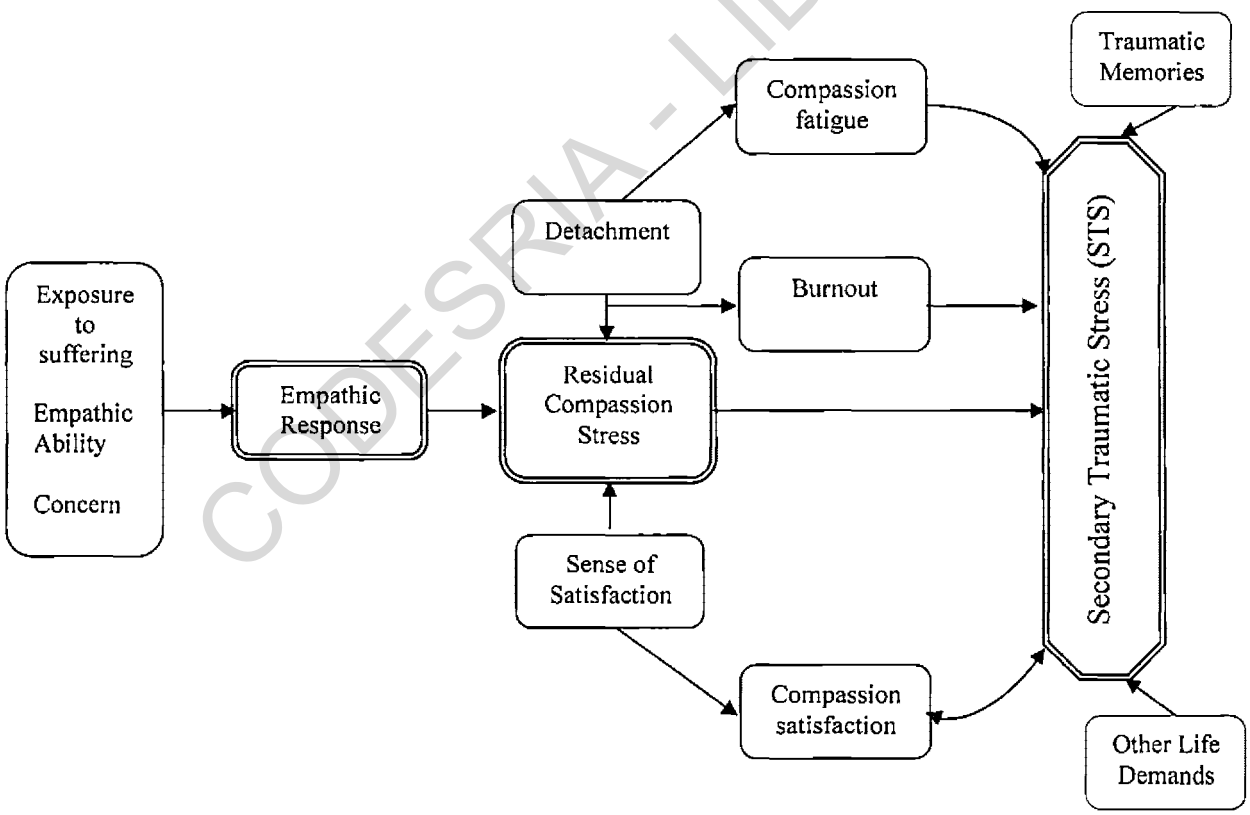
(iii) Therefore, there is limited local investigation, empirical, epidemiological, or phenomenological, to guide our understanding and intervention in STS, particularly with regard to the problem of HIV/AIDS orphans.

(iv) Consequently, in-depth study of STS and how it impacts on populations working directly with or have direct exposure to HIV/AIDS victims, in this case young people orphaned by AIDS is warranted. The present study was designed to fill this gap in knowledge by exploring the experience of young people orphaned by AIDS in Rachuonyo District, Kenya.

2.6 Conceptual framework

Based on the theoretical framework and the literature reviewed in this section, it was envisaged that orphanhood (that brings about exposure to suffering, empathy and concern) affect the individual's empathic response, which directly impacts on residual compassion (affected by levels of detachment and sense of satisfaction) leading eventually to secondary traumatic stress. STS is itself influenced by traumatic memories, other life demands and prolonged exposure to suffering. These factors are all related to orphanhood and cumulative stress effect, in a manner depicted in Figure 2.1.

Fig. 2.1 Interactions between STS and causative factors



The figure further shows that individuals that end up with STS as a matter of CS are bound to recover. As yet, it is not clear how and when this occurs. On the contrary, when someone

becomes a victim of STS either as a result of BO or CF, their condition may be lethal, probably leading to STSD. But the one sure thing is that where a system of at least two people is formed, one of whom has been traumatized and another who is helping; the empathic response of the helping individual will sure lead to the transmission of STS.

2.7 Research hypotheses

The study tested the following set of research hypotheses based on a review of related literature:

Ha_1 Young people orphaned by AIDS in Rachuonyo District exhibit a significant level of symptoms consistent with those of STS.

Ha_2 There is a significant difference in prevalence and the extent of severity of STS symptoms among male and female AIDS orphans in Rachuonyo District.

Ha_3 There is a significant relationship between STS symptoms and the development of STS among young people orphaned by AIDS in Rachuonyo District.

Ha_4 There exists a significant relationship between selected factors and STS among young people orphaned by AIDS in Rachuonyo District.

However, in order to explicitly specify the relationship that would be considered as true in case the research hypothesis proved to be wrong, the above hypotheses were formulated as alternate hypotheses, thus:

Ho_1 Young people orphaned by AIDS in Rachuonyo District exhibit no significant levels of STS symptoms.

Ho_2 There is no significant difference in the prevalence and extent of severity of STS symptoms among male and female AIDS orphans in Rachuonyo District.

Ho_3 There is no significant relationship between STS symptoms and the development of STS among young people orphaned by AIDS in Rachuonyo District.

Ho_4 There is no significant relationship between selected factors and STS among young people orphaned by AIDS in Rachuonyo District.

The formulation of the above hypotheses provided the study with focus, thereby telling the researcher what specific aspects of the research problem to investigate. They also educated the researcher on what data to collect and what not to collect, in essence providing additional focus to the study. As they provided a focus, the construction of the above hypotheses enhanced objectivity in the study. Lastly, the construction of each of the above hypotheses enabled the researcher to specifically conclude what was true and/or what was false when data was collected and analyzed. This enabled the researcher to add to knowledge gaps pinpointed in the study and generate new information for the formulation of theory.

Chapter three (3) presents the methodology that was adopted in this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter highlights and clarifies the research methods employed in this study, covering, among other things: research design; research variables; study location; population and sample; collaboration; the instrumentation; pilot study; validity and reliability; and procedures of data collection and analysis.

3.2 Research design

According to Kerlinger (1986), a research design is a plan, structure and strategy of investigation so conceived as to obtain answers to research questions or problems. The plan is the complete scheme or program of the research. It includes an outline of what the investigator will do from writing the hypotheses and their operational implications to the final analysis of data. Thus, it is an arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. The research enabled the researcher to conceptualize an operational plan to undertake the various procedures and tasks required to complete the study and to ensure that the procedures taken were adequate to obtain valid, objective and accurate answers to the research questions.

It follows that data for this study were collected using the cross-sectional survey (one-shot or status studies) research design. This design was best suited to this study since it was aimed at finding out the prevalence of a phenomenon, situation, problem or issue, by taking a cross-

section of the entire population. Thus, the design was useful in obtaining the overall picture as it stands at the time of the study, meaning that the study was cross-sectional with regard to both the study population and the time of investigation. Cohen and Manion (1994); Coolican (1994); Mouly (1993); and Wiersma (1998) describe survey research as a method that enables one to gather data from a relatively large number of cases at a particular time. It consists of asking people information concerning them, and adopts the use of a structured questionnaire, with answers open or closed. This design was considered applicable to this study because the independent variables already existed.

A key advantage of the design used in this study is that since the study involved only one contact with the study population, it was comparatively cheap to undertake and easy to analyse. However, the biggest limitation is that the study could not measure change. To measure change it would be necessary to have at least two data collection points- that is, at least two cross-sectional studies, at two points in time, on the same population.

3.3 Research variables

Black and Champion define a variable as 'rational units of analysis that can assume any one of a number of designated sets of values' (1976:34). In other words, an image, perception or a concept that can be measured on any one of the four types of measurement scale (nominal/classification scale, ordinal/ranking scale, interval scale, ratio scale), which have varying degrees of precision/accuracy in measurement, is a variable. Based on this definition, the study variables were classified from the viewpoint of causation since; this study was an attempt at investigation of a causal relationship or association between STS and other factors.

3.3.1 Independent variables

These were the causes or change variables, which were conceived to be responsible for bringing about change in STS. Thus, the independent variable investigated in this study was AIDS orphanhood as depicted by orphanhood related factors, which included:

- Duration of paternal orphanhood
- Duration of maternal orphanhood
- Involvement of orphans in caregiving
- Person(s) to whom such care was rendered
- Number of hours per day spent caring for the sick parent(s), and
- Cumulative duration of work as caregiver for orphans who were involved as caregivers.

3.3.2 Dependent variables

These were the outcome/effect variables, which were perceived in this study to be the effects/outcomes of the change(s) brought about by the independent variable. The study was designed to explore whether young people orphaned by AIDS would be significantly affected by the challenges of AIDS orphanhood to the level of developing Secondary Traumatic Stress (STS) symptoms. Consequently, the dependent variable of the study was STS as cumulative sum of symptoms exhibited through:

- burnout
- compassion satisfaction and,
- compassion fatigue.

Burnout (BO) is associated with feelings of hopelessness and difficulties in dealing with work or doing one's job effectively. These negative feelings have a gradual onset and can reflect the feeling that one's efforts make no difference, or they can be associated with a very high workload or a non-supportive living environment, conditions that were all present among young people orphaned by AIDS.

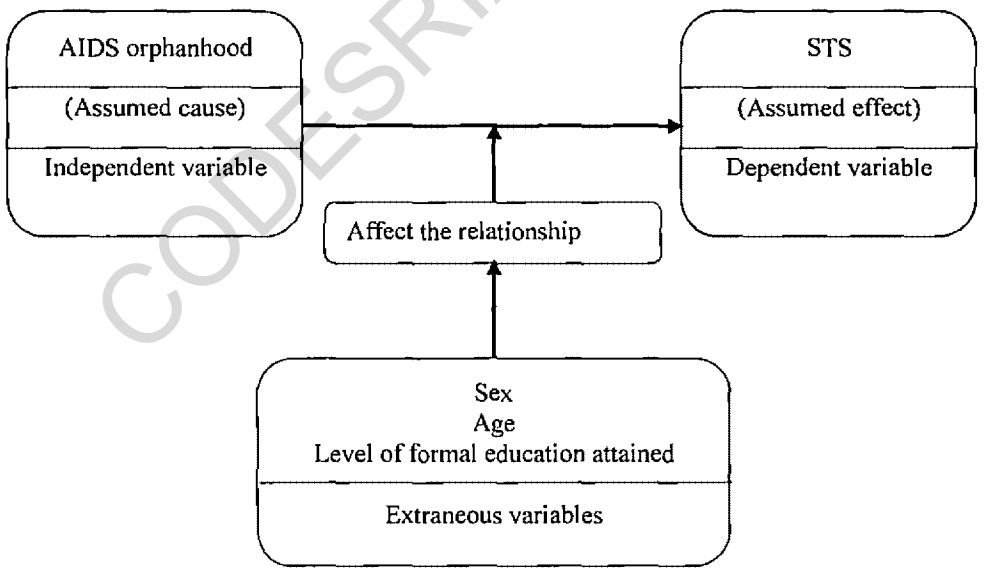
Compassion satisfaction (CS) is about the pleasure that an individual derives from being able to do his/her work well. For example, a child may feel like it is a pleasure to help a sick parent through caregiving. He/she may feel positively about his/her siblings or his/her ability to contribute to the homecare setting (with, say household chores) or even the greater good of the family and/or the larger society.

Compassion Fatigue (CF), or the "cost of caring" (Figley, 2002), is a natural reaction to working with traumatized people. CF, also referred to as secondary trauma (ST) is about an individual's work-related, secondary exposure to extremely stressful events. It occurs when an individual is exposed to another's traumatic events as a result of his/her involvement with the affected. The symptoms of ST, rapid in onset and associated with a particular stressful event, may include being afraid, having difficulty sleeping, having images of the upsetting event pop into one's mind, or avoiding things that remind one of the stressful event(s).

3.3.3 Extraneous variables

These were regarded as several other factors operating in the real-life situation of young people orphaned by AIDS that may affect changes in STS. These factors may have increased or decreased the magnitude or strength of relationship between AIDS orphanhood (the independent variable) and the exhibition of STS (dependent variable). Therefore, in this study, the demographic indicators of the respondents were considered the extraneous variables, since they may have affected the extent to which AIDS orphanhood might cause STS. These variables either increase or decrease the magnitude of the perceived relationship between the dependent and independent variables. Such variables investigated were: sex, age, and level of formal education attained. The three sets of variables were hypothesized to interrelate in the manner depicted in Figure 3.1.

Fig. 3.1 Sets of variables in AIDS orphanhood and secondary traumatic stress



3.4 Study location

Kakelo Location in Kasipul Division of Rachuonyo District, Nyanza Province, Kenya served as the study site in this project (Map 1).

3.4.1 Geographical description

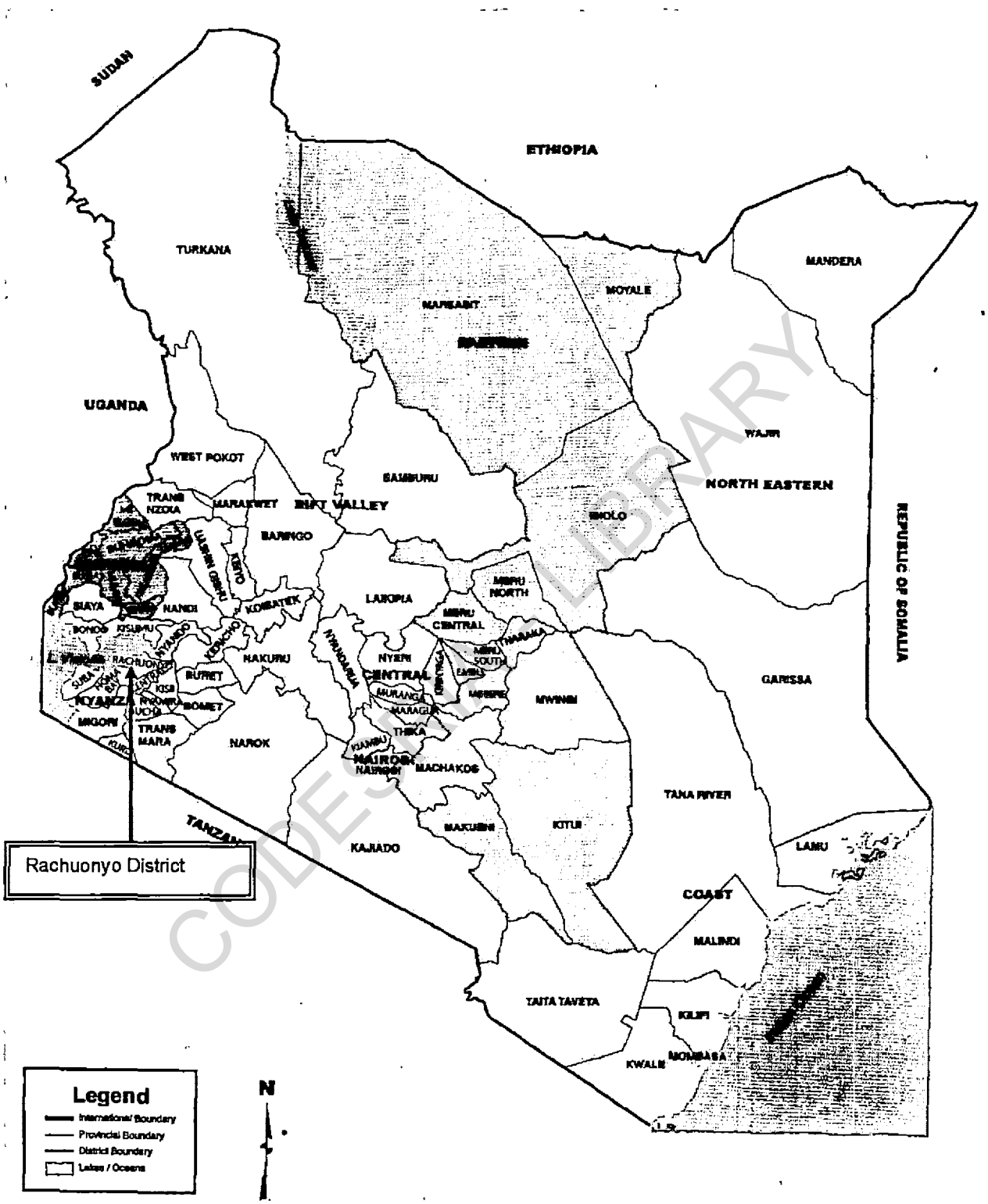
As at the time of this study, Rachuonyo District was one of the twelve districts constituting Nyanza Province. It was bordered by Nyando District to the North East, Kisii and Nyamira to the South East, Homabay to the South East, Kericho to the East, and Lake Victoria to the North and West. Administratively the district was divided into four divisions and forty locations all previously part of the larger South Nyanza District (Republic of Kenya- RoK, District Commissioner's- DC's office, Kosele, 2006). Table 3.1 shows the population density in the four administrative divisions in Rachuonyo District while the location and population density pattern are shown in Map 2. The population of the district was 313,870 according to the 1999 National Population Census. This was projected to rise to 328,580 at the end of 2001 and 351,674 in 2004; 60% of which is below the age of 20 years (District Planning Unit, Kosele, 2005). This translated to a population distribution and density of 355 persons per square kilometre.

Table 3.1: Area and population density of study area by Division

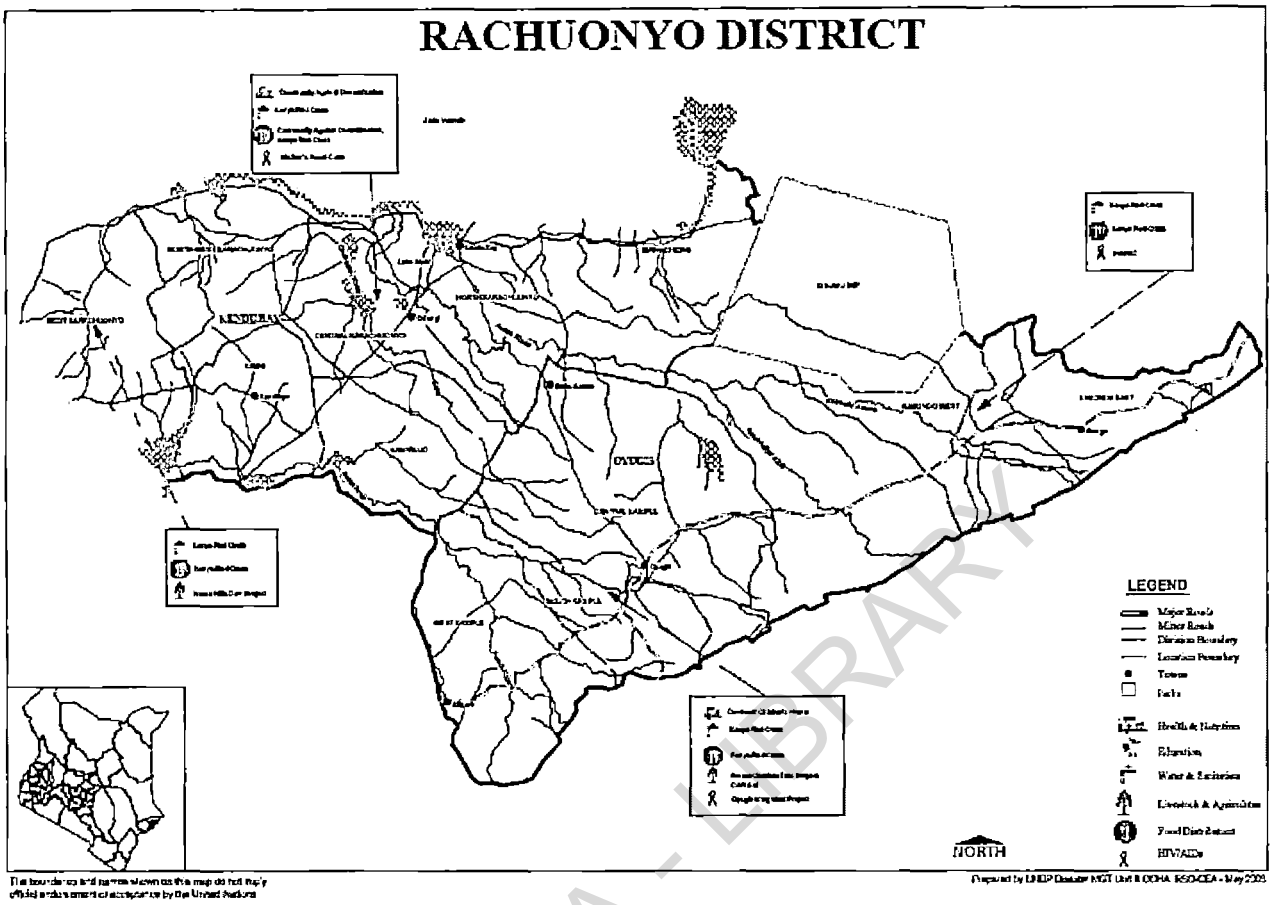
Division	Area (sq km²)	Locations	Population	Population Density
Kasipul	365.5	07	129,854	355
Kabondo	141.5	11	49,934	353
E. Karachounyo	251.6	11	74,578	296
W. Karachounyo	186.6	11	52,754	283
Total	945.2	40	307,120	325

Source: District Statistics Office – Kosele – 2006

Map 1: Map of Kenya showing location of Rachuonyo District (Marked)



Map 2: Map of Rachuonyo District showing study location



3.4.2 Socio–economic description

As of December 2004, there were 191 pre-primary schools, 339 primary schools and 58 secondary schools in Rachuonyo District located in all parts of the district. In the primary schools, total enrolment in 2001 was 81,847 out of whom 42,830 were males and 39,017 were females (RoK, District Education Office, Kosele, 2006).

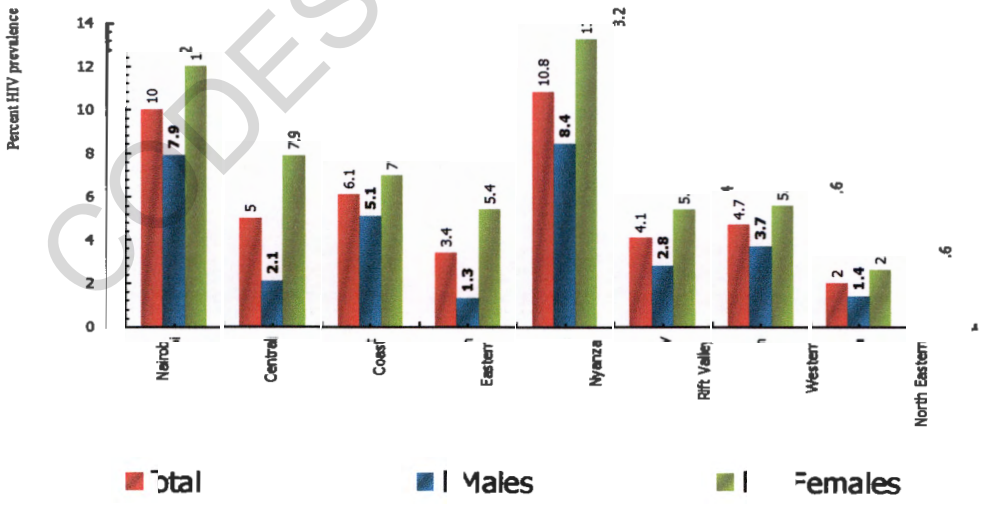
The young population (0-14 years) accounted for 47 percent of the total population while the aged (60 years) accounted for only 6.7 percent of the population. The young and the old therefore accounted for 57 percent, giving rise to a high dependency burden of 100:104. This has

led to low savings and investment levels in the district and hence slow economic growth and high incidence of poverty.

3.4.3 Justification of the study location

The choice of Kakelo Location was based on the fact that Rachuonyo District is one of the districts of Nyanza Province that was, at the time of this study, ranked top in HIV/AIDS prevalence in Kenya. HIV/AIDS prevalence in Rachuonyo District stood at 30 percent, which was a very high rate compared to the then national figure of 13.5 percent (8.7% female; 4.6% male) (NACC, 2006). Currently, the HIV prevalence rate in Kenya stands at 7.4 percent in the general population. The distribution of this in the eight (8) provinces of Kenya is as follows: Nyanza = 15.3%; Nairobi = 9.0%; Coast = 7.9%; Rift-Valley = 7.0%; Western = 5.1%; Eastern = 4.7%; Central = 3.8%; and North-Eastern = 1.0% (NASCOP, 2008) (Figure 3.2).

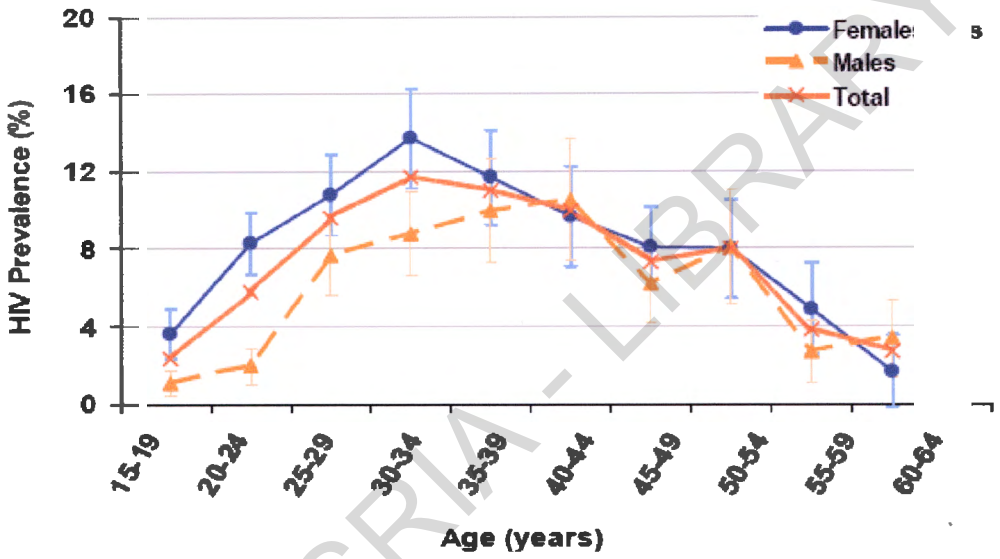
Fig. 3.2 HIV Prevalence in Kenya by Province



Source: NASCOP, 2008

The most affected segment of the population was young people aged between 15-45 years considered to be sexually active. However youth in the age bracket 14-25 years were the most vulnerable. This implied that there were high numbers of young people orphaned by AIDS in the province and by implication; the district, division and the location (Figure 3.3).

Fig. 3.3 HIV prevalence and 95% CI among Kenyans15-64 years old by sex and 5-year age categories based on the Kenya AIDS Indicator Survey 2007



Source: NASCOP, 2008

3.5 Population and sample

The population of this study comprised male and female young people orphaned by AIDS from Kakelo Location, Kasipul Division of Rachuonyo District. The sampling unit was young people orphaned by AIDS in the entire location, composed of Kakelo Kamroth and Kakelo Dudi Sub-locations.

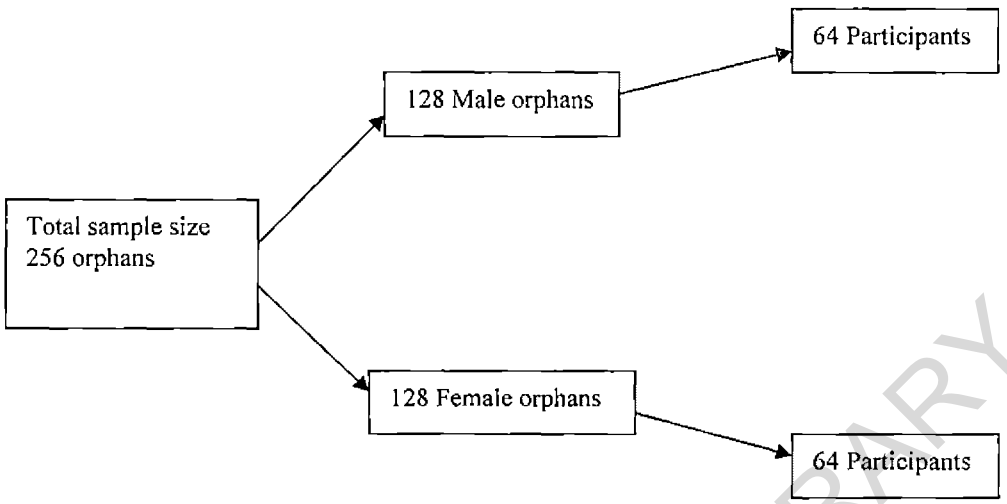
In this study, four broad categories of AIDS orphans were identified; orphans who have lost their fathers (otherwise called paternal orphans), those who have lost their mothers (maternal orphans), young people who have lost both their mothers and fathers (double orphans), and those born to single mothers (matrifocal orphans). The first three categories were perceived within the realm of conjugality while the fourth category of orphans existed outside the socially recognized or acceptable conjugal arrangements. In this study however, only the first three categories of orphans were recruited for participation: paternal, maternal and double orphans.

3.5.1 Sampling technique of the population

Sample selection in this study was aimed at achieving maximum precision in study estimates within the given sample size; and, avoiding bias in the selection of the sample. Thus, sample size calculations were based on power and type one error of 0.80 and 0.05, respectively. Based on these criteria, for each gender a sample of 64 was required for each group, resulting in a total sample size of 64×4= 256 (Fig. 3.4). However, in order to enhance the representativeness of the sample, 425 participants were enrolled in the study, 309 of whom took part in the study, resulting in a response rate of 72.7 percent.

Respondents were then selected through a random sampling design- where each member in the sample had an equal and independent chance of selection. Random (probability) sampling design ensured that the inferences drawn from the sample could be generalized to the total sampling population. Further, the design enabled the researcher to employ some statistical tests (that can only be applied to data collected from random samples) based on the theory of probability in order to establish conclusive correlations (as presented in Chapter Four on results).

Fig. 3.4 Sample size determination



The researcher adopted the stratified random sampling design, whereby elements in the sampling population were identified. AIDS orphanhood, location, school attended, and sex were the different strata into which the population was stratified. Once the sampling population had been separated into these groups, the researcher placed each element into the appropriate stratum and numbered every element in each stratum separately. Having decided on the total sample size, he selected the required number of elements from each stratum disproportionately (where consideration was not given to the number of elements from each stratum in relation to its proportion in the total population) using the simple random sampling technique. This was followed by a determination of the number of elements to be selected from each stratum, as: (sample size÷number of strata).

The final step involved selecting the required number of elements from each stratum with the simple random sampling technique. Thus, the study sample was selected as presented in Table 3.2.

Table 3.2: Sample size determination

Kasipul Division		Number Enrolled		Actual Participants by Sex		Total
Location	*Name of School*	*Male*	*Female*	*Male*	*Female*	
Kakelo Dudi	Ober mixed	70	52	63	45	108
Kakelo Dudi	Dudi	20	16	14	10	24
Kakelo Dudi	Atemo Mixed SS	10	10	04	03	07
Kakelo Dudi	Angino Mixed SS	10	10	04	03	07
Kakelo Kamroth	Omiro	48	35	41	29	70
Kakelo Kamroth	Saramba	22	16	16	11	27
Kakelo Kamroth	Nyabondo	38	28	31	22	53
Kakelo Kamroth	Omiro Mixed SS	10	10	03	03	06
Kakelo Kamroth	Kakelo Mixed SS	10	10	04	03	07
Total	9 Schools	238	187	180	129	309

3.5.2 Inclusion criteria

Participation was open to young people orphaned by AIDS who had to be either male or female aged between 10-21 years. This age cohort was chosen based on UNAIDS' and WHO's reference to young people orphaned by HIV/AIDS as any person below the age of 24 years who has lost father and/or mother both to AIDS . Only those who gave informed consent and those who were permanent residents of Kakelo Kamroth and Kakelo Dudi Sub-locations participated in the study.

3.5.3 Exclusion criteria

Orphans who did not consent to participate in the study, those whose ages fell outside the 10-21 age-bracket, and those who were not permanent residents of Kakelo Kamroth and Kakelo Dudi Sub-locations did not participate in the study.

3.5.4 Ethical considerations

The study followed the 1993 international ethical guidelines for biomedical research involving human subjects prepared by the Council for International Organization of Medical Sciences (CIOMS) in collaboration with the World Heath Organization (WHO). Consequently, this study was approved by the Ethics Review Board at the National Council of Science and Technology. Further permission was obtained from the local administration of the District and of the Location, through the office of the Location Chief.

Only subjects aged between 10-21 years were considered eligible to participate. All study subjects were recruited on a voluntary basis. Signed, informed consent was obtained from all subjects (and/or their guardians) by the researcher, prior to their participation in this study. All participants (and/or their guardians) were asked to read and sign a consent form that had been translated in the local language (mother tongue).

In the event that the participant (or his/her guardian) was not able to read the consent form, it was read by the interviewer in a language that the participant could understand, and the participants were then asked to provide their signed consent and/or finger prints. All information related to this study was kept strictly confidential.

All of the participants' personal identifying information including, names, were not recorded as part of the study data. Such information was also withheld from the research team in order to maintain the confidentiality and anonymity of the study participants. All participants were

assigned a unique ID number as they were recruited for the study. In addition, participants were free to withdraw from the study at any time without penalty or loss of privileges.

3.6 Collaboration

Kakelo Based Integrated Support Project (KBISP) was the key collaborator in this study. KBISP is a Community Based Organization (CBO) founded and registered with the Ministry of Social Services in 1997 to initiate projects that were intended to improve the welfare of those infected and affected by HIV/AIDS in Kakelo, Kokwanyo and Kojwach Locations of Kasipul Division in Rachuonyo District, Kenya.

The community support (CS) component of the project had three main objectives, namely a healthy and HIV infection free community, to facilitate the development of innovative and sustainable community owned and managed anti-HIV/AIDS initiatives and an improved quality of life for those infected and affected by HIV/AIDS. The KBISP in Rachuonyo District is being implemented in Kakelo Dudi and Kakelo Kamroth Sub-locations. The project largely uses the CBO approach in both areas and so most of the activities have been revolving around villages and homesteads, from where the study participants were traced and recruited.

The PLWHAs, orphans, grandmothers and other members affected by HIV/AIDS are meant to be reached through any (or all) of the project initiatives, which, at the time of this study included: training of community health workers; the Bull scheme; provision of textbooks and/or school uniforms; training seminars on HIV/AIDS infection, prevention, care and control, and positive living for PLWHAs; elder Elizabeth centre for home economics and agriculture; the Donkey cart

project; the Cent Project; the Goat scheme; the Tea project; the VCT centre; the solar oven project; the schools' building materials project; and the food for orphans project.

The high incidence of abuse and neglect related issues of young people orphaned by AIDS in families led to the expansion of the project's coverage to include such initiatives as tea and bread for orphans. This was aimed at enabling the CBO to offer counselling to the community in addressing the orphans' problem.

3.7 Instrumentation

The study adopted the questionnaire as the main tools for primary data collection (see Appendices 1 and 2).

The questionnaire used in this study was a written list of closed-ended questions, the answers to which were recorded by the respondents. Closed-ended questionnaire was preferred over the open-ended one because the closed-ended questions, since they provide 'ready made' categories within which respondents reply to the questions asked by the researcher, helped the researcher to ensure that information needed was obtained. In addition, because the possible responses were already categorised, they were easy to analyse.

In order to enhance user-friendliness, the researcher ensured that the questions were clear and easy to understand. Also, the layout of the questionnaire was such that it was easy to read and pleasant to the eye. Additionally, the sequence of questions was easy to follow (Appendices 1 and 2). This questionnaire was also developed in an interactive style, meaning that respondents

were made to feel as if someone was talking to them. Because the questionnaire used in this study contained some sensitive questions and some questions that respondents could have felt hesitant about answering, the researcher prefaced it by interactive statement explaining the relevance of the items therein.

The questionnaire was collectively administered in classrooms, staffrooms and other convenient locations at the study sites. This ensured a high response rate. The researcher was also able to explain the purpose, relevance and importance of the study because he had personal contact with the study population. Additionally, this mode of administration of the questionnaire enabled the researcher to clarify questions that respondents had.

Using the questionnaire was advantageous because a questionnaire requires comparatively minimum financial expenses and effort. According to Mouly (1993) the questionnaire normally has a greater reliability because it allows the selection of a large and representative sample. It can be used in a wider geographical area than most other techniques, and assures confidentiality, which was paramount in this study. As there was no face-to-face interaction between respondents and the interviewer, this method provided greater anonymity. Further, because a number of sensitive questions were asked, this data collection tool helped increase the likelihood of obtaining accurate information. That way, the questionnaire used in this study elicited more candid and objective responses.

However, despite the above strengths, a questionnaire has one major limitation, that members of low educational group tend not to answer or are unable to express their responses clearly due to

poor reading and writing skills. According to Kumar (2005), the application of a questionnaire is limited to a study population that can read and write. It cannot be used on a population that is illiterate, very young, very old, or handicapped. In this study, however, the above limitations were overcome by the fact that a greater majority of the subjects were members of good educational background (that is, primary and secondary school pupils, able to read and write). None of the respondents were illiterate, very young, very old, or handicapped. Further, the items in the questionnaires were designed in such a manner that there was little writing to be done.

In many cases where questionnaires are used, opportunity to clarify issues is lacking. However, in this study, even for respondents who, for any reason, did not understand some questions in the questionnaire, there was an opportunity for them to have the meaning clarified. The principal investigator and his research assistants (all trained) were available at hand to offer the necessary assistance. This ensured that respondents all interpreted the questions in a similar manner, in effect enhancing the quality of the information provided.

Questionnaires are also notorious for their low response rates, and not everyone who receives a questionnaire returns it, leading to self-selecting bias (Kumar, 2005). Nonetheless, the response rate was not a problem in this study since the administration of the questionnaires was done collectively. This further controlled for the possibility of respondents consulting others before giving their responses. The high response rates obtained in this study (72.7%) implies that the findings were representative of the total study population of young people orphaned by AIDS.

Finally, in order to control for the fact that a response, in case of a questionnaire, cannot be supplemented with other information; the researcher integrated the use of the questionnaire in this study with the use of focus group discussions in order to ensure that responses were supplemented with information from other methods of data collection. A description of the specific tools used in this study follows.

3.7.1 Secondary Traumatic Stress Test

Since the researcher was unable to find a ready-made questionnaire with all the items required to collect the necessary information on secondary trauma of young people orphaned by AIDS in this study, the researcher decided to construct a questionnaire that was relevant to the situation in Rachuonyo District and to the purposes of the study. In designing this questionnaire (the STS test), several existing instruments with some parts relevant to this study were perused, among them, the Professional Quality of Life: Compassion Satisfaction and Fatigue Subscales – Revision III (Stamm, 2005). This instrument was selected primarily because of its extensive use in the measurement of traumatized people and because of its low demand characteristics. It is brief and easily self-administered.

A list of one hundred (100) items related to STS cases among the target population was drawn from which thirty (30) items were selected for use in this study (ten items each for burnout, compassion satisfaction and compassion fatigue). While formulating these questions, a number of considerations were taken by the researcher. Firstly, he was careful to use simple and everyday language in the construction of the questions while the pilot study helped show the researcher what was and what was not understood by the respondents. Secondly, care was taken

not to use ambiguous questions, which therefore made it easy to draw valid conclusions from the information collected. Additionally, the researcher took precaution never to ask any double-barrelled questions. He was also keen not to ask any leading questions that would otherwise be judgemental leading respondents to answer either positively or negatively. Finally, none of the questions asked was based on any presumptions. The inclusion of any item in the research instrument was based solely on its relevance to the situation of young people orphaned by AIDS in Rachuonyo District, Kenya and its conspicuous harmony with the STS phenomenon.

Attempts were made in the STS test to include the time-tested characteristics and symptomatologies of burnout, compassion satisfaction and compassion fatigue. Consequently, the questionnaire tapped areas of secondary trauma (as depicted by burnout, compassion satisfaction, compassion fatigue) personal and family characteristics, and information related to current life experiences of the respondents. It follows that the secondary traumatic stress (STS test) used in this study was the 30-item questionnaire that presents the burnout, compassion satisfaction and compassion fatigue sub-scales together as STS.

The STS test was constructed on a six-level summated rating scale, also known as the Likert scale with scores ranging from zero (0) to five (5). A score of zero represented a non-presence of the STS symptom in all of the three sub-tests (burnout, compassion satisfaction and compassion fatigue). However, for variables used to measure burnout, a mixture of both positively and negatively worded statements were used. For this sub-scale therefore, positive statements accounted for six (6) items (i.e. BO.1, BO.2, BO.5, BO.6, BO.8, and BO.10) while the negatively worded statements comprised four (4) items (i.e. BO.3, BO.4, BO.7, and BO.9). Consequently,

the positive statements attracted a score of five (5) for a *"not at all"* response, and a score of zero (0) for *"an extreme amount"* response in that order. On the contrary, the negative statements attracted a score of zero (0) for a *"not at all"* response, and a score of five (5) for *"an extreme amount"* response format. Higher scores on the burnout scale meant that the individual orphan was at higher risk for burnout.

Statements in the compassion satisfaction (CS.1, CS.2, CS.3, CS.4, CS.5, CS.6, CS.7, CS.8, CS.9, and CS.10) and compassion fatigue (CF.1, CF.2, CF.3, CF.4, CF.5, CF.6, CF.7, CF.8, CF.9, and CF.10) sub-tests were all negatively worded. Thus, they all attracted scores of zero (0) for a *"not at all"* response; one (1) for a *"rarely"* response; two (2) for *"a few times"* response; three (3) for *"a moderate amount"* response; four (4) for a *"very much"* response; and a score of five (5) for *"an extreme amount"* response format in that order. Higher scores on the compassion satisfaction scale represented a greater satisfaction related to orphans' ability to be effective caregivers.

It follows that the average score on the burnout scale used in this study was 25 (SD 7.7; alpha scale reliability .63), hence a score of below 25 reflected positive feelings about orphans' ability to be effective in their lives. Higher scores above 25 were reflective of other worries and hence a cause for concern. The average score on the compassion satisfaction test was 27 (SD 7.5; alpha scale reliability .60). Consequently, scores of below 27 indicated that the orphan was finding problems with his/her life, or there may have been some other reason, for instance that he/she might be deriving satisfaction from activities other than the caregiver roles associated with AIDS orphanhood.

In a similar manner, the average score on the compassion fatigue test was 29 (SD 10.3; alpha scale reliability .81). Thus, higher scores of above 29 were an indication of genuine concerns about how the individual feels about their life and the environment around. The above information is summarised in Table 3. 3.

Table 3.3: Instrumentation

	Scale	Alpha	Mean	δ	Interpretation
The STS Test	Burnout	.63	25.00	7.70	higher score is higher risk for burnout (feel hopeless and unwilling to deal with work, onset gradual as a result of feeling one's efforts make no difference or very high workload)
	Compassion Satisfaction	.60	27.00	7.50	higher score is better satisfaction with ability to caregiver (e.g. pleasure to help, like colleagues, feel good about ability to help, make contribution, etc.)
	Compassion Fatigue	.81	29.00	10.30	higher score is risk for Compassion Fatigue (symptoms of work-related PTSD, onset rapid as a result of exposure to highly stressful life)

The following were the elements of STS symptomatology investigated by each sub-scale:

a. Burnout:

- Diminished sense of enjoyment
- Diminished ego-functioning (identity)
- Sleeplessness

- Tiredness
- Cynicism
- Suspiciousness
- Exhaustion
- Chronic fatigue
- A sense of being physically run down, and
- Hypervigillance.

b. Compassion Satisfaction:

- Self-praise for accomplished work
- Self-knowledge
- Ability to find meaning in life
- Enthusiasm
- Positive self-concept
- Ability to feel joy
- Great expectations
- Confidence
- Increased use of positive coping methods, and
- A sense of strength.

c. Compassion Fatigue:

- A sense of being besieged
- Increased negative arousal
- Difficulty separating work from personal life
- Diminished ego functioning (volition)

- Lowered frustration tolerance
- Depression
- Intrusive images of situations/traumas
- Dread of certain situations or activities
- Intrusive thoughts, and
- Feelings of helplessness.

The study data regarding the prevalence and severity of STS symptoms among young people orphaned by AIDS was all quantitative and was therefore collected quantitatively using the Secondary Traumatic Stress test.

3.8 Pilot study

The researcher first pre-tested the instruments on 15 male and 15 female orphans randomly selected from the study area in the month of May 2006. The pre-test subjects were encouraged by the researcher to make comments and give suggestions concerning the items. Data collected at the pilot study were analyzed and the results used for appropriate amendments of the research instruments before the main study.

The aim of the pilot study was to validate the research instruments and ascertain their reliability. It was also geared at identifying major problems, instrument deficiencies, and at making suggestions for improvement; to check if the research instruments would elicit the data anticipated in the study and whether they could be meaningfully analyzed in relation to the stated

objectives and hypotheses. The pilot study was also meant to help check the appropriateness of the language used in the tools and to contextualize them for predictability.

3.9 Validity and reliability of the research instruments

3.9.1 Validity

According to Smith (1991: 106), 'validity is the ability of an instrument to measure what it is designed to measure'. According to Kerlinger, 'the commonest definition of validity is epitomised by the question: Are we measuring what we think we are measuring?' (1973: 457). Babbie writes, 'validity refers to the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration' (1990: 133). According to Coolican (1994) validity refers to whether a measure is really measuring what it was intended to measure, implying that validity is the ability of a research instrument to measure what it is designed to measure. Consequently, in this study, validity was conceived from two broad perspectives; first, if the research investigation provided answers to the research questions for which it was undertaken; and if so, whether it provided these answers using appropriate methods and procedures.

The face validity of the research instrument used in this study was established by ensuring that each item on the scale had a logical link with the research objectives. And, in order to ascertain content validity of the instrument, the items and questions included covered the full range of issues under STS being measured in a balanced manner. Content validity of the various sub-tests was initiated at the design stage. Pilot study was used to ascertain the content validity of the research instruments.

All the pre-test subjects agreed that the items in the burnout sub-scale, the compassion satisfaction and the compassion fatigue tests all articulated issues that were related to what their experiences on a day-to-day basis (as care givers to their parent(s), siblings and the life after), were, thus ascertaining further the content validity of the tools used in this study.

3.9.2 Reliability

According to Moser and Kalton, 'a scale or test is reliable to the extent that repeat measurements made by it under constant conditions will give the same result' (1989: 353). Based on Coolican (1994) reliability refers to a measure's consistency in producing similar results on different but comparable occasions. And Kumar asserts, 'reliability is the degree of accuracy or precision in the measurements made by a research instrument. The lower the degree of "error" in an instrument, the higher is the reliability' (2005: 156). It follows from the above definitions that if a research tool is consistent and stable, and, hence, predictable and accurate, then it is reliable.

Prior to the main analysis the scales were checked by internal consistency procedures as a measure of their reliability (Derogatis, 1993). This was done through the split-half technique, whereby the statements were divided in half in such a way that any two statements intended to measure the same aspect of STS fell into different halves. The score obtained by administering the two halves were correlated and reliability calculated by using the Pearson Product Moment Correlation between scores obtained from the two halves. This was correlated in order to assess reliability for the whole instrument (the stepped-up reliability) via the Spearman-Brow formula.

Thus, the researcher ascertained the reliability of the burnout sub-scale (alpha, α=.63; SD=7.7; N=230), the compassion satisfaction test (alpha, α=.60; SD=7.5; N=227), the compassion fatigue test (alpha, α=.81; SD=10.3; N=264) and the STS Test (alpha, α=.70; SD=15.2; N=189).

3.10 Data collection procedures

The procedures employed in the study and during data collection process involved first, the establishment by the researcher/Principal Investigator (PI), of a core group of local researchers in Kakelo Location of Kasipul Division, Rachuonyo District. The researcher then designed and prepared a package of training materials for the research team. This exercise led to the training and availability therefore, of educational materials in local language.

Training of local research team to collect data was paramount in ensuring that the local research team was able to problem-solve during data collection process for smooth implementation. This process resulted in a core group of ten (10) trained local research assistants (RAs). The researcher then went ahead to identify community leaders, head teachers and parents for collaboration and networking. Specifically, the researcher identified the area Location Chief and his assistants, head teachers of schools within the location and a group of selected parents and guardians.

Negotiation and establishment of linkages with the Ministry of Health and Children's Department of the Ministry of Home Affairs then followed. The researcher also negotiated and established links with local primary schools for cooperation and assistance in identification and

recruitment of young people orphaned by AIDS. This was done in collaboration with the Kakelo Based Integrated Support Project, already mentioned earlier under the sub-topic on collaboration.

The above steps were followed by recruitment of orphans whose parent(s) died of AIDS. Having identified this group, the researcher then negotiated their cooperation and participation in the project, a process that gave birth to a pool of eligible orphans who became the study participants. The researcher then piloted the feasibility of the research instruments. Piloting was important in this project because as a result of this process, the research team ensured that research instruments and data collection tools were culturally sensitive and appropriate for use in this study. Translation of questionnaires and other research instruments into local language was also done. This translation ensured that data collection tools were easily administered during data collection process. The translated instrument is presented in Appendix 2.

Data collection by the researcher with the help of trained local research assistants then ensued. This was done by the research team following up subjects to their respective schools given that such information was already available from the collaborator –KBISP. The researcher found the exercise to be full of new experiences, humbling and yet sometimes, a very sad venture given the stories shared by some of the subjects about their own personal day-to-day life experiences.

Following the completion of data collection process, the principal investigator compiled and entered all the collected data into a computer software (SPSS- the Statistical Package for the Social Sciences (Version 13.0 for windows) (Nie, Stein and Bent, 2007) for analysis.

Data analysis and submission for cross-checking, review, comments and changes was then done. The above processes were immediately followed by the preparation of the thesis for validation by advisors and for comments and corrections. The writing process, which was a continuous process based on analysed data, culminated in the preparation of the final PhD thesis, which was submitted for examination.

3.11 Data analysis

The Secondary Traumatic Stress test was used to assess STS among young people orphaned by AIDS. Subgroup analysis by gender was done for burnout, compassion satisfaction, compassion fatigue and STS symptoms. An alpha of 0.05 (α=0.05), for each domain of the various tests in the questionnaire was considered statistically significant between the categories of orphans. Quantitative data was analysed using SPSS version 13.0 in order to address the research objectives, which were to:

1. Explore the demographic indicators of young people orphaned by AIDS
2. Assess the prevalence of STS symptoms among young people orphaned by AIDS
3. Assess the extent of severity of STS among young people orphaned by AIDS
4. Explore the differences in STS between genders among young people orphaned by AIDS
5. Establish the relationship between STS symptoms and the development of STS
6. Investigate and document the predictive factors of STS among young people orphaned by AIDS.

The analyses were focused at addressing the key research questions of the study, which were:

a. What are the demographic profiles of young people orphaned by AIDS?

b. To what extent do young people orphaned by AIDS exhibit symptoms consistent with those of STS?
c. What is the extent of severity of STS symptoms among young people orphaned by AIDS?
d. Are there gender differences in STS among young people orphaned by AIDS?
e. Is there any relationship between STS symptoms and the development of STS?
f. What are the predictive factors of STS among young people orphaned by AIDS?

In order to answer the above research questions, specific analyses were conducted as follows:

3.11.1 Research Question 1: What are the demographic profiles of young people orphaned by AIDS?

Three broad categories of factors that were of interest to the study were investigated. These were demographic indicators (sex, age and level of formal education attained); orphanhood related factors (number of years that had elapsed since being orphaned of father and/or mother, person(s) to whom care was rendered for those orphans who had been involved as caregivers, number of hours per day spent caring for the sick parent(s), and the overall duration of work as caregiver, for those orphans who were involved in one way or another as caregivers); and care giver roles that young people orphaned by AIDS were involved in (among them: household chores, farm work, nursing care, involvement in income generating activities, and any other chore(s)).

Descriptive statistics were used to establish frequencies, means, modes and standard deviations on these factors. Means, modes and standard deviations were generated by an SPSS syntax that

automatically checks, recodes data and computes domain scores for each domain of the various items in the questionnaire.

3.11.2 Research Question 2: To what extent does young people orphaned by AIDS exhibit symptoms consistent with those of STS?

In order to answer this particular question about the prevalence of STS symptoms, descriptive statistical analysis was conducted on STS scores. A comparison was then made between the average scores of the participants on each of the sub-scales on STS (i.e. the burnout, compassion satisfaction and compassion fatigue sub-tests).

The STS test that was used in this study contained three variables measured using three sub-scales: burnout, compassion satisfaction and compassion fatigue that together measured the levels of secondary trauma of an individual. The test was constructed on a six level Likert scale with scores ranging from zero (0) to five (5). A score of zero represented a non-presence of the STS symptom in all of the three sub-tests.

The first measure, the burnout scale, was concerned with orphans' feelings of hopeless and unwillingness to deal with work. Onset of burnout on victims has been noted to be gradual as a result of the feeling that one's efforts make no difference and/or due to very high workload. Higher scores in this scale was representative of higher risk for burnout.

The second measure, the compassion satisfaction scale, was concerned with the pleasure that young people orphaned by AIDS derive from being able to do their work well both as caregivers

and otherwise. For example, they may have felt like it is a pleasure to help and take care of their parent(s) while they were sick. This implies that compassion satisfaction is about the pleasure that an individual derives from being able to help someone in distress, and/or do his/her work well. For example, a child may feel like it is a pleasure to help a sick parent through care giving. He/she may feel positively about his/her siblings or his/her ability to contribute to the homecare setting (household chores, farm work, nursing care, or as a household head and so on) or even for the greater good of the society. Higher scores on this scale represented a greater satisfaction related to an individual's ability to be an effective helper or caregiver. Consequently, lower scores indicated that one was finding problems with his/her work, or there may have been some other reason(s), for instance that he/she might be deriving satisfaction from activities other than the caregiver roles. Results of this analysis are presented in Table 4.6.

Finally, the third measure, compassion fatigue test, presented findings based on the compassion fatigue (secondary trauma) measure. Compassion fatigue (CF), also called secondary trauma (ST) is about an individual's work-related, secondary exposure to extremely stressful events. It occurs when an individual is exposed to another person's traumatic events as a result of his/her wanting to help, actually helping or care work. Such symptoms, rapid in onset and associated with a particular stressful event, may include being afraid, having difficulty sleeping, having images of the upsetting event pop into one's mind, or avoiding things that remind one of the event. Higher scores were an indication of genuine concerns about how the orphans felt about their lives and the general environments under which they lived and acted.

3.11.3 Research Question 3: What is the extent of severity of STS symptoms among young people orphaned by AIDS?

In order to determine the extent of severity of STS among young people orphaned by AIDS, the highest and lowest possible scores were determined, thus:

Highest possible score = highest possible score on any item × number of items in each sub-scale × the number of subscales

=> 5 × 10 × 3 = 150

Lowest possible score = lowest possible score on any item × number of items in each sub-scale × the number of subscales

=> 0 × 10 × 3 = 000

After this computation, the highest score was divided by three (3) in order to yield different categories of severity, as follows:

Score of zero (0) = Absence of STS symptoms

Score of between 01-50 = Less severe levels of STS symptoms

Score of between 51-100 = Severe levels of STS symptoms

Score of between 101-150 = Very severe levels of STS symptoms

Statistical analyses were then conducted in order to answer the twin research questions about the prevalence and extent of severity of distress among young people orphaned by AIDS. Pearson Product Moment Correlation Coefficient analysis was conducted between the average scores of the participants on each of the sub-scales on STS (i.e. the burnout, compassion satisfaction and compassion fatigue). Scores on each sub-scale of STS were calculated, thus:

Highest possible score = highest possible score on any one item × number of items in each sub-scale

=> 5 × 10 = 50

Lowest possible score = lowest possible score on any one item × number of items in each sub-scale

=> 0 × 10 = 00

A mean score for each sub-scale was then computed, in order to yield different categories of severity, as follows:

Mean score = (highest possible score on any scale + lowest possible score on any scale)/10

=> (50 + 00)/10 = 05

Consequently;

A score of zero (0) indicated a total absence of any STS symptom in the individual

A score of between 01and 04 indicated less likelihood of any STS symptom

A score of 05 indicated likelihood of some STS symptom being present.

3.11.4 Research Question 4: Are there gender differences in STS among young people orphaned by AIDS?

This research question sought to find out the differences that exist, if any, among male and female orphans with regard to the various aspects of STS investigated in this study (prevalence, severity and predictive factors). In order to answer this research question, a gendered analyses of all the aspects of STS investigated was conducted, thus: gender differences on the demographic profiles of young people orphaned by AIDS, gender differences in exhibition of STS symptoms,

gender differences in the extent of severity of STS symptoms, gender differences in the relationship between STS symptoms and the development of STS, and gender differences in predictive factors of STS among young people orphaned by AIDS were ascertained. Analyses were done as indicated under specific sections referring to these gender issues. Further analysis using the chi-square test was used in order to test the statistical significance of these gender differences. Findings presented in section 4.5 of the results.

3.11.5 Research Question 5: Is there any relationship between STS symptoms and the development of STS?

This area of analysis addressed the research question about the probable relationship between STS symptoms herein established and the development of STS. In order to answer this question, a Pearson Product Moment Correlation was used since the variables under consideration were measured in ordinal scale and therefore comparison of relationships of their respective scores was possible through this method.

Specifically, the study endeavoured to identify the association between the levels of distress as reported in the burnout, compassion satisfaction and compassion fatigue tests and the cluster of personal and orphanhood related factors that were envisaged to contribute to the development of symptoms of STS.

3.11.6 Research Question 6: What are the predictive factors of STS symptoms among young people orphaned by AIDS?

In order to answer this question, the researcher conducted analysis on the relationship between selected variables and STS using a One-Was Analysis of Variance (ANOVA). A further analysis using Multiple Linear Regression was also conducted in order to identify the major predictors of STS.

One advantage of the Multiple Linear Regression test is that the variable that contribute most to the variance explained are entered first into the solution, with other variables not being entered unless they meet preset criteria. For each test, the independent variables included sex, age and level of formal education attained, number of years of paternal orphanhood, number of years of maternal orphanhood, involvement of orphans as caregivers to parent(s), person(s) to whom care was rendered for those orphans who were involved as care givers, number of hours per day spent caring for the sick parent(s), the cumulative duration of work as caregiver; and care giver roles (if any) for young people orphaned by AIDS (among them household chores, farm work, nursing care, involvement in income generating activities, and other chores- as were established by the study).

The next section (Chapter Four) deals with a presentation of the study findings based on analyses presented above. The results have been presented in tables and graphs that follow the standard American Psychological Association (APA) format. In this context, sets of numerical results have been presented as tables or graphs rather than being included wholly in the text. Tables were preferred for giving structural numerical information, whereas graphs ere essential for

indicating trends and making broad comparisons or showing relationships. Well presented tables and graphs enabled the researcher to concisely summarize information which would have otherwise been difficult to describe in words alone.

In presenting results in the tables and figures, the research first writes the verbal summary before preparing the final version of the tables and figures; to make sure they illuminate the important points. Efforts have been made by the researcher to ensure that the text include a mention of key points in the table or figure.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter presents the results obtained from the study. The chapter is divided into five sections, each of which presents data based on research questions of the study. In answering these questions, preliminary data are presented first followed by statistical analyses of the findings based on study objectives, study variables and research questions.

4.2 What are the demographic profiles of young people orphaned by AIDS?

The researcher begins a presentation of results by looking at some of the core features that defined the study participants. Table 4.1 details these characteristics. From Table 4.1, it is clear that majority of the orphans were male aged between 14-17 years in upper primary (that is, pupils in standards 7 and 8). As at the time of this study, the majority of the respondents had been orphaned of their fathers and/or mothers for more than seven (7) years indicating that most of the respondents were maternal orphans (that is, orphans who have lost their mothers to AIDS).

Results regarding the involvement of young people orphaned by AIDS as caregivers indicate that majority of them had been involved in one way or the other as caregivers to their parent(s) and/or sibling(s). Their care roles spanned across many activities including, but not limited to household chores, farm work, nursing care and work as household head (in order to generate some income for the household). However, farm work and household chores were a common engagement for the greater majority of orphans across board.

Table 4.1: Demographic indicators of young people orphaned by AIDS in Rachuonyo District

Characteristic	Number of respondents (%)
Sex (N=309)	
Male	58.3
Female	41.7
Age category (N=309)	
10-13	42.4
14-17	54.0
18-21	03.6
Level of formal education attained (N=309)	
Lower Upper Primary	07.1
Mid Upper Primary	27.5
Upper Primary	61.5
Junior Secondary	03.9
Number of years of paternal orphanhood (N=309)	
< 1 year	25.2
1-2 years	11.0
3-4 years	13.0
5-6 years	17.2
> 7 years	33.6
Number of years of maternal orphanhood (N=309)	
< 1 year	02.3
1-2 years	13.9
3-4 years	08.1
5-6 years	13.6
> 7 years	62.1
Involvement as a caregiver to parent(s): Yes (N=221)	
Household chores	35.7
Farm work	38.0
Nursing care	31.2
Household head (IGA)	25.8
Other	14.9
Person to whom care was rendered (N=230)	
Father only	36.1
Mother only	30.4
Father and mother only	14.8
Brothers and sisters only	01.3
Father, Mother, Brothers and Sisters	17.4
Number of hours per day spent caring for the sick parent(s) (N=226)	
01 – 04 Hours	34.9
05 – 08 Hours	37.2
09 – 12 Hours	15.5
13 – 16 Hours	02.2
Whole day and whole night	10.2
Cumulative duration of work as caregiver (N=221)	
1 Week – 6 Months	60.2
07 – 12 Months	19.4
13 – 18 Months	02.3
19 – 24 Months	09.5
More than 2 years	08.6

Majority of orphans rendered care to their parent(s) while only a few of them took care of their brother(s) and sister(s). The caregiver service provision among these orphans spanned on a daily basis for between one (1) and sixteen (16) hours. However, some of the orphans indicated that they spent the whole day and whole night of caregiving. Worth noting is the fact that a greater majority of orphans spent between five (5) and eight (8) hours per day taking care of their (sick) parent(s) (Table 4.1).

On the overall, the duration of care work spanned from between one (1) week to more than two (2) years with a greater number of respondents being engaged as caregivers for between one (1) week and six (6) months. Thus, the summary of the study findings regarding the demographic profiles of the orphans is as presented below:

a. Majority of the respondents were males; mean age range was 14-17 years.
b. A great number of the respondents were upper primary school pupils (i.e. pupils in standards 7 and 8).
c. As at the time of the study, the majority of the respondents had been orphaned of their fathers and/or mothers for more than seven (7) years.
d. Most of the respondents were maternal orphans (i.e. orphans who have lost their mothers to HIV/AIDS).
e. More than 71 percent of the young people orphaned by AIDS had been involved in one way or the other as caregivers to their sick parent(s) and/or sibling(s).
f. Such care roles spanned across many activities, ranging from household chores, farm work, nursing care, and work as household head (in order to generate some income for the household) amongst other chores.

g. Farm work and household chores were a common engagement for the greater majority of orphans regardless of their sex and/or gender roles.

h. A majority of the respondents rendered care to their parent(s), while only a few of them took care of their brothers and sisters.

i. Caregiving roles among the orphans differed. However, majority of orphans spent between five (5) and eight (8) hours per day taking care of their sick parent(s).

j. On the overall, duration of care work spanned from between one (1) week to more than two (2) years with many orphans being engaged as caregivers for between one (1) week and six (6) months.

Therefore, having ascertained the demographic indicators of young people orphaned by AIDS, the researcher turned to the study data to try and establish the core purpose, which was the assessment of the prevalence and extent of severity of secondary traumatic stress (STS) and its predictors among young people orphaned by AIDS. The sections that follow delve further into these.

4.3 To what extent do young people orphaned by AIDS exhibit symptoms consistent with those of STS?

This phase of the analysis focused on the second research question, the extent at which an AIDS orphan exhibits general emotional distress and specific symptoms consistent with those of STS. Consequently, and in order to answer this particular question about the prevalence of STS symptoms, descriptive statistical analysis was conducted on STS scores collected using the STS test. The test contained three variables measured using three sub-tests: Burnout (BO), Compassion Satisfaction (CS) and Compassion Fatigue (CF) that together measured the levels of

secondary trauma (ST) of an individual. The tests were constructed on a six level Likert scale with scores ranging from zero (0) to five (5). A mean score of zero represented a non-presence of the STS symptom in all of the three sub-tests. A comparison was then made between the average scores of the participants on each of the sub-scales on STS. Findings are presented in Table 4.2.

Table 4.2: Percentage prevalence of STS symptomatologies among young people orphaned by AIDS

	Mean frequency of ratings (%) (N = 309)			
Symptomatology of STS – BO	Not susceptible	Less susceptible	Susceptible	Highly susceptible
Diminished sense of enjoyment	31.1	43.7	18.4	06.8
Diminished ego-functioning (identity)	10.7	37.8	24.9	26.6
Sleeplessness	11.3	51.8	06.5	30.4
Tiredness	20.7	36.5	16.8	26.0
Cynicism	26.2	25.9	13.6	34.3
Suspiciousness	31.3	17.8	14.9	36.0
Exhaustion	19.1	40.5	16.8	23.6
Chronic fatigue	28.5	31.4	19.4	20.7
A sense of being physically run down	26.9	27.1	13.6	32.4
Hypervigillance	15.5	27.2	15.3	42.0
Symptomatology of STS – CS	Not satisfied	Somewhat satisfied	Satisfied	Very satisfied
Self-praise for accomplished work	12.3	13.0	12.0	62.7
Self-knowledge	08.1	39.5	16.5	35.9
Ability to find meaning in life	12.3	11.0	11.7	65.0
Enthusiasm	10.4	19.4	20.1	50.1
Positive self-concept	22.0	27.2	22.0	28.8
Ability to feel joy	10.0	23.9	19.2	46.9
Great expectations	12.3	24.9	14.6	48.2
Confidence	20.1	19.7	09.7	50.5
Increased use of positive coping methods	22.0	24.3	25.6	28.1
Sense of strength	11.7	23.3	14.2	50.8
Symptomatology of STS – CF	Not susceptible	Less susceptible	Susceptible	Highly susceptible
A sense of being besieged	18.8	25.9	14.9	40.4
Increased negative arousal	11.6	36.6	08.1	43.7
Difficulty separating work from personal life	14.2	31.4	13.9	40.5
Diminished ego-functioning (volition)	14.2	22.4	11.0	52.4
Lowered frustration tolerance	14.2	19.8	12.3	53.7
Depression	08.7	33.9	11.4	46.0
Intrusive images of situations/traumas	18.4	22.0	11.3	48.3
Dread of certain situations/activities	10.7	18.5	17.5	53.3
Intrusive thoughts	16.8	22.6	12.9	47.7
Feelings of helplessness	09.1	14.9	05.5	70.5

On the overall, Table 4.2 shows that when investigated on STS symptomatologies, majority of the orphans were found to be highly susceptible to hypervigillance, suspiciousness, and cynicism. Other symptoms were feelings of helplessness, lowered frustration tolerance, dread of certain activities and situations, and diminished ego functioning. These not withstanding, young people orphaned by AIDS were not susceptible to a diminished sense of identity, sleeplessness, nor hypervigillance. Other negative symptoms of STS not established among this group of respondents included depression, feelings of helplessness, dread of certain situations or activities and increased negative arousal.

On the contrary, orphans were still able to find meaning in life; they were full of self-praise for accomplished tasks, possessed a high sense of strength and manifested some element of confidence in life. Detailed presentation of these findings based on analyses of the specific sub-scales follows.

4.3.1 Symptomatology of STS among young people orphaned by AIDS

Results based on the BO sub-scale indicate that majority of the young people orphaned by AIDS were not susceptible to suspiciousness, gauged on their ability to be happy and enjoy life. Further, majority of them were less susceptible to diminished ego-functioning. This had to do with whether young people orphaned by AIDS felt connected to and accepted by the people they knew. About 11 percent of them were not at all susceptible to diminished ego-functioning (ego identity). Some 25 and 27 per cent were found to be respectively susceptible and highly susceptible to diminished ego-functioning.

Quality of sleep of AIDS orphans was one of the behavioural symptoms investigated, and as Table 4.2 shows; some 11 percent of the study subjects never exhibited any susceptibility to sleeplessness. Additionally, over 51 percent were less susceptible. However, this not withstanding, it is noteworthy that some six and 30 percent of the respondents were respectively susceptible and highly susceptible to sleeplessness. This implies that they lost sleep over their parents' traumatic experiences.

Somatic reactions as physical changes associated with STS were also investigated, and results presented in Table 4.2 reveal that only about 20 percent of the respondents were not susceptible to tiredness. Another 36 percent were less susceptible. On the contrary however, about 17 and 26 percent of the respondents were respectively susceptible and highly susceptible to tiredness. These were the individuals who felt that physical pain prevented them from doing their daily work.

Interesting to note is the fact that many of the orphans were found to have little or no beliefs to sustain their lives (Table 4.2). Consequently, more than 13 and 34 percent were respectively susceptible and highly susceptible to cynicism. About 26 percent were less susceptible, while only about an equal number of respondents were not susceptible to this STS symptom.

Similar trends were established when suspiciousness as a symptom of STS was investigated using the burnout scale. Results indicate that majority of the young people orphaned by AIDS were a highly suspicious lot (as evidenced by the 14.9 and 36 percent of the respondents who were respectively susceptible and highly susceptible to suspiciousness) (Table 4.2). This shows

that majority did not accept their bodily appearance on the belief that they were not the persons that they always wanted to be. About 18 percent were less susceptible while some 31 percent were not at all susceptible.

Additional results indicate that only about 19 percent of the respondents were not susceptible to physical exhaustion. About 40 percent of them were less susceptible, while some 17 percent were actually susceptible. About 24 percent were highly susceptible to exhaustion as depicted in Table 4.2. This symptom was based on the experience of orphans who felt too exhausted to perform their daily activities.

Other than physical exhaustion, another area of symptomatology analysis involved chronic fatigue where the researcher found out that majority of the respondents were less susceptible (Table 4.2). Some 28 percent of them were not susceptible compared to about 19 percent who were actually susceptible. Close to 21 percent of the respondents were established to be highly susceptible to chronic fatigue, meaning that they felt that they did not have enough energy for everyday life.

An investigation into the symptoms of STS using the burnout scale also looked at the physical environment of young people orphaned by AIDS. The analysis established that many of the orphans were highly susceptible to being physically run down (Table 4.2). That is, they felt bogged down by their physical environment. Only about 27 percent and a similar number were either not susceptible or less susceptible to a sense of being physically run down.

Finally, in the burnout scale was investigated hypervigillance, which had to do with orphans' levels of sensitivity. Results indicate that many of the orphans were highly susceptible to exhibiting this symptom; that is, they were too sensitive a people (Table 4.2). Another 15 percent were actually susceptible. Only about 15 percent were not susceptible to hypervigillance, with another 27 percent being less susceptible.

In summary therefore, results from the burnout scale seems to suggest that young people orphaned by AIDS were at a higher risk for:

a. cynicism
b. suspiciousness
c. a sense of being physically run down, and
d. hypervigillance.

On the contrary, they were less susceptible to:

i. diminished sense of enjoyment,
ii. diminished ego-functioning (identity),
iii. sleeplessness,
iv. tiredness,
v. exhaustion, and
vi. chronic fatigue.

However, it is important to note that the above findings were limited to the fact that there was an absence of baseline data in the general population regarding STS symptoms. The second measure, the compassion satisfaction scale, was concerned with the pleasure that young people

orphaned by AIDS derived from being able to do their work well both as caregivers and otherwise. For example, they may have felt like it is a pleasure to help and take care of their parent(s) while they were sick. This is because compassion satisfaction is about the pleasure that an individual derives from being able to do his/her work well. For example, the orphaned youth may have felt like it is a pleasure to help a sick parent through caregiving, home-making, looking for food, and so on. He/she may have felt positively about his/her sibling(s) or his/her ability to contribute to the homecare setting (household chores, farm work, nursing care, as household head and the like) or even to the greater good of the society. Higher scores on this scale represented a greater satisfaction related to an individual orphan's ability to be an effective caregiver. Table 4.2 details the findings.

From the table, more than 62 percent of the young people orphaned by AIDS were full of self-praise for the work they did in working as carers to their parent(s) and/or siblings. Another 12 percent were satisfied. This means that they got satisfaction from the fact that they were able to help their parents. Nonetheless, about 13 percent and another 12 percent of them were somewhat satisfied and not satisfied respectively.

From Table 4.2, it is clear that a number of the respondents were not satisfied with their self-knowledge, since only 16 and 36 percent of them respectively showed satisfaction and even higher levels of satisfaction with their self-knowledge. The other 8.1 percent were not at all satisfied. About 40 percent were somewhat satisfied. These findings show the fact that for the majority of orphans; information that they needed on day-to-day life was simply unavailable.

Table 4.2 further shows that majority of young people orphaned by AIDS liked their work as helpers because, according to them, it made their lives meaningful. This was the case in spite of the 12.3 and 11 percent of the respondents who were respectively either not satisfied or only somewhat satisfied with their ability to find meaning in life.

When orphans were investigated further on other STS symptoms using the compassion satisfaction scale, results indicate that about one-half of them were very enthusiastic about their ability to keep up with their peers despite the fact that they were orphaned (Table 4.2). Another 20 percent were enthusiastic as opposed to some 10 and 19 percent respectively who were either not satisfied or only somewhat satisfied with their ability to keep up with their peers in spite of their parents' death.

Results concerning the satisfaction of orphans with themselves revealed as follows: some 22 and more than 28 percent of them were either satisfied or very satisfied with themselves respectively, implying a very positive self-concept (Table 4.2). However, close to 27 percent and another 22 percent were either only somewhat satisfied or completely not satisfied with themselves respectively.

Regarding the ability to feel joy, orphans were investigated on whether they had happy thoughts and feelings about their family members and friends. As Table 4.2 depicts, about half of the respondents were very satisfied with their ability to feel joy. In addition, some 19 percent were satisfied. Nonetheless, some 10 percent of them were not satisfied while close to 24 percent were

only somewhat satisfied, meaning that they had happy thoughts and feelings about their family members and friends.

The life expectations of the respondents were also investigated on the basis of CS, and, as Table 4.2 shows, more than one-half of them had great expectations and believed they could make a difference in the lives of their family members and friends. Only about 12 percent were not satisfied in addition to some 25 percent who were somewhat satisfied with their ability to make a difference in the lives of their family members and friends.

An analysis of the orphans' fear of the future was also conducted, to which data established that more than one-half of the respondents were very satisfied and had great confidence in the future. Table 4.2 shows that about 20 percent were somewhat satisfied with their ability to face the future while another 20 percent were not satisfied with their own ability to tackle the future.

The researcher further investigated orphans coping mechanisms, and established that some 22 percent of the respondents were not satisfied with their coping methods. Another 24 percent were only somewhat satisfied with their coping mechanisms while 26 percent of them indicated that they were satisfied. In addition, close to 28 percent of them were very satisfied with their increased use of positive coping methods and styles (Table 4.2).

Finally, the last symptom of STS investigated using this scale was orphans' satisfaction with their capacity to do work. Embedded in this item was the sense of strength of young people orphaned by AIDS. As Table 4.2 shows, a minority of the respondents were not satisfied with

their sense of strength. Some 23 percent of them were somewhat satisfied while close to 14 percent were satisfied. In addition, over 50 percent were very satisfied with their sense of strength.

The above findings reveal that in summary, given the CS test, young people orphaned by AIDS were susceptible to 30 percent of all the symptoms investigated; that is:

a. Decreased self-knowledge
b. poor/negative self-concept, and
c. decreased use of positive coping methods

They were, however, not susceptible to:

i. self-blame,
ii. inability to find meaning in life,
iii. lack of enthusiasm,
iv. inability to feel joy,
v. poor life expectations,
vi. lack of confidence or even
vii. a poor sense of strength.

The implication is that, their experiences of orphanhood not withstanding, AIDS Orphans were full of self-praise for accomplished work, they were able to find meaning in life and were still very enthusiastic in many respects. Additionally, they were able to feel joy, had great

expectations for their lives and were a very confident lot. Similarly, they felt a deeper sense of strength in life.

Finally, the third measure, compassion fatigue test, presents findings based on the compassion fatigue (secondary trauma) measure. Compassion fatigue (CF), also called secondary trauma (ST) is about an individual's work-related, secondary exposure to extremely stressful events. It occurs when an individual is exposed to others' traumatic events as a result of his/her care work. Such symptoms, rapid in onset and associated with a particular stressful event, may include being afraid, having difficulty sleeping, having images of the upsetting event pop into one's mind, or avoiding things that remind one of the stressful event(s). Detailed findings are presented in Table 4.2.

The table shows that when young people orphaned by AIDS were investigated on whether or not they were bothered by the physical problems related to their parent's death, about 19 percent of them were found not to be susceptible. Some 26 percent were less susceptible to a sense of being besieged while close to 15 percent were susceptible. This was in addition to another more than 40 percent who were highly susceptible to this symptom.

Table 4.2 further indicates that majority of AIDS orphans were highly susceptible to increased negative arousal, a symptom of STS. More than 8 per cent of them were susceptible while close to 37 percent were less susceptible. Consequently, only about 12 per cent were not startled by unexpected sounds, which was a measure of increased negative arousal in this study.

Table 4.2 further shows results obtained when orphans were investigated on ability to separate their personal time from time for leisure activities. This analysis targeted the respondents' ability to separate work life from personal life. And, as the table shows, majority of young people orphaned by AIDS were highly susceptible to having difficulties separating work life from personal life. About 14 percent were susceptible while 31 percent were less susceptible, implying further that only about 14 percent were not susceptible.

An analysis on volition as a symptom of STS showed similar trend in results since majority of the respondents were established to be highly susceptible to diminished ego functioning. This was in addition to the 11 percent of them who were found susceptible. Some 22 percent were less susceptible while only 14 percent were not at all susceptible (Table 4.2), indicating that many young people orphaned by AIDS might have been infected by the traumatic stress of their parent(s).

Another area of investigation on symptomatology of STS, based on the compassion fatigue scale involved frustration tolerance. And, as the table further shows, a majority of the respondents were again highly susceptible to lowered frustration tolerance. In this category were found orphans who were bothered about people blaming them for their parents' status and death. Only about 14 percent were not susceptible whereas close to 20 percent and 12 percent were, respectively, less susceptible and susceptible to lowered frustration tolerance.

Regarding depression as a symptom of STS, the focus of the investigation was on whether orphans experienced depression in their daily life as a result of their parents' sickness and death.

Data analysis presented in Table 4.2 shows that still more of the orphans were highly susceptible to depression. A small number of them (8.7 percent) were the only ones not susceptible. All the others were either less susceptible (33.9 percent) or susceptible (11.4 percent) to depression.

Additionally, the effect of helping as a possible source of secondary trauma was also investigated among orphans. Table 4.2 shows that yet a greater majority of the respondents were highly susceptible to developing intrusive images of situations/traumas as a result of their orphanhood. Another 11 percent were susceptible while 22 percent were less susceptible. On the contrary, only about 18 percent were not susceptible to these.

Further analysis investigated work life of the young people orphaned by AIDS as well. And, as Table 4.2 shows, more than half of the respondents were found to be highly susceptible to developing dread of certain situations and/or activities. This was because such activities or situations reminded them of frightening experiences of their parents. As the table shows, about 17 percent of them were actually susceptible while some 18.5 percent were less susceptible. Again, only about 11 percent were not victims of susceptibility to dread of certain situations or activities.

In the same vein, susceptibility of AIDS orphans to intrusive thoughts was also investigated and results highlighted in Table 4.2. From this table, it is clear that majority of young people orphaned by AIDS were both susceptible and highly susceptible to developing intrusive, frightening thoughts as a result of their orphanhood. Some 22 percent were less susceptible while about 17 percent were not at all susceptible to such thoughts.

Finally, the other symptom of STS investigated on the compassion fatigue scale had to do with orphans' ability to meet their needs (both physical and psychological), failure of which implied sliding into helplessness. Table 4.2 shows that in the same trend as for the preceding factors, a greater majority of young people orphaned by AIDS were either susceptible (5.5 percent) or highly susceptible (70.5 percent) to feelings of helplessness. About 15 percent of them were less susceptible while some 9 percent were not at all susceptible to feelings of helplessness.

From the above findings, it is clear that symptoms of STS, based on the compassion fatigue test were manifest. Thus, majority of young people orphaned by AIDS were highly susceptible to all the ten (10) symptoms investigated, thus:

a. A sense of being besieged
b. increased negative arousal
c. difficulty separating work from personal life
d. diminished ego-functioning (volition)
e. lowered frustration tolerance
f. depression
g. intrusive images of situations/traumas
h. dread of certain situations or activities
i. intrusive thoughts, and
j. feelings of helplessness.

The study has thus established that young people orphaned by AIDS exhibit symptoms consistent with those of STS, among them cynicism, suspiciousness, chronic fatigue and hypervigillance. Others were a decreased self-knowledge, poor/negative self-concept, and decreased use of positive coping methods. In addition, they exhibited a sense of being besieged, increased negative arousal, difficulty separating work from personal life, diminished ego functioning, lowered frustration tolerance, depression, intrusive images of situations, dread of certain situations or activities, intrusive thoughts, and feelings of helplessness. These findings are discussed in chapter five of this thesis.

4.4 What is the extent of severity of STS symptoms among young people orphaned by AIDS?

This phase of the analysis focused on the third research question, the extent of severity of the established emotional distresses and specific symptoms of STS among young people orphaned by AIDS. Consequently, and in order to determine the extent of severity of STS among young people orphaned by AIDS, the highest and lowest possible scores were determined. After this computation, the highest score was divided by three (3) in order to yield different categories of severity of STS (less severe, severe and very severe). The research hypothesis tested here was: there is a significant difference in prevalence and extent of severity of STS symptoms among male and female AIDS orphans in Rachuonyo District. Results are presented next.

4.4.1 Extent of severity of STS symptoms among young people orphaned by AIDS

Table 4.6 present the findings of the survey regarding the extent of severity of STS symptoms among young people orphaned by AIDS.

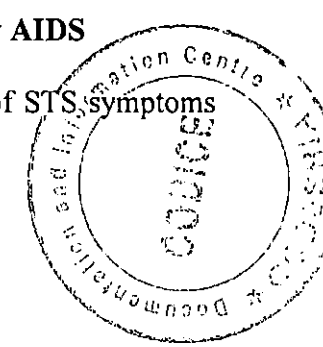


Table 4.3: Extent of severity of STS among young people orphaned by AIDS

Level of STS	Score	Male (N=109)		Female (N=80)		Total	
		f	%	*f*	%	*f*	%
Absent	00	00	00.0	00	00.0	000	00.0
Less severe	01-50	00	00.0	00	00.0	000	00.0
Severe	51-100	79	72.5	74	92.5	153	81.0
Very severe	101-150	30	27.5	06	07.5	036	19.0

The table sows that of the 61.16 percent of the respondents (n=309) who were found to exhibit STS symptoms, all fell in the "severe" and "very severe" symptom categories (72.5 percent and 27.5 percent respectively for males; and 92.5 percent and 7.5 percent respectively for the females). On the overall, more males (57.7 percent) than females (42.3 percent) exhibited symptoms of STS.

Also observed was the fact that even though more males than females exhibited symptoms of STS, more females (92.5 percent) than males (72.5 percent) were found to exhibit "severe" symptoms of STS while more males (27.5 percent) than females (7.5 percent) exhibited "very severe" STS symptoms.

The above findings can be summarised, thus:

a. Young people orphaned by AIDS exhibited STS symptoms only at "severe" and "very severe" levels.
b. Where STS symptoms were established among young people orphaned by AIDS, more males than females were likely to exhibit these STS symptoms.
c. Females were more prone to "severe" symptoms of STS symptoms than males, while

d. Males were more likely to suffer from "very severe" levels of STS symptoms than females.

Consequently, the null hypothesis is rejected.

4.4.2 Statistical analyses: Prevalence and extent of severity of STS symptoms among young people orphaned by AIDS

In order to statistically address the second and third research questions about the prevalence and extent of severity of distress among young people orphaned by AIDS, Pearson product moment correlation coefficient analysis was conducted between the average scores of the participants on each of the sub-scales on STS (i.e. burnout, compassion satisfaction and compassion fatigue).

Scores on each sub-scale of STS were calculated. A mean score for each sub-scale was then computed, in order to yield different categories of severity. Results of the above statistical analyses are as shown in Table 4.4.

Table 4.4: Correlations in total sample for the primary symptoms of STS

	N	Mean	Std deviation	Correlation	P value
BO and Compassion Satisfaction	198	25.6616	7.62720		
	198	27.7374	7.46645	-0.466	0.000***
CS and Compassion Fatigue	217	27.4562	7.52645		
	217	29.9401	10.53219	-0.112	0.101
BO and Compassion Fatigue	205	25.4829	7.57097		
	205	29.9463	10.71201	0.530	0.000***

***.Correlation significant at $\alpha = 0.01$ (2-tailed); *.Correlation significant at $\alpha = 0.05$ (2-tailed)

It is clear from the table that consistently, the average scores of the participants were significantly higher on two of the three sub-scales (burnout and compassion fatigue).

Additionally, the observed relationships were statistically significant (***$p < 0.05$) at $\alpha = 0.01$ (2-tailed); and at $\alpha = 0.05$ (2-tailed). In other words, AIDS orphans on average reported being in distress.

The summary of the above findings is that:

a. Young people orphaned by AIDS, on average, reported experiencing:
   - Moderate levels of risk for burnout (r= -0.466).
   - High levels of potential for compassion satisfaction (r= -0.112), and
   - High levels of risk for compassion fatigue (r= 0.530).

b. Greater risk for STS symptomatology among young people orphaned by AIDS was associated with burnout and compassion fatigue, whereas

c. The least risk for STS symptomatology was associated with compassion satisfaction.

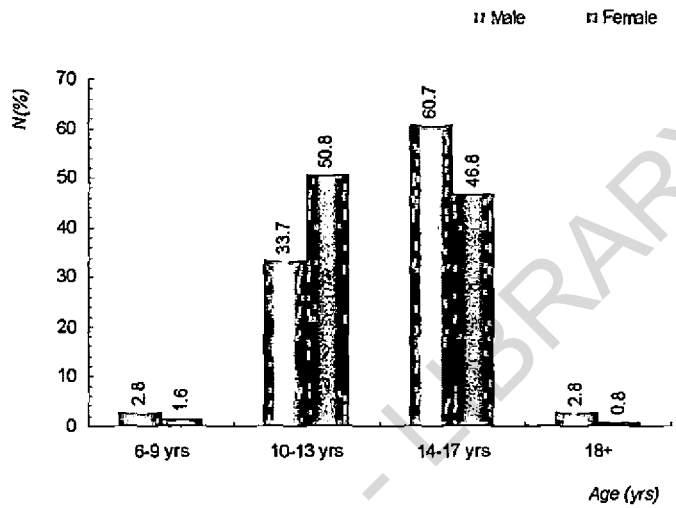
4.5 Are there gender differences in STS among young people orphaned by AIDS?

This research question sought to find out the differences that exist, if any, among male and female orphans with regard to demographic indicators; and prevalence, extent of severity and predictive factors of STS among young people orphaned by AIDS. Consequently, a presentation of gendered analyses of all the aspects of STS investigated follows in light of gender differences on demographic profiles of young people orphaned by AIDS, gender differences in exhibition of STS symptoms, gender differences in the extent of severity of STS symptoms, gender differences in the relationship between STS symptoms and the development of STS, and gender differences in predictive factors of STS among young people orphaned by AIDS.

4.5.1 Gender differences in the demographic indicators of young people orphaned by AIDS

From the gender perspective, the demographic profiles investigated in this study differed variously among the male and female respondents. Such differences in age are depicted in Figure 4.1.

Fig. 4.1 Sex differences among AIDS orphans by age categories



The figure shows that males were the majority at 14-17 years, while females were the majority within the 10-13 years age category.

Similarly, the respondents' distribution by sex and level of formal education attained were as depicted in Figure 4.2.

From the figure, it is clear that within the class of majority, that is, upper primary school category, males were the dominant group as opposed to females. Males were further dominant within the lower-upper primary cluster and at junior secondary school categories. Females were, nonetheless, the majority within the mid-upper primary school segment.

Fig. 4.2 Sex differences among AIDS orphans by level of formal education attained

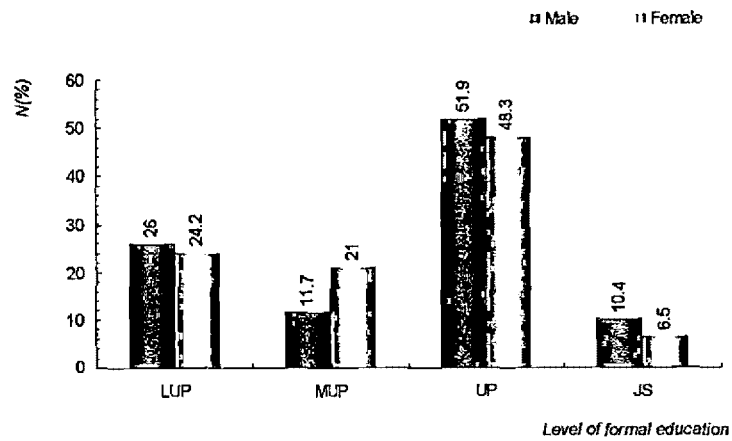
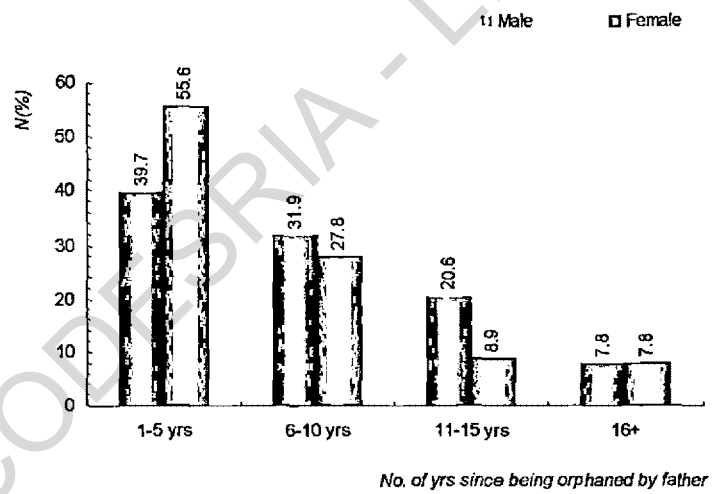


Figure 4.3 details sex differences in regard to the number of years that had passed since the respondents were orphaned of their fathers.

Fig. 4.3 Sex differences among AIDS orphans by number of years or paternal orphanhood

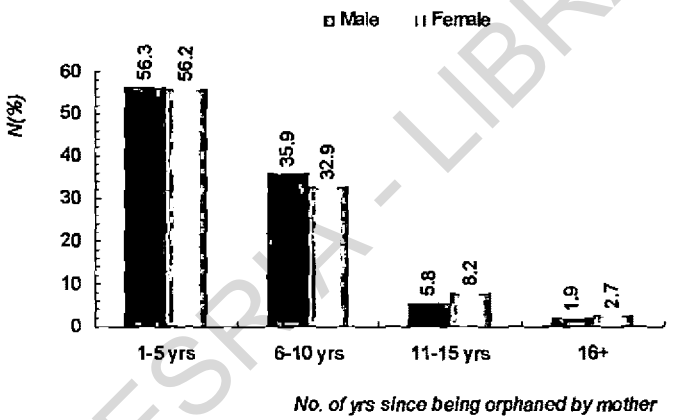


The figure depicts that as at the time of this study, more females than males had been orphaned of their fathers for between one (1) and five (5) years. Majority of the respondents fell in this category while the trend reduced as the number of years of paternal orphanhood went by. From six (6) to over fifteen (15) years, it was more males as opposed to the females who were

orphaned. There was, however, a tie of numbers at sixteen (16) years and beyond of paternal orphanhood for both males and females.

Analyses were also performed regarding the number of years that had passed since the respondents were orphaned of their mothers and results are detailed in Figure 4.4. The figure shows that majority of the respondents had been orphaned for between one (1) and five (5) years as at the time of data collection, a category to which an almost equal number of males and female fell.

Fig. 4.4 Sex differences among AIDS orphans by number of years of maternal orphanhood



And just like for paternal orphanhood, males dominated among those who had been maternally orphaned for between six (6) and ten (10) years; while females were the majority among those who had been orphaned for between eleven (11) and fifteen (15) years. This was further the case for those who had been maternal orphans for sixteen (16) years or more.

The other interest of gender analysis for demographic indicators regarded the involvement of orphans as caregivers. And, as Figure 4.5 presents, some 81 percent of the males and another 63 percent females were actually involved as caregivers.

Fig. 4.5 Involvement of AIDS orphans in care work by sex

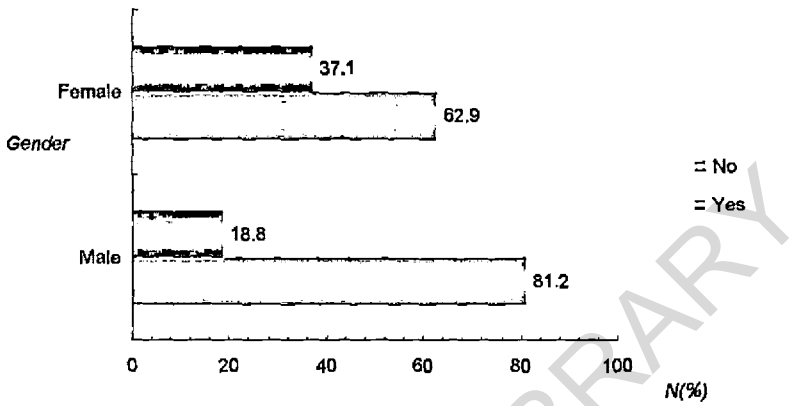
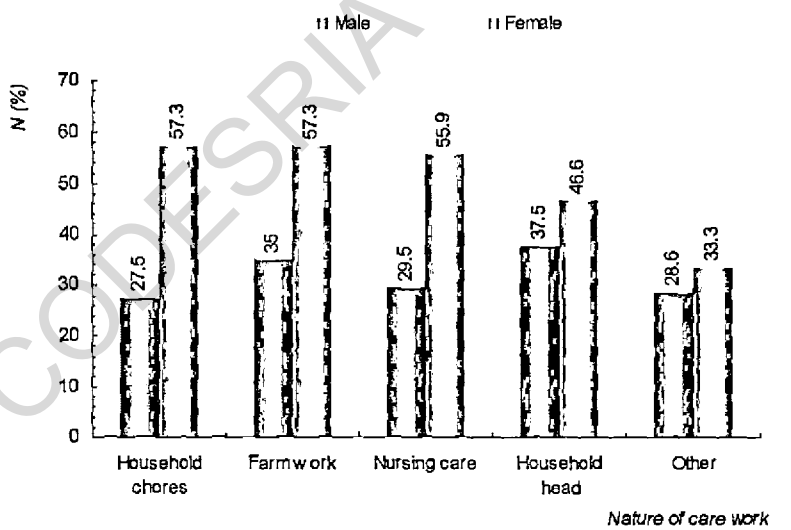


Fig. 4.6 Involvement of AIDS orphans in care work by sex and nature of care work

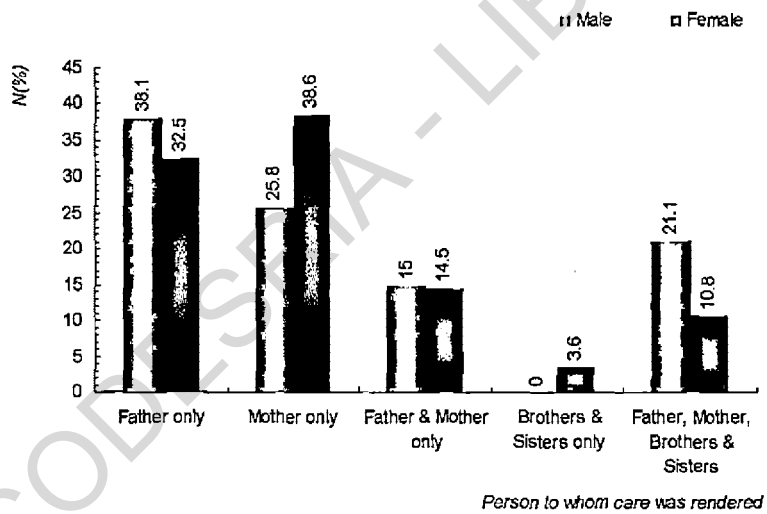


The details regarding the involvement of young people orphaned by AIDS were also sought in light of the nature of care giver roles that they performed. Subsequently, data analysis presented

in Figure 4.6 shows that female orphans dominated caregiver roles, which included household chores, farm work, nursing care, working as a household head in order to generate some income and other roles not specifically identified by name.

Figure 4.7 is a presentation of findings regarding the person(s) to whom the orphans rendered care. A gendered analysis indicates that more females than males took care of their mothers. Similarly, girls dominated in taking care of their brother(s) and sister(s), while none of the males were found to be taking care of their brother(s) and sister(s).

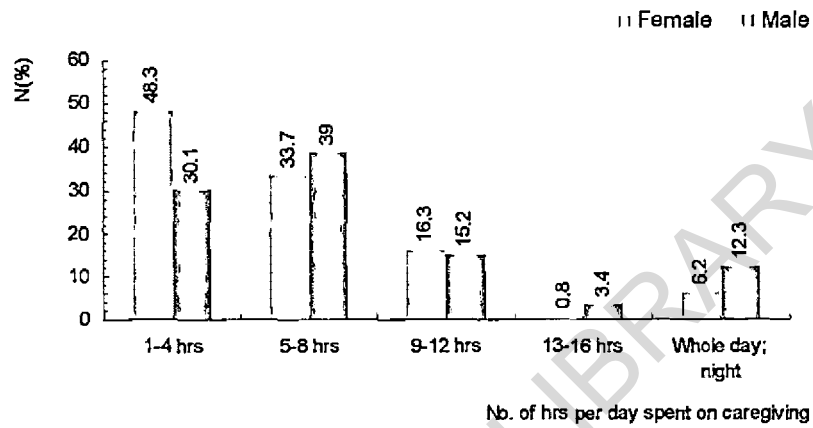
Fig. 4.7 Involvement of AIDS orphans in care work by sex and the persons to whom such care was rendered



Caregiving for the rest of the family members (fathers only; fathers and mothers combined; and both fathers, mothers, brothers and sisters) were dominated by the males. This finding seems to suggest that females were the main caregivers to mothers while males dominated caregiving for fathers.

A look into the number of hours that young people orphaned by AIDS spent per day in their care giving roles indicates that a majority of caregivers (who were usually females) did so for between one (1) and four (4) hours on a daily basis (Figure 4.8).

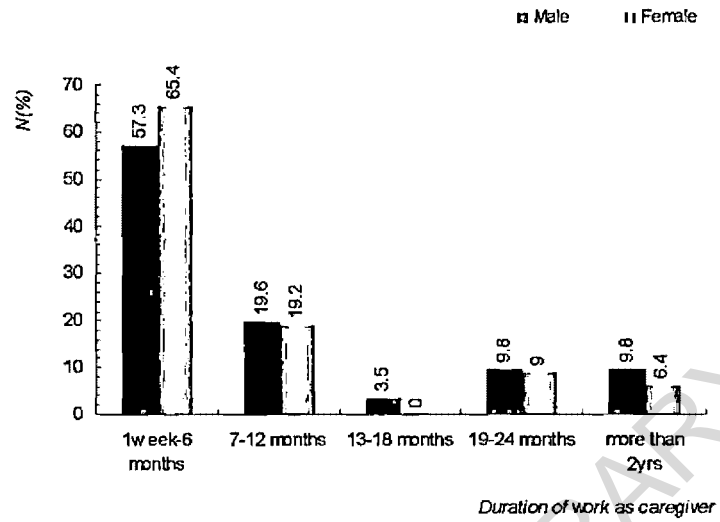
Fig. 4.8 Involvement of AIDS orphans in care work by sex and the number of hours per day spent in caregiving



The figure shows that at between five (5) and eight (8) hours, 39 percent males and about 34 percent females provided care on a daily basis. However, beyond the fifth to eighth hours of caregiving on a daily basis, there were no major differences between males and females in terms of the amount of time spent in care work. As a matter of fact, males dominated care work lasting for between 13 hours and whole day and night. The figure further indicates that care giving spanned for up to between thirteen (13) and a maximum of twenty-four (24) hours per day.

In the final analysis of demographic profiles, the researcher sought to find out how long (in terms of overall duration of work) the orphaned caregivers spent in their caregiving roles. Figure 4.9 presents findings with regard to overall duration of work, whereby a majority of the respondents indicated they worked as caregivers for between one (1) week and six (6) months.

Fig. 4.9 Involvement of AIDS orphans in care work by sex and 6-month duration of care work categories



Additional care work spanned along the time scale quantum, thus: 7-12 months, 13-18 months, 19-24 months and more than two (2) years at a reducing level basis. It is thus clear that, on the overall, serious caregiver roles lasted between six (6) and twelve (12) months, roughly one year long.

Thus, the summary of the study findings regarding gender differences in demographic profiles of young people orphaned by AIDS is as presented below:

a. Majority of the respondents were male at 14-17 years age category.
b. Males were the dominant group within the upper primary school category.
c. Females were the majority paternal orphans for orphanhood lasting between one and five years.

d. There were about equal numbers of male and female maternal orphans between one and five years. However, males were slightly more than females for maternal orphanhood lasting between six and 10 years.

e. More male than female orphans were involved as caregivers.

f. Females dominated all the specific care roles investigated in this study.

g. Males dominated among orphans who took care of their fathers, while females were the majority among orphans who too care of their mothers.

h. Females topped among orphans who provided care for between one and four hours on a daily basis. Males were the majority for those who rendered care for between five and eight hours. The same was true of orphans who provided care that lasted whole day and whole night.

i. More females were cumulatively involved as caregivers for between one week and six months, while the numbers were similar for caregiving that lasted seven to 12 months. Beyond one year, males were the majority caregivers.

4.5.2 Gender differences in prevalence of STS symptoms among young people orphaned by AIDS

When investigated on their susceptibility to burnout, Table 4.5 shows that consistently more males than female orphans were highly susceptible to burnout. This trend was true for all the symptoms investigated on the burnout scale except for diminished ego-functioning, suspiciousness, and chronic fatigue. Figure 4.10 highlights these findings further.

Table 4.5: Percentage prevalence of STS symptoms among young people orphaned by AIDS based on BO

Symptomatology of STS – BO	Percentage susceptibility (N = 309)							
	Not susceptible		Less susceptible		Susceptible		Highly susceptible	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*
Diminished sense of enjoyment	27.9	34.4	48.1	38.3	15.6	22.7	08.4	04.6
Diminished ego-functioning (identity)	11.7	07.8	43.0	31.3	25.7	24.2	19.6	36.7
Sleeplessness	11.4	11.8	47.7	59.8	09.7	02.4	31.2	26.0
Tiredness	16.5	27.6	31.9	44.9	18.1	15.7	33.5	11.8
Cynicism	15.6	06.0	31.2	31.0	12.1	21.6	41.1	41.4
Suspiciousness	29.9	30.7	18.1	18.1	18.6	10.2	33.4	41.0
Exhaustion	14.2	26.8	43.2	38.6	18.2	15.7	24.4	18.9
Chronic fatigue	30.9	23.4	32.0	31.2	20.2	18.8	16.9	26.6
A sense of being physically run down	20.2	37.3	27.6	27.7	13.5	14.3	38.7	20.7
Hypervigillance	14.0	11.5	20.8	38.5	15.2	16.4	50.0	33.6

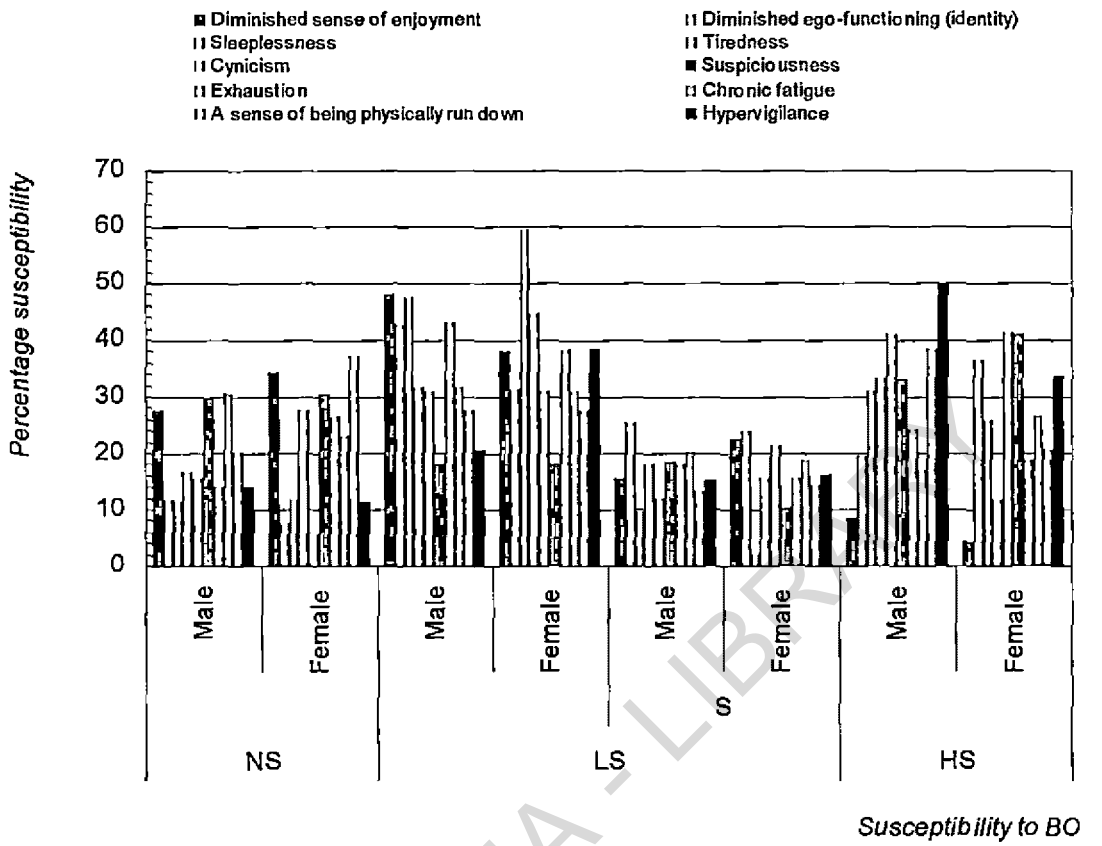
The above information can also be summarized, thus:

Males	***Females***
hypervigillance	cynicism
cynicism	suspiciousness
a sense of being physically run down	diminished ego-functioning (identity)
tiredness	hypervigillance
suspiciousness	chronic fatigue
sleeplessness	sleeplessness
exhaustion	a sense of being physically run down
diminished ego-functioning (identity)	exhaustion
chronic fatigue	tiredness
diminished sense of enjoyment	diminished sense of enjoyment

Decreasing prevalence

From these findings, it is clear that male and female AIDS orphans were very likely to suffer from hypervigillance, cynicism, suspiciousness, tiredness, diminished ego-functioning (identity), and chronic fatigue, amongst the other symptoms investigated, which brings into sharp focus the high prevalence of these STS symptoms among young people orphaned by AIDS.

Fig. 4.10 STS prevalence and susceptibility to BO among AIDS orphans by sex



The observed differences were statistically significant for diminished ego-functioning (identity) (χ^2 =7.765; p = 0.007), tiredness (χ^2 =25.496; p = 0.000), cynicism (χ^2 =16.383; p = 0.006), a sense of being physically run down (χ^2=16.297; p = 0.006), and hypervigillance (χ^2=13.123; p = 0.022) (Table 4.8).

When young people orphaned by AIDS were investigated on their potential for compassion satisfaction, Table 4.6 shows that consistently more female than male orphans were very satisfied and thus possessed greater potential for CS. This was true of all symptoms investigated

except for a sense of confidence and increased use of positive coping mechanisms. These findings are further highlighted in Figure 4.11.

Table 4.6: Percentage prevalence of STS symptoms among young people orphaned by AIDS based on CS

Symptomatology of STS – CS	Percentage satisfaction (N = 309)							
	Not satisfied		Somewhat satisfied		Satisfied		Very satisfied	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*
Self-praise for accomplished work	14.3	13.8	12.0	20.2	18.3	5.3	55.4	60.7
Self-knowledge	10.7	08.3	50.0	43.1	18.0	22.0	21.3	26.6
Ability to find meaning in life	16.0	09.8	09.1	14.7	16.0	07.8	58.9	67.7
Enthusiasm	13.3	06.3	16.1	24.2	23.3	15.6	47.3	53.9
Positive self-concept	23.2	21.4	26.6	29.4	27.1	15.9	23.1	33.3
Ability to feel joy	10.2	10.2	22.6	26.3	22.6	14.7	44.6	48.8
Great expectations	13.9	10.1	31.7	15.7	13.9	15.6	40.5	58.6
Confidence	21.7	20.9	13.7	30.2	10.6	10.1	54.0	38.8
Increased use of positive coping methods	21.2	23.3	25.1	23.3	23.5	28.6	30.2	24.8
Sense of strength	12.8	10.2	24.0	22.6	17.9	09.4	45.3	57.8

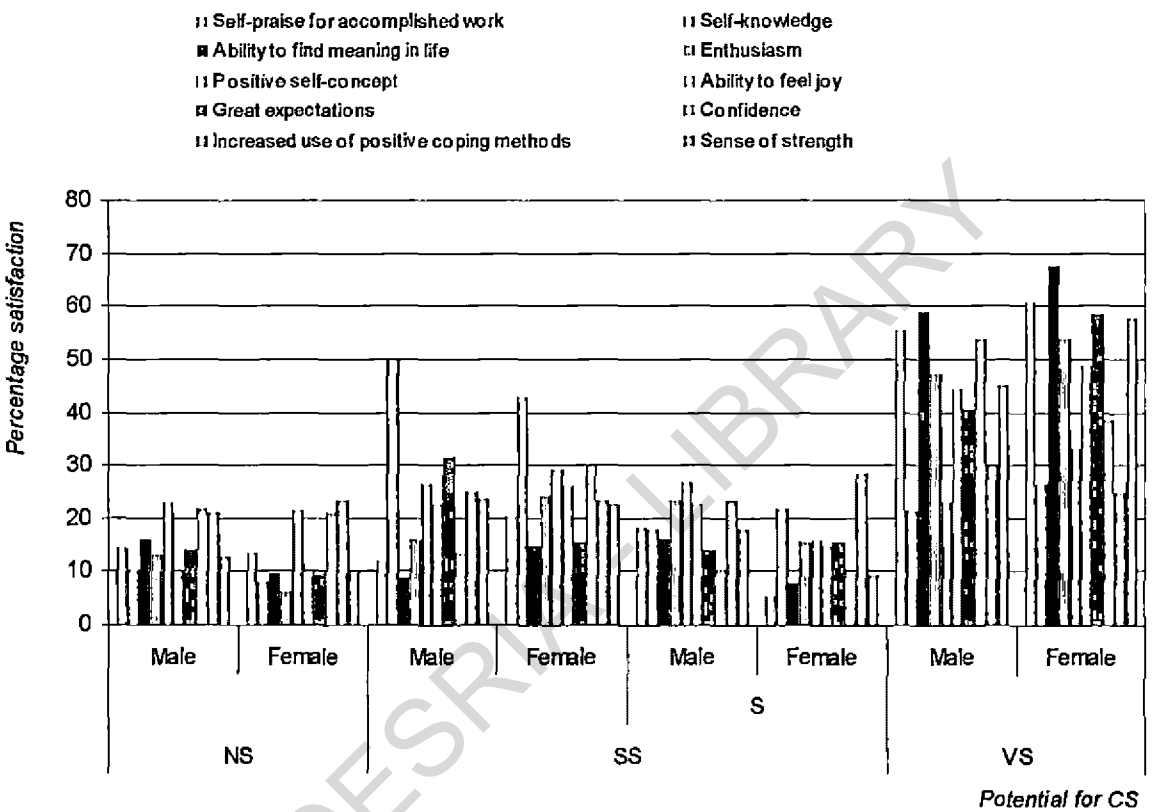
The above findings can be summarized, thus:

Males		***Females***
ability to find meaning in life		ability to find meaning in life
self-praise for accomplished work		self-praise for accomplished work
confidence		great expectations
enthusiasm		sense of strength
sense of strength		enthusiasm
ability to feel joy		ability to feel joy
great expectations		confidence
increased use of positive coping methods	*Decreasing prevalence*	positive self-concept
positive self-concept		self-knowledge
self-knowledge		increased use of positive coping methods

Thus, the key symptoms of STS reported by a majority of both male and female orphans based on the CS sub-scale included the ability to find meaning in life, self-praise for accomplished

tasks, great expectations, confidence, sense of strength, enthusiasm, and the ability to feel joy among other symptoms. In other words, young people orphaned by AIDS displayed greater levels of potential for compassion satisfaction.

Fig. 4.11 STS prevalence and potential for CS among AIDS orphans by sex

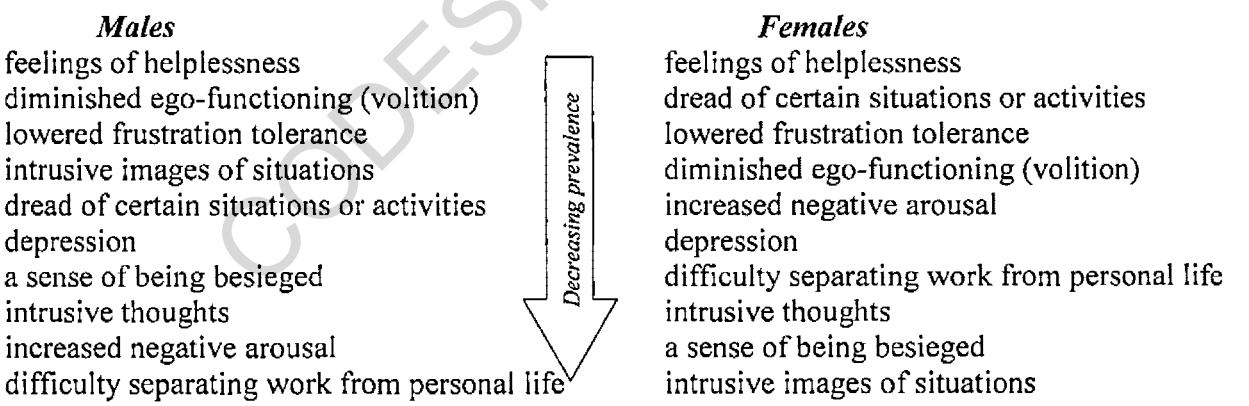


The observed gender differences were statistically significant for the following STS symptoms: self-praise for accomplished work (χ^2 =23.139; p = 0.000), the ability of orphans to find meaning in life (χ^2 =14.634; p = 0.012), enthusiasm (χ^2 =13.412; p = 0.020), greater life expectations (χ^2 =14.932; p = 0.011) and, self-confidence (χ^2 =25.796; p = 0.000) (Table 4.8).

In the same vein, young people orphaned by AIDS were investigated on their susceptibility to STS based on their experiences related to compassion fatigue and Table 4.7 presents the findings. Further comparisons on gender differences are highlighted on Figure 4.12.

Table 4.7: Percentage prevalence of STS symptoms among young people orphaned by AIDS based on CF

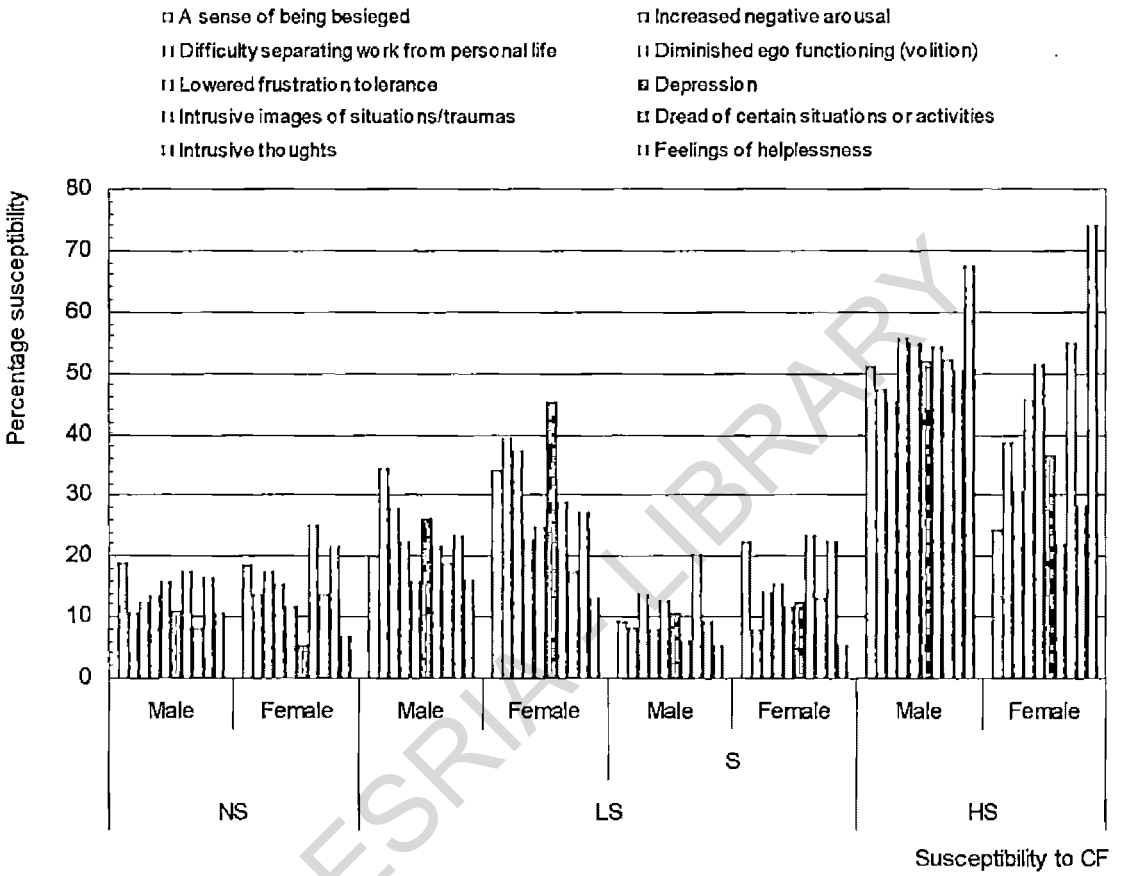
Symptomatology of STS – CF	Percentage susceptibility (N = 309)							
	Not susceptible		Less susceptible		Susceptible		Highly susceptible	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*
A sense of being besieged	19.0	18.6	20.1	34.2	09.5	22.5	51.4	24.7
Increased negative arousal	10.9	14.0	34.5	39.5	08.3	07.8	47.3	38.7
Difficulty separating work from personal life	12.4	17.5	28.1	37.3	14.0	14.3	45.5	30.9
Diminished ego functioning (volition)	13.6	15.7	22.6	22.9	07.9	15.7	55.9	45.7
Lowered frustration tolerance	16.1	11.7	16.1	25.0	12.8	11.7	55.0	51.6
Depression	11.2	05.5	26.2	45.2	10.6	12.5	52.0	36.8
Intrusive images of situations/traumas	17.7	25.2	21.7	29.1	06.3	23.4	54.3	22.3
Dread of certain situations or activities	08.3	14.0	18.9	17.8	20.6	13.2	52.2	55.0
Intrusive thoughts	16.7	21.7	23.5	27.4	09.2	22.6	50.6	28.3
Feelings of helplessness	10.7	07.0	16.3	13.3	05.6	05.5	67.4	74.2



From both the table and the figure, it is clear that consistently more male than female orphans were highly susceptible to CF. This trend was true of all symptoms investigated on the CF sub-

scale except for dread of certain situations or activities and feelings of helplessness, where slightly more females than males were highly susceptible.

Fig. 4.12 STS prevalence and susceptibility to CF among AIDS orphans by sex



It is easy to see from the above illustration that feelings of helplessness, a diminished ego-functioning (volition), lowered frustration tolerance, dread of certain situations or activities, increased negative arousal, and depression were among the most common symptoms of secondary traumatic stress among a majority of young people orphaned by AIDS (both male and female).

Table 4.8: Correlations between STS symptoms and gender among young people orphaned by AIDS

STS symptom	Not susceptible		Less susceptible		Susceptible		Highly susceptible		Correlation (N=309; df=5)	
Symptomatology of STS – BO	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*	χ^2	p
Diminished sense of enjoyment	27.9	34.4	48.1	38.3	15.6	22.7	08.4	04.6	7.765	0.170
Diminished ego-functioning (identity)	11.7	07.8	43.0	31.3	25.7	24.2	19.6	36.7	16.107	**0.007**
Sleeplessness	11.4	11.8	47.7	59.8	09.7	02.4	31.2	26.0	10.129	0.072
Tiredness	16.5	27.6	31.9	44.9	18.1	15.7	33.5	11.8	25.496	**0.000**
Cynicism	15.6	06.0	31.2	31.0	12.1	21.6	41.1	41.4	16.383	**0.006**
Suspiciousness	29.9	30.7	18.1	18.1	18.6	10.2	33.4	41.0	6.589	0.253
Exhaustion	14.2	26.8	43.2	38.6	18.2	15.7	24.4	18.9	8.596	0.126
Chronic fatigue	30.9	23.4	32.0	31.2	20.2	18.8	16.9	26.6	5.649	0.342
A sense of being physically run down	20.2	37.3	27.6	27.7	13.5	14.3	38.7	20.7	16.297	**0.006**
Hypervigillance	14.0	11.5	20.8	38.5	15.2	16.4	50.0	33.6	13.123	**0.022**
Symptomatology of STS – CS										
Self-praise for accomplished work	14.3	13.8	12.0	20.2	18.3	5.3	55.4	60.7	23.139	**0.000**
Self-knowledge	10.7	08.3	50.0	43.1	18.0	22.0	21.3	26.6	9.275	0.099
Ability to find meaning in life	16.0	09.8	09.1	14.7	16.0	07.8	58.9	67.7	14.634	**0.012**
Enthusiasm	13.3	06.3	16.1	24.2	23.3	15.6	47.3	53.9	13.412	**0.020**
Positive self-concept	23.2	21.4	26.6	29.4	27.1	15.9	23.1	33.3	8.665	0.123
Ability to feel joy	10.2	10.2	22.6	26.3	22.6	14.7	44.6	48.8	4.712	0.452
Great expectations	13.9	10.1	31.7	15.7	13.9	15.6	40.5	58.6	14.932	**0.011**
Confidence	21.7	20.9	13.7	30.2	10.6	10.1	54.0	38.8	25.796	**0.000**
Increased use of positive coping methods	21.2	23.3	25.1	23.3	23.5	28.6	30.2	24.8	2.445	0.785
Sense of strength	12.8	10.2	24.0	22.6	17.9	09.4	45.3	57.8	7.877	0.163
Symptomatology of STS – CF										
A sense of being besieged	19.0	18.6	20.1	34.2	09.5	22.5	51.4	24.7	28.302	**0.000**
Increased negative arousal	10.9	14.0	34.5	39.5	08.3	07.8	47.3	38.7	6.994	0.221
Difficulty separating work from personal life	12.4	17.5	28.1	37.3	14.0	14.3	45.5	30.9	9.515	0.090
Diminished ego functioning (volition)	13.6	15.7	22.6	22.9	07.9	15.7	55.9	45.7	6.891	0.229
Lowered frustration tolerance	16.1	11.7	16.1	25.0	12.8	11.7	55.0	51.6	6.209	0.286
Depression	11.2	05.5	26.2	45.2	10.6	12.5	52.0	36.8	18.181	**0.003**
Intrusive images of situations/traumas	17.7	25.2	21.7	29.1	06.3	23.4	54.3	22.3	37.592	**0.000**
Dread of certain situations or activities	08.3	14.0	18.9	17.8	20.6	13.2	52.2	55.0	5.338	0.376
Intrusive thoughts	16.7	21.7	23.5	27.4	09.2	22.6	50.6	28.3	17.553	**0.004**
Feelings of helplessness	10.7	07.0	16.3	13.3	05.6	05.5	67.4	74.2	8.006	0.156

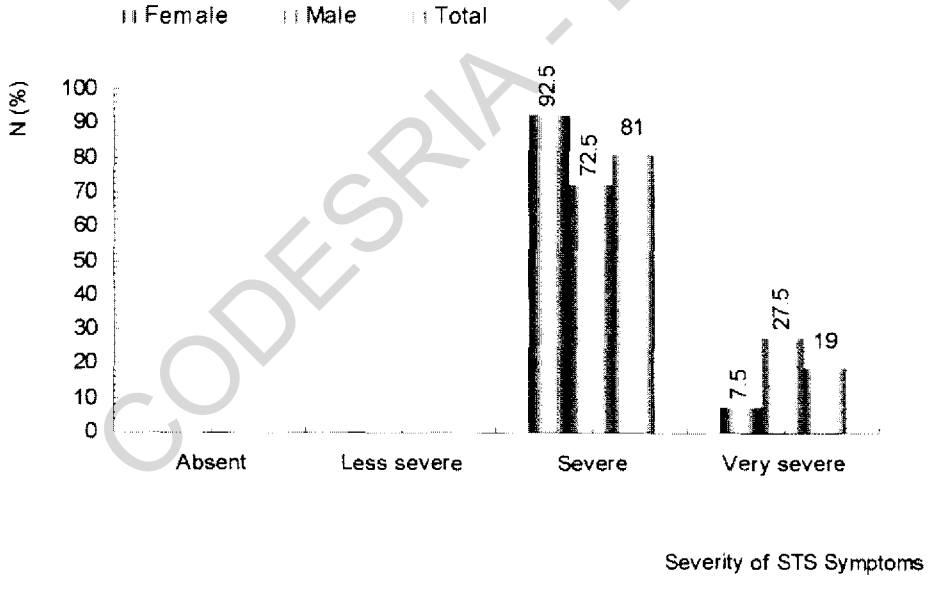
***significant correlations at p< 0.001 level; **significant correlations at p< 0.01 level; *significant correlations at p< 0.05 level

Table 4.8 shows that the observed differences were statistically significant for a sense of being besieged (χ^2 =28.302; p = 0.000), depression (χ^2 =18.181; p = 0.003), intrusive images of situations/traumas (χ^2=37.592; p = 0.000), and intrusive thoughts (χ^2=17.553; p = 0.004).

4.5.3 Gender differences in the extent of severity of STS symptoms among young people orphaned by AIDS

Figure 4.13 highlights the findings with regard to the gender differences in the extent of severity of STS symptoms among young people orphaned by AIDS. From this figure, it is clear that young people orphaned by AIDS were either suffering from or not exhibiting any STS symptoms at all.

Fig. 4.13 Extent of severity of STS symptoms among AIDS orphans by sex



Where orphans exhibited such symptoms, the STS symptoms reported were either of a "severe" or "very severe" nature. However, majority of those who exhibited symptoms of STS did so at "severe" levels.

Consequently, the findings regarding the gender differences in the prevalence of STS symptoms can be summarized as follows:

a. Both male and female AIDS orphans were very likely to suffer from hypervigillance, cynicism, suspiciousness, tiredness, diminished ego-functioning (identity) and chronic fatigue, amongst the other symptoms investigated. However, significant gender differences were established with regard to the following symptoms where males were more susceptible than females:

   - diminished ego-functioning (identity) (χ^2 =7.765; p = 0.007)
   - tiredness (χ^2 =25.496; p = 0.000)
   - cynicism (χ^2 =16.383; p = 0.006)
   - a sense of being physically run down (χ^2 =16.297; p = 0.006)
   - hypervigillance (χ^2 =13.123; p = 0.022)

b. Key symptoms of STS reported by a majority of both male and female orphans based on the CS sub-scale included the ability to find meaning in life, self-praise for accomplished tasks, great expectations, confidence, sense of strength, enthusiasm, and the ability to feel joy among other symptoms. Significant gender differences were noted with regard to the symptoms below, meaning that female orphans displayed greater levels of potential for compassion satisfaction.

   - self-praise for accomplished work (χ^2 =23.139; p = 0.000)

- the ability of orphans to find meaning in life (χ^2 =14.634; p = 0.012)
- enthusiasm (χ^2 =13.412; p = 0.020)
- greater life expectations (χ^2 =14.932; p = 0.011) and,
- self-confidence (χ^2 =25.796; p = 0.000)

c. Feelings of helplessness, a diminished ego-functioning (volition), lowered frustration tolerance, dread of certain situations or activities, increased negative arousal, and depression were among the most common symptoms of secondary traumatic stress among a majority of young people orphaned by AIDS (both male and female). However, significant gender difference were noted with regard to the four (4) symptoms listed below, whereby males were more adversely affected.

- a sense of being besieged (χ^2 =28.302; p = 0.000)
- depression (χ^2 =18.181; p = 0.003)
- intrusive images of situations/traumas (χ^2 =37.592; p = 0.000)
- intrusive thoughts (χ^2 =17.553; p = 0.004)

d. Regarding gender differences in the extent of severity of STS symptoms, the study established that:

- Young people orphaned by AIDS exhibited STS symptoms only at "severe" or "very severe" levels.
- Where STS symptoms were established among young people orphaned by AIDS, more males than females were likely to exhibit the STS symptoms.
- Females were more prone to "severe" symptoms of STS, while males were more likely to suffer from "very severe" levels of STS symptoms.

Therefore, the second null hypothesis which stated that there is no significant difference in the prevalence and extent of severity of STS symptoms among male and female AIDS orphans in Rachuonyo District is rejected.

4.6 Is there any relationship between STS symptoms and the development of STS?

This area of analysis addressed the research question about the probable relationship between STS symptoms herein above established and the development of STS. In order to answer this question, a Pearson Product Moment Correlation Coefficient was used since the variables under consideration were measured in ordinal scale, meaning that comparison of relationships of their respective scores was possible through this method. The research hypothesis tested here was that there is a significant relationship between STS symptoms and the development of STS among young people orphaned by AIDS.

Specifically, the study endeavoured to identify the association between the levels of distress as reported in the burnout, compassion satisfaction and compassion fatigue sub-tests and the cluster of personal and orphanhood related factors that were envisaged to contribute to the development of symptoms of STS among young people orphaned by AIDS. The findings are presented in Table 4.9.

4.6.1 Relationship between STS symptoms and the development of STS

Table 4.9 shows that such symptoms as were established in the Burnout scale (cynicism, suspiciousness, chronic fatigue and hypervigillance); Compassion satisfaction scale (decreased self-knowledge, poor/negative self-concept, and decreased use of positive coping methods), and

Compassion fatigue scale (a sense of being besieged, increased negative arousal, difficulty separating work from personal life, diminished ego functioning (volition), lowered frustration tolerance, depression, intrusive images of situations/traumas, dread of certain situations or activities, intrusive thoughts and feelings of helplessness) were major determinants for the development of STS.

Table 4.9: Correlations in total sample for the primary symptoms of STS and STS scores

		N	Mean	Std deviation	Correlation	P value
BO and Secondary Traumatic Stress		189	25.6878	7.56833		
		189	83.9841	15.16416	0.633	0.000***
CS and Secondary Traumatic Stress		189	27.7460	7.49674		
		189	83.9841	15.16416	-0.148	0.042*
CF and Secondary Traumatic Stress		189	30.5503	10.58270		
		189	83.9841	15.16416	0.875	0.000***

*** Correlation is significant at α = 0.001 (2-tailed); * Correlation is significant at α = 0.05 (2-tailed)

Therefore, it is clear that at α = 0.01 (2-tailed); and at α = 0.05 (2-tailed) there exists a strong positive correlation between Burnout and Secondary Traumatic Stress (r= 0.633; ***p < 0.01), a marginal negative correlation between Compassion satisfaction and Secondary Traumatic Stress (r= -0.148; *p < 0.05); and a very strong positive correlation between Compassion Fatigue and Secondary Traumatic Stress (r= 0.875; ***p < 0.05).

Consequently, the above findings can be summarized thus:

a. There exists a strong positive relationship between Burnout and Secondary Traumatic Stress, which implies that in terms of STS symptoms, there exists;
    - a strong positive relationship between cynicism and the development of STS

- a strong positive relationship between suspiciousness and the development of STS
- a strong positive relationship between chronic fatigue and the development of STS, and
- a strong positive relationship between hypervigillance and the development of STS.

b. There exists a strong negative relationship between Compassion satisfaction and Secondary Traumatic Stress, which implies that in terms of STS symptoms, there exists;

- a strong positive relationship between decreased self-knowledge and the development of STS
- a strong positive relationship between poor or negative self-concept and the development of STS, and
- a strong positive relationship between decreased use of positive coping methods and the development of STS

c. There exists a strong positive relationship between Compassion Fatigue and Secondary Traumatic Stress, implying that in terms of STS symptoms, there exists;

- a strong positive relationship between a sense of being besieged and the development of STS
- a strong positive relationship between increased negative arousal and the development of STS
- a strong positive relationship between difficulty separating work life from personal life and the development of STS
- a strong positive relationship between diminished ego functioning and the development of STS

- a strong positive relationship between lowered frustration tolerance and the development of STS
- a strong positive relationship between depression and the development of STS
- a strong positive relationship between intrusive images of situations, otherwise called traumas, and the development of STS
- a strong positive relationship between dread of working in certain situations or activities and the development of STS
- a strong positive relationship between intrusive thoughts and the development of STS, and finally
- a strong positive relationship between feelings of helplessness and the development of STS.

d. Compassion fatigue was more strongly correlated to STS ($r= 0.875$; $^{***}p < 0.01$) than burnout, which was more highly correlated to STS ($r=0.633$; $^{***}p < 0.01$) than compassion satisfaction ($r=-0.148$; $^{*}p < 0.05$), further reinforcing the earlier finding that young people orphaned by AIDS, on average, experienced moderate levels of risk for burnout, high levels of potential for compassion satisfaction, and high levels of risk for compassion fatigue. Consequently, the null hypothesis, which stated that there is no significant relationship between STS symptoms and the development of STS among young people orphaned by AIDS, is rejected.

The above findings imply that symptoms associated with compassion fatigue (a sense of being besieged, increased negative arousal, difficulty separating work from personal life, diminished ego functioning (volition), lowered frustration tolerance, depression, intrusive images of

situations/traumas, dread of certain situations or activities, intrusive thoughts and feelings of helplessness) may well be likely determinants for the development of STS than symptoms embedded in burnout (cynicism, suspiciousness, chronic fatigue and hypervigillance) and compassion satisfaction (decreased self-knowledge, poor/negative self-concept, and decreased use of positive coping methods).

4.7 What are the predictive factors of STS among young people orphaned by AIDS?

In order to answer this question, the researcher first conducted analyses on the relationship between selected variables and STS using a One-Way Analysis of Variance (one-way ANOVA). ANOVA was conducted in order to determine differences between groups (that were: male versus female, the various age categories, the various levels of formal education attained, number of years of maternal and paternal orphanhood, various care giver roles, various persons to whom care was rendered, various categories of caregiving time, and the cumulative time spent in caregiving) in terms of the extent to which they expressed symptoms of traumatic stress. This was followed by Multiple Linear Regression analysis in order to identify the major predictors of STS. One advantage of such a test is that the variable that contribute most to the variance explained are entered first into the solution, with other variables not being entered unless they meet preset criteria.

For each test, the independent variables included demographic characteristics (sex, age and level of formal education attained); orphanhood related factors (number of years that had elapsed since the respondents were orphaned of their father and/or mother, person(s) to whom care was rendered for those orphans who were involved as caregivers, number of hours per day spent caring for the sick parent(s), the overall duration of work as caregiver; and care giver roles for

young people orphaned by AIDS (household chores, farm work, nursing care, involvement in income generating activities, and other chores that were however not necessarily specified during data collection). The research hypothesis for this question stated thus: there exists a significant relationship between selected factors and STS among young people orphaned by AIDS.

4.7.1 Relationship between selected factors and STS among young people orphaned by AIDS

Tables 4.10, 4.11 and 4.12 present ANOVA results with secondary traumatic stress symptoms and selected variables among young people orphaned by AIDS.

Table 4.10: Relationship between demographic characteristics and STS among young people orphaned by AIDS

Predictors of STS	N	Mean	Standard deviation	F	P value
Sex					
Male	109	86.0642	17.09249		
Female	080	81.1500	11.56391	4.947	0.027*
Total	189	83.9841	15.16416		
Age category					
< 10 years	002	83.5000	30.40559		
10-13 years	067	83.5821	15.11987		
14-17 years	112	84.8214	14.97157	0.505	0.679
18+ years	006	77.3333	17.86244		
Total	187	84.1230	15.17641		
LOFEA					
Lower Upper Primary	021	76.2857	16.45340		
Mid Upper Primary	018	86.6111	14.79721		
Upper Primary	057	84.8596	17.57173	3.013	0.034*
Junior Secondary	009	71.8889	10.40966		
Total	105	82.3333	16.90964		

***significant correlations at p< 0.001 level; **significant correlations at p< 0.01 level; *significant correlations at p< 0.05 level

Table 4.10 shows that respondents' sex ($F=4.947$; $*p < 0.05$) and level of formal education attained ($F=3.013$; $*p < 0.05$) were significantly related to STS symptoms at $\alpha=0.05$ probability of error. However, age ($F= 0.505$; $p=0.679$) was not significantly related to STS at $\alpha=0.05$ probability of error. Within the respondents' sex, males were more prone to STS than females. Considering the level of formal education attained, upper primary school pupils were more prone to STS than their lower primary and junior secondary counterparts.

In the orphanhood related factors category, Table 4.11 details the findings. The table shows that the number of years that had elapsed since the respondents' were orphaned of their fathers ($F=4.812$; $***p < 0.001$); the number of hours per day spent by respondents' in caring for the sick parent(s) ($F=9.827$; $****p < 0.0001$); and the person to whom care was rendered ($F=9.202$; $****p < 0.0001$) were all significantly related to STS symptoms at $\alpha=0.01$ probability of error. Nonetheless, of the five factors investigated, two (2) factors, namely the number of years that had elapsed since the respondents' were orphaned of their mothers ($F=1.960$; $p=0.124$) and the cumulative duration of work as a caregiver ($F=1.786$; $p=0.134$) were not significantly related to STS at $\alpha=0.05$ probability of error.

The relationship between the number of years of paternal orphanhood and STS was that those who had been orphaned for between 11-15 years (*mean=93.4400*) were more likely to exhibit STS. These were followed chronologically by those who had been orphaned for between six (6) and ten (10) years (*mean=84.4615*), and lastly by those orphaned for between one (1) and five (5) years (*mean=79.9531*).

Table 4.11: Relationship between AIDS orphanhood and STS among young people orphaned by AIDS

Predictors of STS	N	Mean	Std dev.	F	P
Years of paternal orphanhood					
01-05 years	64	79.9531	14.32218		
06-10 years	39	84.4615	14.97866		
11-15 years	25	93.4400	15.99760	4.812	0.003
16+ years	11	83.4545	17.73902		
Total	139	83.9209	15.70196		
Years of maternal orphanhood					
01-05 years	67	87.5075	16.04385		
06-10 years	39	86.1026	14.35782		
11-15 years	08	89.0000	13.63818	1.960	0.124
16+ years	04	69.0000	02.94392		
Total	118	86.5169	15.33095		
Person to whom care was rendered					
Father only	46	79.0435	11.96097		
Mother only	49	83.3265	14.03328		
Father and mother only	31	86.3871	12.30631	9.202	0.000
Brothers and sisters only	02	81.5000	0.70711		
Father, Mother, Brothers and Sisters	33	97.0606	15.41699		
Total	161	85.4845	14.71738		
Hours p/day spent caring for the sick parent(s)					
01 – 04 Hours	54	79.4815	12.34220		
05 – 08 Hours	58	82.5345	14.92462		
09 – 12 Hours	29	90.8276	13.04955	9.827	0.000
13 – 16 Hours	04	101.0000	14.30618		
Whole day and whole night	14	100.2857	13.46465		
Total	159	85.0377	15.04966		
Duration of work as caregiver					
1 Week – 6 Months	92	84.6957	13.54012		
07 – 12 Months	36	82.4167	16.67397		
13 – 18 Months	05	88.8000	18.83348	1.786	0.134
19 – 24 Months	11	83.8182	11.40893		
More than 2 years	14	94.5000	19.77080		
Total	158	85.1139	15.10345		

***significant correlations at p< 0.001 level; **significant correlations at p< 0.01 level; *significant correlations at p< 0.05 level

The above trend did not hold for paternal orphanhood lasting sixteen (16) years and beyond. Similarly, the relationship between the persons to whom care was rendered and STS was established. Thus, orphans who took care of everybody (their fathers, mothers, brothers and sisters) were at the highest risk for developing STS (*mean=97.0606*). They were followed by those who took care of their Fathers and mothers only (*mean=86.3871*). Orphans who took care of only their mothers (*mean=83.3265*) came next followed by those orphans who only took care of their brothers and sisters (*mean=81.5000*). Interesting to note is the fact that orphans who took care of only their fathers were the least likely to develop STS (*mean=79.0435*).

Regarding the relationship that exists between STS and the number of hours per day spent by orphans in caring for their sick parent(s), the study established an interesting trend linking the highest likelihood of developing STS to the subsequent proportionate number of hours put in actual care work. Consequently, those putting in anything between thirteen (13) hours and whole day and whole night of care giving were at greatest risk of developing STS (*mean=101.0000 and* 100.2857). Spending between nine (9) and (12) hours in caregiving was next in the risk continuum (*mean=90.8276*), which was followed by care work spanning between five (5) and eight (8) hours on a daily basis (*mean=82.5345*). Subsequently, orphans who put in the least; that is, between one (1) and four (4) hours (*mean=79.4815*) were the least likely to develop STS. This trend shows that the higher the amount of time spent in caregiving, the greater the likelihood of developing STS.

Finally, under the specific caregiver roles, five (5) factors were studied specifically among the category of orphans who worked as caregivers. In studying these factors, the researcher sought to establish, which among the various chores in caregiving (that is, household chores, farm work, nursing care, income generating activities- IGAS, and others), were the greatest predictors for the development of STS. Table 4.12 presents the findings.

The table shows that only participating in household chores ($F=3.348$; $p=0.021$) was significantly related to STS at $\alpha=0.05$ probability of error. All the other caregiver roles (farm work, nursing care, involvement with income generating activities (IGAs), and all the other caring roles) were not significantly related to STS at $\alpha=0.05$ probability of error.

Table 4.12: Relationship between caregiver roles and STS among young people orphaned by AIDS

Predictors of STS	N	Mean	Std deviation	F	P value
Household chores					
Yes	73	82.5753	13.97311		
No	09	93.1111	14.85298	3.348	0.021
Farm work					
Yes	67	86.5821	12.73405		
No	14	84.9286	21.46362	1.006	0.392
Nursing care					
Yes	58	83.0517	13.25780		
No	08	89.5000	17.60682	1.387	0.250
IGAs					
Yes	47	83.0638	14.02855		
No	07	92.7143	18.00661	2.018	0.116
Other chores					
Yes	28	82.1786	13.77075		
No	05	92.6000	17.75669	1.064	0.386

***significant correlations at p< 0.001 level, **significant correlations at p< 0.01 level, *significant correlations at p< 0.05 level

The relationship between household chores and STS was such that those who were not involved in any of such chores were more likely than their counterparts (getting involved with household chores) to exhibit STS. However, results of the regression analysis presented in section 4.6.2 will help clarify this rather complex and mind-boggling finding.

In summary therefore, the study established relationships between the following selected variables and the development of STS among young people orphaned by AIDS:

a. Demographic characteristics:
   - sex
   - level of formal education attained
b. Orphanhood related factors:
   - number of years of paternal orphanhood
   - the number of hours per day spent by respondents' in caring for the sick parent(s)
   - the person to whom care was rendered
c. Care giver roles:
   - household chores

The established relationships were:

(i) There exists a relationship between sex and STS among young people orphaned by AIDS such that males were more likely to be at risk of STS than females.

(ii) There exists a relationship between the level of formal education attained by young people orphaned by AIDS and STS such that upper primary school pupils were more prone to developing STS than their lower primary and junior secondary counterparts.

(iii) There exists a relationship between the number of years of paternal orphanhood and the development of STS such that the higher the number of years that had elapsed since being orphaned of a father, the greater the likelihood of exhibiting STS. This trend did not hold for paternal orphanhood lasting sixteen (16) years and beyond.

(iv) There exists a relationship between the number of hours per day spent by orphans in caring for the sick such that the higher the amount of time spent in caregiving per day, the greater the likelihood of developing STS.

(v) There exists a relationship between the person to whom care was rendered and the development of STS. Thus, orphans who took care of their fathers, mothers, brothers and sisters were at the highest risk for developing STS than those who took care of their fathers and mothers only, who were at greater risk than orphans who took care of only their mothers and those orphans who only took care of their brothers and sisters. Orphans who took care of only their fathers were the least likely to developing STS.

(vi) There exists a relationship between the involvement of orphans in caregiver roles and STS such that those who were not involved in any caregiver chores at all were more likely than their counterparts (getting involved with household chores) to exhibit STS.

Therefore, the null hypothesis stating that there is no significant relationship between selected factors and STS among young people orphaned by AIDS is rejected.

4.7.2 Predictive factors of STS among young people orphaned by AIDS

Table 4.13 shows the results of multiple linear regressions of major predictors of STS. From the table, the major predictive factors of STS were found to include four (4) variables: sex (t=-2.083; p=0.045), level of formal education attained (t=-2.019; p=0.051), number of years of

In summary therefore, the major predictors of STS among young people orphaned by AIDS were established, thus:

a. Demographic characteristics:
   - sex
   - level of formal education attained

b. Orphanhood related factors:
   - number of years of paternal orphanhood
   - number of years of maternal orphanhood

4.8 Summary of the study Findings

This chapter has been an attempt to answer the research questions of the study. Below is a summary of what have been the key findings of the study.

4.8.1 Demographic indicators of young people orphaned by AIDS

a. Majority of the respondents were male.
b. The mean age range was 14-17 years.
c. A greater number of the respondents were upper primary school pupils (i.e. pupils in standards seven (7) and eight (8).
d. As at the time of this study, majority of the respondents had been orphaned of their fathers (paternal orphans) and/or mothers (maternal orphans) for more than seven (7) years. However, a single majority of the respondents were maternal orphans (i.e. orphans who have lost their mothers to HIV/AIDS).

e. About three-quarters of the orphans had been involved in one way or the other as caregivers to their sick parent(s) and/or siblings.

f. Caregiver roles spanned across many activities, ranging from household chores, farm work, nursing care and work as household head [in order to generate some income for the household] amongst other chores. However, farm work and household chores were a common engagement for the greater majority of orphans across board.

g. Majority of the respondents rendered care to their parent(s) (mothers and/or fathers), while only a paltry number took care of their brothers and sisters.

h. The caregiver service on a daily basis generally spanned for between one (1) and sixteen (16) hours. However, some of the orphans spent the whole day and whole night of caregiving. Majority of orphans spent between five (5) and eight (8) hours per day taking care of their sick parent(s).

i. On the overall, the duration of care work spanned from one (1) week to more than two (2) years with a greater number of respondents being engaged as caregivers for between one (1) week and six (6) months.

4.8.2 Symptomatology of STS among young people orphaned by AIDS

Out of the thirty (30) symptoms of STS investigated, young people orphaned by AIDS exhibited seventeen (17) such symptoms among them;

i. cynicism
ii. suspiciousness
iii. chronic fatigue
iv. hypervigillance

v. decreased self-knowledge

vi. poor/negative self-concept

vii. decreased use of positive coping methods

viii. a sense of being besieged

ix. increased negative arousal

x. difficulty separating work from personal life

xi. diminished ego functioning

xii. lowered frustration tolerance

xiii. depression

xiv. intrusive images of situations

xv. dread of certain situations or activities

xvi. intrusive thoughts and

xvii. feelings of helplessness.

4.8.3 Prevalence and extent of severity of STS symptoms among young people orphaned by AIDS

a. Young people orphaned by AIDS exhibited STS symptoms only at "severe" and "very severe" levels.

b. Females were more prone to "severe" symptoms of STS while males were more likely to suffer from "very severe" levels of STS symptoms than females.

c. In overall, more males than females were likely to be at risk of STS.

d. Young people orphaned by AIDS, on average, reported experiencing:

- Moderate levels of risk for burnout

- High levels of potential for compassion satisfaction, and
- High levels of risk for compassion fatigue.

e. Greater risk for STS symptomatology among young people orphaned by AIDS was associated with burnout and compassion fatigue, whereas

f. The least risk for STS symptomatology was associated with compassion satisfaction.

g. More females were cumulatively involved as caregivers for between one week and six months, while the numbers were similar for caregiving that lasted seven to 12 months. Beyond one year, males were the majority caregivers.

4.8.4 Gender differences in STS among young people orphaned by AIDS

Demographically;

a. Majority of the respondents were male at 14-17 years age category.

b. Males were the dominant group within the upper primary school category.

c. Females were the majority paternal orphans for orphanhood lasting between one and five years.

d. There were about equal numbers of male and female maternal orphans between one and five years. However, males were slightly more than females for maternal orphanhood lasting between six and 10 years.

e. More male than female orphans were involved as caregivers.

f. Females dominated all the specific care roles investigated in this study.

g. Males dominated among orphans who took care of their fathers, while females were the majority among orphans who too care of their mothers.

h. Females topped among orphans who provided care for between one and four hours on a daily basis. Males were the majority for those who rendered care for between five and eight hours. The same was true of orphans who provided care that lasted whole day and whole night.

Regarding prevalence of STS symptoms;

a. There exists significant gender differences with regard to the following symptoms based on BO whereby males were more susceptible than females:

- diminished ego-functioning (identity) (χ^2 =7.765; p = 0.007)
- tiredness (χ^2 =25.496; p = 0.000)
- cynicism (χ^2 =16.383; p = 0.006)
- a sense of being physically run down (χ^2 =16.297; p = 0.006)
- hypervigillance (χ^2 =13.123; p = 0.022)

b. There exists significant gender differences with regard to STS symptoms based on CS such that female orphans displayed greater levels of potential for compassion satisfaction compared to their male counterparts:.

- self-praise for accomplished work (χ^2 =23.139; p = 0.000)
- the ability of orphans to find meaning in life (χ^2 =14.634; p = 0.012)
- enthusiasm (χ^2 =13.412; p = 0.020)
- greater life expectations (χ^2 =14.932; p = 0.011) and,
- self-confidence (χ^2 =25.796; p = 0.000).

c. There exists significant gender differences with regard to STS symptoms based on CF whereby males were more susceptible:

- a sense of being besieged (χ^2 =28.302; p = 0.000)

- depression (χ^2 =18.181; p = 0.003)
- intrusive images of situations/traumas (χ^2 =37.592; p = 0.000)
- intrusive thoughts (χ^2 =17.553; p = 0.004)

On the extent of severity of STS symptoms, the study established that:

- Where STS symptoms were established among young people orphaned by AIDS, more males than females were likely to exhibit the STS symptoms.
- Females were more prone to "severe" symptoms of STS, while males were more likely to suffer from "very severe" levels of STS symptoms.

4.8.5 Relationship between STS symptoms and the development of STS

There exists a strong positive correlation between burnout and Secondary Traumatic Stress, which implies that:

a. There exists a strong positive relationship between cynicism and the development of STS
b. There exists a strong positive relationship between suspiciousness and the development of STS
c. There exists a strong positive relationship between chronic fatigue and the development of STS, and
d. There exists a strong positive relationship between hypervigillance and the development of STS.

There exists a strong negative correlation between compassion satisfaction and Secondary Traumatic Stress, which indicates that:

a. There exists a strong positive relationship between decreased self-knowledge and the development of STS
b. There exists a strong positive relationship between poor or negative self-concept and the development of STS
c. There exists a strong positive relationship between decreased use of positive coping methods and the development of STS

There exists a strong positive correlation between compassion fatigue and Secondary Traumatic Stress, implying that:

a. There exists a strong positive relationship between a sense of being besieged and the development of STS
b. There exists a strong positive relationship between increased negative arousal and the development of STS
c. There exists a strong positive relationship between difficulty separating work life from personal life and the development of STS
d. There exists a strong positive relationship between diminished ego functioning and the development of STS
e. There exists a strong positive relationship between lowered frustration tolerance and the development of STS
f. There exists a strong positive relationship between depression and the development of STS
g. There exists a strong positive relationship between intrusive images of situations, otherwise called traumas, and the development of STS

h. There exists a strong positive relationship between dread of working in certain situations or activities and the development of STS

i. There exists a strong positive relationship between intrusive thoughts and the development of STS, and finally

j. There exists a strong positive relationship between feelings of helplessness and the development of STS.

Compassion fatigue was more strongly correlated to STS (*mean=30.5503;* $p<0.001$) than burnout, which was more highly correlated to STS (*mean=25.6878;* $p<0.001$) than compassion satisfaction (*mean=27.7460;* $p<0.05$), further reinforcing the earlier finding that young people orphaned by AIDS, on average, experienced moderate levels of risk for burnout, high levels of potential for compassion satisfaction, and high levels of risk for compassion fatigue.

4.8.6 Relationship between selected variables and STS among AIDS orphans

(i) There exists a relationship between sex and STS among young people orphaned by AIDS such that males were more likely to be at risk of STS than females.

(ii) There exists a relationship between the level of formal education attained by young people orphaned by AIDS and STS such that upper primary school pupils were more prone to STS than their lower primary and junior secondary counterparts.

(iii) There exists a relationship between the number of years of paternal orphanhood and STS such that the higher the number of years, the greater the likelihood of exhibiting STS. This trend did not hold for paternal orphanhood lasting sixteen (16) years and beyond.

(iv) There exists a relationship between the number of hours per day spent by respondents' in caring for the sick such that the higher the amount of time spent in care giving, the greater the likelihood of developing STS.

(v) There exists a relationship between the person to whom care was rendered and STS. Thus, orphans who took care of their fathers, mothers, brothers and sisters were at the highest risk for developing STS than those who took care of their fathers and mothers only, who were at greater risk than orphans who took care of only their mothers and those orphans who only took care of their brothers and sisters. Orphans who took care of only their fathers were the last to developing STS.

(vi) There exists a relationship between the involvement of orphans in caregiver roles and STS such that those who were not involved in any caregiver chores at all were more likely than their counterparts (getting involved with household chores) to exhibit STS.

4.8.7 Predictive factors of STS among young people orphaned by AIDS

The following were established to be the major predictors of STS among young people orphaned by AIDS:

a. Sex.

b. Level of formal education attained.

c. Number of years of paternal orphanhood.

d. Number of years of maternal orphanhood.

CHAPTER FIVE

DISCUSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the results of the study as presented in chapter four. The discussion is organized in five major sections, each adressing one of the research questions that directed the study. This is followed by conclusions therefrom and the implications of such findings. The final section presents the recommendations based on a synthesis of each of the study finding.

5.2 Discussion of results

Presented in the sections that follow are the discussions of the study findings.

5.2.1 Demographic profiles of young people orphaned by AIDS

Results regarding the demographic profiles of young people orphaned by AIDS in Rachuonyo District, Kenya are found in Table 4.1 and Figures 4.1-4.9.

To begin with, a majority of the respondents were maternal orphans. Such trends were expected given the current HIV prevalence in Kenya that is more tilted against women (prevalence: 8.7 percent) than men (prevalence: 4.6 percent) (NASCOP, 2008). Available literature indicates that when a mother dies, the father retains the children under the care of his parents (if they are still alive) especially if he is polygamous (SADCFANR VAC, 2003). However, most fathers get married almost immediately after burying their wives with the justification of getting someone to care for the orphans. In a number of cases where the extended family is strong, the remarriage

would take the sororate custom form (that is, a cultural practice where a woman is given in marriage to her diseased sister's husband), although others would still marry from different families. But we know that the attention that children get from their mothers as well as her physical absence is difficult to regain through remarriages by their fathers.

Thus, one would expect that this remarriage affects the consanguity in the care of orphan, leading to a denial of basic necessities like food and clothing, and poor relationships with orphans' new "mothers". Sordid relationships have been reported in such households, attributed to sudden switch of attention by the father from the children (who may still be grieving the death of their mother) to the new wife (SADCFANR VAC, 2003). Additionally, adjustment by the orphans to the new household settings takes along time marked with pain and suffering- the implications of which are discussed elsewhere in this chapter.

The study has also showed that majority of young people orphaned by AIDS had been involved in one way or the other as caregivers. These findings can be explained based on how HIV/AIDS affect livelihoods. Research has established three (3) main ways in which a household can be affected by HIV/AIDS, and which have different sets of impacts that should be examined separately: chronic illness, death and support of orphans (SADCFANR VAC, 2003; Aggleton *et al.*, 1999; Adams and Gullotta, 1999).

During chronic illness the main effects are loss of labour due to illness; loss of labour due to increased caring; and increased requirements for spending on healthcare. Death leads, not only to an immediate loss of labour, but can lead to other changes in household composition that can

positively or negatively affect labour availability. There can be changes in livelihood patterns as remaining members try to optimise their available assets (Barnes, 1996; UNICEF, 2000). This may explain the involvement of many orphans in farm work and with household chores. Such engagements can, however lead to successful coping, or following a period of unsustainable response (for instance, by selling productive assets), could ultimately result in the dissolution of the household.

The economic effects on orphans themselves depend on the existing composition of the household and then on the age, gender and skills of the orphan, which determines the net contribution (in terms of care roles) of the orphan to the household (Barnes, 1996). For example, the Zimbabwe VAC's rural survey in 2003 showed that age, gender and skills of the orphans themselves impacted on the food security of the host household. Accordingly, younger children are more likely to place a strain on the household, both in terms of the costs of providing for their material needs, and also in terms of the caring requirements that they may have from adults (and/or their older siblings). Older children, on the other hand, may actually bring a net economic benefit to the household in the short run at least if they are working and contributing to household income, especially food production. Regrettably however, in such cases, such a contribution is at the cost of their education or through some form of exploitation. Aggleton *et al.* (1999); and Adams & Gullotta (1999) found that orphanhood had a much more ambiguous relationship with food security outcomes than other proxies examined.

The period of chronic illness of an adult can often place the greatest acute stress on household livelihoods, embedded with three (3) problems. Firstly, the ill person is often unable to work,

reducing the income available to the household and/or the output from agricultural activity, which is a key economic activity in many households, particularly those households from rural areas like the ones from where this study was conducted (Ruck, 1996). Secondly, other household members are required to spend time caring for the ill person; who are normally older children. This may explain why majority of the orphans involved in caregiving were older orphans- pupils in standards seven and eight; and the time spent on care can take away from productive activities (the reason for the involvement of orphans in many care related activities), from caring for other children (as seen in the more than three-quarters of orphans taking care of their parents, as opposed to one percent who took care of their other sibling(s)). The potential double loss of income at this stage can make households particularly food insecure

Thirdly, there is need for a greater spending on healthcare and associated costs. Depending on the existing level of food security in the household, this can mean spending is switched from other household needs to healthcare or that assets are sold to raise extra cash (Matazzaro, 1993). In already very poor households, their options may be so limited that they make the difficult decision to forego such spending on healthcare to maximize the welfare of remaining members. Such may explain the circumstances that led the sample of orphans in this study to work in income generating activities (IGAs) (as household heads), hopefully to supplement the much needed household income.

The findings on care continuum are in agreement with what other investigators (e.g. (Russel, 2000; UNAIDS, 2000; NASCOP, 2002; Phaladze, 2001; Ferns, Flannery, McNeal, Morisette, Cameron, & Bally, 1995; WHO, 1993) have established, that is, the struggle by families to adopt

"a form of" home based care (HBC). This is done amidst the crisis that in many cases is the only other alternative avenue of care for PLWHAs especially in rural areas where the majority cannot afford the prohibitive cost of providing care through public health facilities, which are themselves ill equipped to do so.

Ideally speaking, HBC is care that is extended from a healthcare facility to a patient's home through family participation and community involvement using the available resources and in collaboration with health workers. It is care given to individuals in their own natural environments, which is their home, by their families, supported by skilled social welfare officers and communities to meet material, psychological and spiritual needs (NASCOP, 2002).

Consequently, and given the trend of these findings, the researcher envisages a comprehensive HIV/AIDS related care and support to alleviate the suffering of the sick and their caregivers, especially in rural areas like the one from where the present study was conducted. Such would comprise diagnosis, treatment with drugs, referral and follow-up, nursing care, counselling and support to meet psychological, spiritual, economic, social and legal needs. It is important to emphasize that nothing short of a comprehensive home care that comprises counselling and social support, psychological support and support for families and carers should be considered in order to take care of, not only the young people orphaned, but the entire households affected by HIV/AIDS.

Counselling and social support will be imperative since, as other researchers (UNAIDS, 2000; Osborne & Van Praag, 1997; Welch & Newburry, 1990) have noted, PLWHAs frequently

experience emotional and psychiatric problems, while depression is common but their welfare can be considerably improved when family members and carers understand these problems, and support the patient in experiencing them. This will go a long way in minimizing possible stress that may be associated with this kind of chronic illness.

5.2.2 Prevalence of STS symptoms among young people orphaned by AIDS

Data relevant to the prevalence of STS among young people orphaned by AIDS are found in Tables 4.2, 4.6, 4.7 and Figures 4.10, 4.11, and 4.12.

Between 46 percent and 76 percent of the participants reported symptoms on at least one subscale at a level of susceptibility or higher susceptibility.

The symptoms of STS associated with burnout established in this study (cynicism, suspiciousness, a sense of being physically run down, and hypervigillance) accounted for 40 percent of the total STS symptomatologies investigated. A contra-indication was that young people orphaned by AIDS lacked beliefs to sustain them; they did not accept their bodily appearance and were bogged down by their physical environments. They too were found to be very sensitive individuals, implying that AIDS orphans were susceptible to developing STS through burnout. These findings are in concurrence with the literature reviewed on symptomatology of STS among individuals in helping professions and the works of other scholars.

Firstly, young people orphaned by AIDS experienced moderate levels of risk for as evidenced by cynicism, suspiciousness, chronic fatigue, and hypervigillance. Other researchers have reported

related findings; for example, Otieno (1998) found emotional exhaustion, depersonalisation and lack of personal accomplishments to be among the pointers to burnout. This implies that young people orphaned by AIDS were just as likely as the group of top seven stressed professionals (paramedics, fire-fighters, emergency medical technicians, police officers, rescue workers, disaster response teams, and psychotherapists) (Jackson, Schwab, & Schuler, 1986; Maslach & Jackson, 1981) to wear out or be exhausted by reason of excessive demands. Such occupations have been characterized by work that can be highly emotional and consequently traumatizing.

This finding further alludes to the fact that orphanhood may be a causative factor for burnout (as manifested through cynicism, suspiciousness, chronic fatigue, and hypervigillance). Other investigators found life events (for example, death of a loved one, and divorce among others) to be predisposing factors to burnout- evidenced by negativism, physical exhaustion, and other associated somatic states (Kim, Shim, & Umbreit, 2007; Watson, Deary, Thompson, & Li, 2007; Melgosa, 2004; Zastrow, 1985; Taton, 1984). This implies that young people orphaned by AIDS, just like other professionals who spend their work lives attending to the needs of others are at risk, basically because their care work puts them in frequent contact with the tragic side of human experience (the people to whom they rendered care).

Therefore, even though the respondents were found to exhibit moderate levels of risk for burnout, interventions need to be put in place to address the problem of burnout among young people orphaned by AIDS. Only then can we help save the lives of these young ones, who otherwise, may end up with the worst form of burnout- learned helplessness, which is a psychological reaction that occurs when stress overwhelms the body (Zastrow, 1985; Bonanno,

2004; Dyregrov & Mitchell, 1992). In doing so, such interventions will directly be targeting STS among AIDS orphans.

Additionally, even though studies of burnout are a common place in literature (Kim, Shim, & Umbreit, 2007; Jacobson, 2005; Siebert, 2005; Melgosa, 2004; DeCarlo & Folkman, 1996; Harvey, 1996; Dyregov & Mitchell, 1992; Zastrow, 1985; Hodgson, 1984; Maslach, 1982; Dunning & Silva, 1980), results are often inconsistent and researchers typically utilize convenience samples, focusing only on futures of the workplace that contribute to burnout, usually among the helping professions (Kim, Shim, & Umbreit, 2007; Jacobson, 2005; Siebert, 2005; Melgosa, 2004; Harvey, 1996; Dyregov & Mitchell, 1992; Maslach, 1982; Dunning & Silva, 1980). This study has however expanded the discussion and improved the conceptual clarity of burnout by including personal characteristics and personal history variables, utilizing rigorous measures, and collecting data from a unique and representative sample of respondents to show that young people orphaned by AIDS are susceptible to developing STS. Interventions aimed at addressing physical pain among orphans should be priority. Psychological measures aimed at helping orphans accept themselves (including bodily appearance) must be key in order to address imbedded stigmas that could be impacting negatively on orphaned young people.

Secondly, the orphans experienced high levels of potential for compassion satisfaction. Contrary to some would-be popular beliefs and expectations, young people orphaned by AIDS possessed a high potential for compassion satisfaction, predictors of which included: self-praise for accomplished tasks, ability to find meaning in life, enthusiasm, ability to feel joy, greater life expectations, self-confidence, and feelings of a deeper sense of strength in life. It shows that

young people orphaned by AIDS were still able to be happy and enjoy life in spite of their orphanhood. They felt connected to and accepted by the people they knew and were not loosing sleep over their parents' traumatic experiences. In addition, no physical pain, related to their orphanhood, ever prevented them from doing their daily work, and that they never felt too exhausted to perform their daily activities. Further, they felt having enough energy for their everyday life.

The above finding corroborates what other scholars have reported, albeit in studies done among individuals in the helping professions. For instance, Jacobson (2005) in a study of compassion fatigue, compassion satisfaction, and burnout among employee assistance program counsellors, found that coping style was able to account for up to 35.1 percent of the total variance for potential for compassion satisfaction. This finding carries a lot of weight for STS interventions; that efforts should be made by all concerned to enhance circumstances that lead to the development of CS among orphans in order that they may grow and reach their full potential.

On the contrary however, young people orphaned by AIDS lacked information they needed on a day-to-day basis. They were also not satisfied with themselves and lacked proper access to healthcare services. This was established to contribute to their susceptibility to developing STS, the very undesirable condition of distress associated with orphanhood. The importance of necessary information and positive self-concept in addition to proper healthcare for any individual (AIDS orphans inclusive) need not be overemphasized. Therefore, appropriate interventions should be targeted at addressing information needs of AIDS orphans on a daily basis, and helping them to develop positive self-concept. In addition, the government and other

stakeholders must be committed to providing facilities for proper healthcare, especially targeted at these orphans.

For this reason, the study recommends that palliative care (as opposed to home based care), be considered and made available for PLWHAs, particularly in Kenya's rural areas. Palliative care is a philosophy of care which combines a range of therapies with the aim of achieving the best quality of life for parents (and their families) who are suffering from life threatening and ultimately incurable illnesses (UNAIDS, 2000). Central to this philosophy is the belief that everyone has a right to be treated, and to die with dignity, and that the relief of pain- physical, emotional, spiritual, and social is a human right and essential to this process.

If such care; made available throughout the patient's illness and during the period of bereavement, were provided in the community for young people taking care of PLWHAs, then the young caregivers will have the opportunity and support to work through their own emotions and grief, which inevitably arise from their work in essence mitigating a possible secondary trauma among them. Thus, carers can work hard to remain sensitive to patients' personal, cultural and religious values, beliefs and practices, and to ensure effective communication with, not only the patient, but the rest of their family members and others involved in their care. The professionalism of an interdisciplinary team that comes with such a package will most likely help young caregivers develop positive self-concepts, access useful information and be cared for themselves whenever their own need for care (for instance, seeking health services) arises.

Finally, young people orphaned by AIDS experienced high levels of risk for compassion fatigue, the expected high symptomatology for STS (as seen through a sense of being besieged, increased negative arousal, difficulty separating work from personal life, diminished ego functioning, lowered frustration tolerance, depression, intrusive images of situations, dread of certain situations or activities, intrusive thoughts, and feelings of helplessness).

The symptom of STS established among this group of respondents seems to support the findings of other investigators. For example, researchers have found that individuals exposed to traumatic material experience the same array of traumatic stress symptoms (Beaton & Murphy, 1995; Dunning & Silva, 1980; Dyregrov & Mitchell, 1992; Gersons, 1989). Disturbed sleep, depression, hostility, negative arousal, cynicism, anger, fear, rapid deterioration of relationships with family and friends, suppression of emotions, nightmares, flashbacks, irritability, anxiety, alienation, feelings of insanity, obsessive/compulsive behaviour, despair, loss of control, and suicidal thoughts have been experienced by crisis workers and therapists following exposure to trauma victims (Hodgkinson & Shepherd, 1994; Horowitz, 1974; Lundin, 1995; O'Rear, 1992; Raphael *et al.*, 1984).

A closer look at the above studies, however, reveal the same trend of biasness toward utilization of samples drawn mainly from professionals in the helping professions (for instance, Beaton & Murphy, 1995; Dunning & Silva, 1980; Hodgkinson & Shepherd, 1994 and Raphael *et al.*, 1984), and focusing only on futures of the workplace that contribute to trauma (Dyregrov & Mitchell, 1992; Gersons, 1989; Lundin, 1995 & O'Rear, 1992). Thus, it is important to conscientise this study as having expanded the discussion and improved the conceptual clarity

and view of secondary trauma by collecting data from a unique and representative sample of AIDS orphans to show that young people orphaned by AIDS are also susceptible to developing STS.

However, since there are no reported norms for the Secondary Traumatic Stress scale used in this study, it is not possible to test the classification of participants as having the diagnosis of STS based on this measure alone. Nonetheless, and as is evident from the responses to the STS test, a significant number of young people orphaned by AIDS were in a level of distress that is comparable to people who would seek treatment for those symptoms. Consequently, the extent to which traumatic stress symptoms is true of young people orphaned by AIDS has been established, suggesting an urgent need for professional intervention.

The high rates of compassion fatigue among young people orphaned by AIDS and the variety of related factors in this representative sample demonstrate that compassion fatigue needs to be a focus of attention among AIDS orphans rather than merely a topic of casual conversation or the target of study of convenience samples of professionals by researchers. If social work researchers, practitioners, managers, and educators all begin to take compassion fatigue seriously, addressing it actively rather than just accepting it as ubiquitous but impervious to intervention, they could likely improve both the lives of these orphans and other carers and the quality of services they provide to their sick.

On the other hand, results indicate that of all the participants who took part in this study, about 61 percent exhibited symptoms of STS, implying that some 39 percent (42.3 percent male; 57.7

percent female) were not affected. The explanations for this may be many and varied. Nonetheless, it is possible that the extended family system practiced by the Luo (a Kenyan ethnic community from where the study was conducted) might have contributed to this. According to Grigorenko, Geissler, Prince, Okatcha, Nokes, Kenny, Bundy, & Sternberg, 2001; Nyambedha, Wandibba, & Aagaard-Hansen, 2001; Nyambedha, Wandibba, & Aagaard-Hansen, 2003a; Nyambedha, Wandibba, & Aagaard-Hansen, 2003b; and Ocholla-Ayayo, 1976), the extended family, apart from providing siblings with a wider pool of individuals to offer affection, physical comfort, assistance, and coherent moral and cultural understanding of societal expectations, also ensured that children were brought up as part of the larger social system.

It is, however, vital to remember that among many contemporary Luo societies, these traditional child rearing ideologies, practices and the extended family structures are rapidly disintegrating especially in the urban and peri-urban areas. Nucleated families, grandmother and children headed households are continuously replacing the larger households mainly due to modern Kenyans gravitation towards individualistic Western lifestyles, the harsh economic realities, unemployment and the devastating impacts of HIV/AIDS, all of which have reduced the pool of middle generation and negatively impacted on the ability and willingness of families to adopt and/or sustain the large number of children requiring adoption (Håkanson & Levine, 1997; Weisner, 1997; Ocholla-Ayayo, 1997; Forsythe & Rau, 1996; UNAIDS/UNICEF, 2002; Nyambedha *et al.*, 2003a).

As a result, the observed non-exhibition of STS by some of the respondents cannot wholly be attributed to the extended family system and the socialization process that goes with it no matter

how important this may be. Therefore, in order to promote our understanding and potential to help young people orphaned by AIDS in our society, we must add to the preliminary information generated by this study. We need further information about the process of how some orphans develop STS symptoms, while others appear not to be in distress. It is not clear from this single cross-sectional study whether the other participants have the symptoms but were less open to acknowledging them or if they somehow have found successful ways to shield themselves from the potential harm of orphanhood. It may be that the distress reported by young people orphaned by AIDS was caused by some other factor not assessed by this study instead of facing the trauma of orphanhood. We need to understand this process so as to be able to design more effective interventions to assist orphans and other children made vulnerable by HIV/AIDS.

5.2.3 Extent of severity of STS among young people orphaned by AIDS

Data relevant to this question were derived from Tables 4.3 and 4.4, and Figure 4.13. The data have helped to illuminate key areas of secondary trauma research, namely that young people orphaned by AIDS exhibited STS symptoms only at "severe" and "very severe" levels; female orphans were more prone to "severe" symptoms of STS symptoms, while male orphans were more likely to suffer from "very severe" levels of STS symptoms. In overall, more males than females were likely to be at risk of STS.

The above findings consistently reverberates the fact that males were more likely to be at risk of STS than their female counterparts. Further, being male was more associated with the development of STS than being female. Other studies with this sample, for instance; Stein, Rotheram-Borus, & Lester (2007), found that girls were more likely to be in distress than boys,

hence a contradiction with the present finding. These differences in the extent of severity of STS are discussed under the section that follows on gender differences.

5.2.4 Gender differences in STS among young people orphaned by AIDS

The findings regarding gender differences in STS are presented in Tables 4.5-4.8 and Figures 4.1-4.13.

The study has showed that with regard to the demographic profiles of young people orphaned by AIDS, majority of the respondents were male at 14-17 years age category while they too were the dominant group within the upper primary school category. Females were however the majority paternal orphans for orphanhood lasting between one and five years. There were about equal numbers of male and female maternal orphans, for orphanhood that lasted between one and five years. However, males were slightly more than females for maternal orphanhood lasting between six and 10 years. More male than female orphans were involved as caregivers while females dominated all the specific care roles investigated in this study. Males dominated among orphans who took care of their fathers, while females were the majority among orphans who looked after their mothers. Lastly, Females topped among orphans who provided care for between one and four hours on a daily basis while males were the majority for those who rendered care for between five and eight hours. The same was true of orphans who provided care that lasted whole day and whole night.

Regarding prevalence of STS symptoms, the study established significant gender differences with regard to BO whereby males were more susceptible to diminished ego-functioning

(identity) (χ^2 =7.765; p = 0.007), tiredness (χ^2 =25.496; p = 0.000), cynicism (χ^2 =16.383; p = 0.006), a sense of being physically run down (χ^2 =16.297; p = 0.006) and hypervigillance (χ^2 =13.123; p = 0.022) than females.

Prevalence of STS as measured by CS revealed significant gender differences with regard to STS symptoms such that female orphans displayed greater levels of potential for compassion satisfaction compared to their male counterparts in self-praise for accomplished work (χ^2 =23.139; p = 0.000), the ability of orphans to find meaning in life (χ^2 =14.634; p = 0.012), enthusiasm (χ^2 =13.412; p = 0.020), greater life expectations (χ^2 =14.932; p = 0.011) and self-confidence (χ^2 =25.796; p = 0.000).

Also from CF, statistically significant gender differences were established, which showed that males were more susceptible to a sense of being besieged (χ^2 =28.302; p = 0.000), depression (χ^2 =18.181; p = 0.003), intrusive images of situations/traumas (χ^2 =37.592; p = 0.000) and intrusive thoughts (χ^2 =17.553; p = 0.004) than females.

Finally, on the extent of severity of STS symptoms, the study established that where STS symptoms were established more males than females were likely to exhibit the symptoms. In addition, females were more prone to "severe" symptoms of STS, while males were more likely to suffer from "very severe" levels of STS symptoms.

To begin with, the fact that males were more likely to report very severe symptoms of STS than females implies that males were more likely to report unusually high levels of cynicism,

suspiciousness, chronic fatigue and hypervigillance; decreased self-knowledge, poor/negative self-concept, and decreased use of positive coping methods; a sense of being besieged, increased negative arousal, difficulty separating work from personal life, diminished ego functioning, lowered frustration tolerance, depression, intrusive images of situations, dread of certain situations or activities, intrusive thoughts, and feelings of helplessness than females. This finding does not support findings by other researchers, such as Cornille & Meyes (1999), that females are "always" the primary candidates for emotional distress, particularly among members of the helping professions. In a study by Stein, Riedel, & Rotheram-Borus (1999) on parentification and its impact among adolescent children of parents with AIDS, the girls had reported more depressive effect compared to the boys.

The study also revealed that the cumulative effects of orphanhood were easily manifested in the male children, especially at school. Their academic performance suffers a sudden drop as soon as the household dynamics shift against them as a result of orphanhood. Previously enthusiastic males would suddenly be orally shy when responding to teachers' questions in the classrooms. They would be withdrawn, sullen, and would many times come to school with un-kept hair, and this was noticeable during the study, particularly among boys aged between nine and 17 years.

Female orphans were observed to resort to truancy; and once they dropped out of school, the girls were noted to seek consolation in sexual relationships that may not necessarily entail economic gains, but in most cases, acted as a coping mechanism for the girls in these difficult circumstances. This is often compounded by the fact that these girls, at the heart of their adolescence years, could be responding to natural milestones in their development to adulthood.

The contention by researchers holding onto this viewpoint (like Oburu, 2004; Nyambedha, Wandibba, & Aagaard-Hansen, 2003; Nyambedha, Wandibba, & Aagaard-Hansen, 2001) was that girls tended to seek psychological consolation in intimate relationships thereby managing to psychologically cope better than their male counterparts.

The differences in the levels of distress reported by male and female orphans, in addition to the fact that more males than females were likely to be at higher risk of STS, could also be attributed to many other reasons. Firstly, it could be a reflection of differences in unwillingness on the part of males to share emotional distress, that is, higher tendency for the males to avoid talking and/or thinking about their situation (Nyambedha, Wandibba, & Aagaard-Hansen, 2003). The fact that males exhibited more feelings of irritability and anger could well explain the established differences, while the degree of threat perception may as well have been different between males and females. Secondly, differences in age could explain the observed differences given that cumulatively, male respondents were somewhat consistently older than their female counterparts.

Regarding threat perception, the researcher focused on avoidance symptoms. The observed difference could be due to females having a high tendency to share their feelings and emotions with their family members – "the insiders" since this is a way of forming emotional bonds between family members which echoes the collectivism principle according to Gao *et al.* (1996).

With regard to hyperarousal symptoms, people with life-threatening illnesses often find that they have to adjust to a different lifestyle, daily or leisure activities and indeed their future plans. The irritability that both groups of respondents experienced was probably related to the fact that they

found it difficult to adjust to these changes following sickness of their parent(s) and eventual orphanhood. The question is why females felt less irritable than the males, which could be related to their philosophy of life. For instance, among the Luo ethnic group, social societies are highly ordered and hierarchical in terms of space, relationships, age and gender. There are principles that govern, among other things, social relations, gender roles and groupings (Ocholla-Ayayo, 1976). Thus, common child rearing policies practiced by the Luo and members' strong kinship ties ensured that traditional beliefs and attitudes permeated (and still do) most of the Luo institutions such as family life, ideologies and ethics.

From infancy up to the age of seven, socialization of the child was, and still is, in many respects, the mothers' main responsibility. Additionally, caregiving assistance is also obtained from grandmothers, aunts, older children (below 14 years) and female child minders (*"jopidi"*) normally aged between 10-14 years (Grigorenko *et al*, 2001; Ocholla-Ayayo, 1976). Consequently, the seemingly female bias in child socialization might have impacted more on the girl child. That is, living by the kinship principles, females may have learned to become more tolerant and accepting to what happens to them, especially when negative events occur. Nonetheless, it is important to note from the above discussion that the researcher has based the explanations for the observed differences in STS between males and females mainly from a cultural perspective. Other non-cultural factors not investigated in this study might have also influenced the results. This requires further investigation.

Literature suggests that individuals tend to respond more extremely at the onset of negative events (in this case, death) (Xu, 1997). Further, we know from existing research that the degree

of fright at the time of a life-threatening illness (like HIV/AIDS) is related to the severity of stress (Bennett *et al.*, 2001). However, culturally embedded creativity for what people develop as knowledge, epistemology, metaphysics, and world view is certainly different between the Western-centered (from where originated the concept of STS) and other cultures, as demonstrated by Yik & Bond's (1993) conclusion that "the emic measures do no better than the imposed etic" (p. 91) in predicting the degree of westernization of the concept of PTSD. It follows that the observed feelings of distress may have been a matter of cultural orientation. Thus, our understanding of cultural idioms of distress needs a search for the cultural-specific sources of local endogenous knowledge systems.

5.2.5 Relationship between STS symptoms and the development of STS

The findings regarding this research question are presented in Table 4.9.

This study has established a strong positive correlation between burnout and STS (*correlation=0.633; p<0.001*), a strong negative correlation between compassion satisfaction and STS (*correlation=0.633; p<0.005*) and a strong positive correlation between compassion Fatigue and STS (*correlation=0.633; p<0.001*). Further, compassion fatigue was more strongly correlated to STS (*mean=30.5503;* p<0.001) than burnout, which was more strongly correlated to STS (*mean=25.6878;* p<0.001) than compassion satisfaction (*mean=27.7460;* p<0.05), further reinforcing the earlier finding that young people orphaned by AIDS, on average, experienced moderate levels of risk for burnout, high levels of potential for compassion satisfaction, and high levels of risk for compassion fatigue. In addition, the study found recognizable levels of secondary trauma in this sample (57.7% males; 42.3% females). However,

the affected respondents had scores high enough to suggest clinically significant levels of distress.

The observed positive relationships between cynicism, suspiciousness, chronic fatigue and hypervigillance; and a sense of being besieged, increased negative arousal, difficulty separating work from personal life, diminished ego functioning, lowered frustration tolerance, depression, intrusive images of situations, dread of certain situations or activities, intrusive thoughts, and feelings of helplessness, and STS were expected. It points to the fact that orphaned young people demonstrated their highest levels of distress through burnout and compassion fatigue.

The negative correlation established between compassion satisfaction and STS points to the fact that orphans were not susceptible to self-blame, inability to find meaning in life, lack of enthusiasm, inability to feel joy, poor life expectations, lack of confidence or even a poor sense of strength that were investigated by the compassion satisfaction test. This may be a pointer of good coping strategies by these orphans. Coping strategies refers to the cognitive and behavioural efforts to manage internal or external demands seen as taxing or exceeding one's resources (Lazarus & Folkman, 1984). As others have also noted, orphaned children often struggle with feelings of inadequacy and incompetence (Castro, Jones, & Mirsalimi, 2004). On the other hand, early responsibilities and mastery of difficult situations may have led to enhanced coping skills.

Another explanation to this finding could be orphans' increased resilience and competency in the face of traumatic loss and stress, and their genetic dispositions. Resilience in the face of loss and

trauma has been described as common among children growing up in disadvantaged conditions (Bonano, 2004; Masten, 2001; Harris, 1998). Mastern (2001) noted that resilience is a common phenomenon that arises from the basic ability of humans to adapt and, indeed, that development is robust even in the face of adversity. It is important to note however, that this research did not follow up respondents from their formative years and that for resiliency to occur, it requires the development of various belief systems, for example, 'I have' and 'I can' without which resiliency is uncommon. A study to investigate orphans from their formative years would be worthwhile.

Further, the reported adjustment of orphans in spite of their stressful situations could also have been linked to support that siblings residing in familiar homesteads initially consisting of three-generation families before the deaths of biological parents were likely to provide to each other, since as attachment literature asserts, it is the dislocation of orphaned children from familiar to unfamiliar environments that complicate their adjustment potentialities (Pinderhughes, 1998; Poehlmann, 2003; Barnett & Blaikie, 1992).

5.2.6 Predictive factors of STS among young people orphaned by AIDS

The results to this question are found in Tables 4.10, 4.11, 4.12, and 4.13 that offer very interesting insights into the issues regarding the relationships that exist between STS and certain selected factors and the predictive variables thereof. Relationships were established between sex, level of formal education attained, number of years of maternal and paternal orphanhood, number of hours spent in caregiving, and persons to whom care was rendered and STS. The same was true of the involvement of orphans in caregiver roles. The major predictors of STS among

young people orphaned by AIDS were established to be sex, level of formal education attained, and the duration of paternal and maternal orphanhood.

The first finding regarding the relationship between sex and STS is discussed under section 5.2.4. Secondly, the observed relationship between the level of formal education attained and STS, indicating that upper primary school pupils were more prone to developing STS than their lower primary and junior secondary counterparts, might suggest that older orphans were more at risk of developing STS than their younger counterparts, which presents the case for professional intervention. Previous studies have suggested that older people tended to perceive themselves as being susceptible to developing stress disorders following life-threatening illness (for example Chung, Berger, Jones, & Rudd, 2006). It could be the possibility in this sample of young people orphaned by AIDS that due to an eminent discrimination associated with AIDS orphans, the older youth must have been feeling more than their younger counterparts, the distress associate with stigma and discrimination. Being older, they were more likely to be very conscious of the vice. The much older junior secondary pupils may have outgrown this element of discrimination and stigma.

For instance, focus group discussions elicited the fact that orphaned children were discriminated against in many cases. An example was cited where a family of five children orphaned by AIDS were taken in to live with their paternal uncle in his home. At the onset, the aunt (their uncle's wife) insisted that these five orphans be built for a separate hut in the compound as she was not comfortable having them live under the same roof with them. Further, they were not allowed to share utensils or any other such facilities with the foster family. And, as if this was not bad

enough, they were not allowed to interact with their cousins because their parents died of AIDS. This implies that the only thing they received from this foster family was physical security of the homestead coupled with too much stigma and discrimination.

The above notwithstanding, they were made to work both in the household and in the farms. At the peak of farming activities, the five orphans would be woken up early at dawn to go weeding. They would later come back from the farm to prepare themselves and proceed to school the same morning without any breakfast. From school, it was noted that these orphans will be served some lunch (the only meal that these orphans would ever see). And, immediately after the lunch, they would resume their positions in the farms. Consequently, separating work from personal life becomes very difficult. As is expected, very few orphans would be capable of putting away such circumstances of their existence so as to concentrate in schooling and rebuilding of their lives.

Also, orphans were noted to take a little longer to integrate with other children at school (especially if they were new in that school, a case which was common among orphans). Participants asserted that it was a long and traumatic experience as the reality of the absence of parent(s) kept haunting these young ones whenever they faced difficult challenges in life. It is worth noting that a parent(s)' physical presence, even in the verge of death makes a whole lot of difference for the children. It was noted that when the parent(s) ultimately dies, the psychological cushion is removed and a whole new world of existence dawns on orphaned children. According to one of the teachers at Nyabondo primary school:

> "Things significantly change when the fresh mound of earth becomes prominent in the homestead …

"The children need the many school requirements that you already know. More often, shelter and food are acutely needed".

According to him, it is the orphaned pupils who stay behind during lunch brakes because they have nowhere to go. And he observes:

"There is nothing more traumatizing than trying to learn in an empty stomach"

The study also established a relationship between the number of years that had elapsed since the respondents' were orphaned of their fathers and STS such that the higher the number of years that had elapsed since being orphaned, the greater the likelihood of exhibiting STS. According to Nyambedha, Wandibba, & Aagaard-Hansen (2003a and 2003b), the passage of time and resiliency developed due to constant exposure to difficult child minding duties buffer children from death linked difficult circumstances. Consequently, it is possible that the observed relationship could have been linked to similar factors.

Additionally, FGD and IGD data revealed that HIV/AIDS infected fathers usually died earlier than their spouses. This finding is supported by other clinical data and literature for instance, NASCOP (2008), Perry (2003), and Pynoos & Nadar (1988). But even in cases where the female partner/wife died first, the male would most likely follow immediately. When a father dies, the sense of social and physical security associated with male authority both at intra-household and extra-household levels decreases in children. Mothers are often unable to effectively perform the traditional paternal role. The female finds herself in crises as she has to divide her attention between food production and parenting. In many cases, the orphans would be called upon to supplement the process of household resource generation and servicing. In such circumstances, extra efforts would be demanded from these orphans. Overworked, exhausted and fatigued, such

orphans become likely victims of secondary trauma as a result of orphanhood associated with losing their fathers.

In addition, it is clear from the foregoing established relationships that if it was the case of loosing a father, young people orphaned by AIDS experienced more emotional distress than if it was the mother. This is a further contrast to findings reported by other researchers who used similar samples. For example, Stein *et al* (2007) in a study of parentification and its impact among adolescent children of parents with AIDS, for instance, found that if the parent with AIDS was female, the youth experienced more emotional distress. Nonetheless, the foregoing discussion should as well give an insight into this kind of relationship.

Further analyses of the data on predictors of STS indicate that the number of years of paternal or maternal orphanhood was a factor to reckon with, particularly within the first 15 years of AIDS orphanhood. Thus, results regarding paternal/maternal orphanhood have been mixed and inconclusive. On the contrary, the fact that the duration of orphanhood predicted the development of STS up to the fifteenth year might be rooted in the long-term ability of orphans to cope in the face of emotional distress and undue pressures when they were not developmentally ready for such pressures. A counter argument is that, early responsibilities and mastery of difficult situations may have led to enhanced coping skills. Therefore, interventions targeted at young people orphaned by AIDS must most probably target the first fifteen years of orphanhood.

The observed relationship between the number of hours per day spent by respondents' in caring for the sick and STS suggests that the higher the amount of time spent in care giving, the greater the likelihood of developing STS. This was expected based on what other researchers have found out (Rotheram-Borus, Lester, Wang, & Shen, 2004; Stein *et al.*, 2007; Schauben & Frazier, 1995). It could be the case that the respondents developed STS symptoms due to long work hours and lack of support. But it is also possible that the respondents were experiencing symptoms tapped by the STS measure for some reason other than STS. For instance, it is conceivable that they might have developed STS due to some earlier personal trauma. Consequently, a study designed to tease out alternative explanations for the development of STS symptoms will be worthwhile.

Finally, and in contrast to previous studies for example Dunn, Deater-Deckard, Pickering, O'Connor, & Golding (1998), the study established a relationship between the involvement of orphans in caregiver roles and STS such that those who were not involved in any caregiver role(s) at all were the most likely to exhibit STS than their counterparts who got involved with at least some caregiver roles. This finding did not confirm the envisaged positive links between caregiving load and non-normative caregiving roles that included participation in household chores, farm work, provision of nursing care and participation in income generating activities for the household and STS. On the contrary, Oburu (2004) found that the experience of caregiving stress among grandmothers taking care of Kenyan orphaned grandchildren was positively linked to caregiving load and non-normative caregiving roles.

It was important to investigate the involvement of orphans in caregiving because, as others have also noted, despite the apparent risks of orphanhood, caregiving might also have some positive benefit for the youth; for instance, parent(s) genuinely needed care, and the orphans might have needed to "grow up fast" given the likelihood of parental death (Riedel, 1998; Rotheram-Borus *et al.*, 2004). Thus, although the premature assumption of parental roles may have had varied negative effects in the short term, the unusual developmental demands of having a seriously ill or dying parent(s) during adolescence seems to have had some desirable outcomes since orphans who were involved in one way or the other in these activities were far much less likely to develop STS. Additional research is however needed to confirm these findings.

From afar cultures, Cheng (1989) postulated that when a Chinese person feels unable to support his/her family (due to, for example, disabling illnesses), but adds burdens to them, he or she tends to experience feelings of shame, uselessness, or excessive worrying, which in turn creates a great deal of depression and anxiety. In that sense, a strong family tie could potentially exacerbate the psychological distress following a traumatizing event. Earlier Kenyan impact studies on the changing patterns of orphans care suggested that adjustment competency of orphans at risk substantially increase with constant exposures to difficult circumstances (Nyambedha *et al.*, 2001; Nyambedha *et al.*, 2003a; Nyambedha *et al.*, 2003b). The implication is that early exposure to family responsibilities and acquisition of related coping skills may have been adaptive in the long run for these young orphans. But still, studies to corroborate this argument will be worthwhile.

Finally, the duration of maternal and paternal orphanhood were both found to be major predictors of STS among young people orphaned by AIDS. Amongst the Luo, children are considered as orphans irrespective of whether they have lost their father or mother. Nonetheless, mother's play a bigger role in nurturing of children (Nyambedha, Wandibba, & Aagaard-Hansen, 2003; Ocholla-Ayayo, 1976). In most cases, women are the producers of resources which service the household on a daily basis, while the men involve in economic activities perceived as long-term household investments. Thus, the level of emotional attachment that children develop for their mothers is, in many instances, greater than that which they hold for their fathers given the time mothers spend with their children as opposed to fathers. As a result, it is possible that the gravity of a father's death may not be as heavy on the children as the death of a mother in terms of immediate emotionally loss and household maintenance. This implies that the father may be perceived as a custodian, especially in a subsistence economy where mothers form the backbone of production. The father, in such instances, will normally provide the physical and social security, which puts him at the pinnacle of a monolithic structure in the household.

In conclusion therefore, this study suggests that young people orphaned by AIDS are at risk of developing secondary traumatic stress. Orphans who participated in this study have provided invaluable information about the depth of their distress. Following is a presentation of the implications of the above findings to key players and actors in the fight against HIV/AIDS, among them the government, researchers, NGOs, CBOs, and all other stakeholders.

5.3 Implications of study findings

The study assessed the prevalence and extent of severity of secondary STS symptoms among young people orphaned by AIDS in Kenya thereby identifying factors that predispose AIDS orphans to STS. An examination of information obtained from the study findings carry with it some practical implications that can be applied in traumatology research and, not only to the entire field of HIV/AIDS research and practice, but to the larger discipline of health psychology. Among the issues that emerged from the study are the ones discussed below.

5.3.1 Implications to actors in the HIV/AIDS care field

(i) The high rates of STS and the variety of related factors in this representative sample of young people orphaned by AIDS demonstrate that secondary trauma needs to be a focus of attention rather than merely a topic of casual conversation or the target of studies of convenience samples of professionals as is normally the case to-date.

(ii) There is some evidence in this study to suggest that lack of exposure of orphans to challenging circumstances may contribute more to the development of STS. So in as much as orphans should be protected from excessive engagements, a level of exposure to challenging situations will be beneficial. This finding clearly needs to be explored in more depth to better understand the relationship between involvement of orphans in care work and the trauma they face. Ultimately this research can benefit both the workers in this important field of research and practice, and the orphans they protect to develop necessary resilience, and so much more.

(iii) If researchers, practitioners, managers and educators all begin to take STS seriously, addressing it actively rather than just accepting it as ubiquitous but impervious to

intervention, they may likely improve both the lives of those involved and the quality of services they provide, especially to orphaned youth.

(iv) AIDS care workers need to become more informed about secondary trauma's related personal and occupational variables so that they can more effectively prevent or address it as needed, particularly among the orphans.

(v) The reported adjustment of orphans in spite of their stressful situations has been linked to support that siblings residing in familiar homesteads are likely to provide to each other. As attachment literature asserts, it is the dislocation of orphaned children from familiar to unfamiliar environments that complicate their adjustment potentialities. The government, other actors, and all those involved with the task of caring for orphans should be made aware of this.

5.3.2 Clinical Implications

(i) Despite the difficult life circumstances of young people orphaned by AIDS participating in this study, the study found some positive aspects of satisfaction, growth and development. Because of situational demands and the neediness of the PLWHAs that they took care of, many of the participants had become caregivers or reported various caregiving roles at a young age. AIDS orphanhood was associated with STS. The extent to which this would lead to maladaptive or pathological outcomes (in this case STSD) among young people orphaned by AIDS remains a subject for further investigation.

(ii) As noted by other scholars (for example, Barnett and Parker, 1998), successful coping, in the context of stress, is likely to enhance self-confidence and self-esteem, perhaps resulting in a feeling of control over events and an enhanced tendency to plan for one's future.

(iii) Although AIDS orphans exhibited symptoms of STS, they also showed modest levels of potential for compassion satisfaction, and those who had assumed adult roles earlier were inclined to exhibit STS even less. These positive results may indicate that the negative consequences of orphanhood may have motivated the youth to chart their own life path and that the parent(s)' poor health and eventual demise may have led the youth to depend on their personal resources at an earlier age rather than to expect a caring parent to provide for their needs. These two processes may have led to greater resilience among young people orphaned by AIDS. All in all, further research is needed to clarify this issue.

(iv) It is imperative from the study findings that clinicians should consider the positive personal and cultural aspects of a child's contributions to the maintenance of family life in the context of a parent's HIV/AIDS illness. For youth living with a PLWHAs, increased expectations to assist the parent(s)' and family are often an unavoidable reality. Thus, clinicians should recommend support for children of parents living with HIV/AIDS and conduct assessments with them to evaluate if they are coping well with the increased responsibility or becoming overwhelmed. Clinical interventions for young people orphaned by AIDS should include a focus on skills building that increases their positive coping with increased caregiving and family responsibilities and that helps them to maintain developmental opportunities in the context of secondary traumatic stress. This should be carried throughout the period of orphanhood.

5.4 Recommendations

This study has contributed to the understanding of secondary traumatic stress by providing evidence of its existence and impact on the lives of young people orphaned by AIDS (a sample

taken outside that of the helping professionals). The need for a broader conceptualization of the phenomenon is highlighted, as is the need for further research. Such recommendations are targeted at actors in the field of HIV/AIDS care, support, treatment and prevention, and for further research.

5.4.1 Recommendations to actors in the HIV/AIDS care field

(i) The high rates of STS and the variety of related factors in this representative sample of young people orphaned by AIDS demonstrate that attention should be put to STS in relation to HIV/AIDS issues. The study recommends that a national task force (comprising all stakeholders in HIV/AIDS) be formed to immediately design and implement programs aimed at mitigating STS among orphans. Such a national taskforce, housed and coordinated by the Children's Department of the Ministry of Home Affairs (MOHA) should work hand in hand with the National AIDS Control Council (NACC), the National AIDS and STIs Control Programme (NASCOP) and all the other relevant government departments and hospitals.

(ii) All actors in the field of HIV/AIDS, including, but not limited to CBOs, NGOs, FBOs and NACC, NASCOP and other relevant government departments must now begin to take STS seriously, addressing it actively in order to be able to improve both the lives of those involved and the quality of services they provide, especially to orphans and other children made vulnerable by HIV/AIDS (OVCs).

(iii) The study established that elements of stigma and discrimination are still permeating the lives of orphans both at home and in schools. Thus it is imperative that models of peer-to-peer support through educational systems should be developed in order to assist school

going orphans socialize without discrimination and the embedded stigma. Here is a call to the Kenya Institute of Education (KIE) and other curriculum developers, through the Ministry of Education (MOE) to pay more attention to issues of stigma and discrimination associated with HIV/AIDS while developing curriculum, especially of primary and secondary schools education in Kenya.

(iv) There is need for further information in order to educate HIV/AIDS care workers (and all other actors) about secondary trauma's related personal and occupational variables. Additional information and a more in-depth understanding of the STS phenomenon will help all the players in this field (researchers, healthcare workers, clinicians, and others) to work more effectively toward addressing and preventing STS as required.

(v) The need to have siblings residing in familiar homesteads (as opposed to migrating them either to foster homes or such similar environments) has been highlighted in this study. Therefore, efforts must be put by the government (especially the Children's Department of the Ministry of Home Affairs) and all those involved with the task of caring for orphans to revert and ultimately stop the rather common practice of dislocating orphaned children from familiar to unfamiliar environments that complicate their adjustment potentialities. Specifically, whatever support the government (and other development partners) offer to orphans should be channelled to them at their matrimonial homes instead of sending them to foster homes, foster schools or such other foster institutions.

5.4.2 Clinical recommendations

(i) The study established AIDS orphanhood to be associated with STS, and that males were at greater risk. Therefore, the government through the Children's Department of the Ministry

of Home Affairs (and all her agencies- NGOs, CBOs, FBOs and so on) should provide orphaned youth with specialized counselling and support in additional to assistance with basic survival needs, normally inform of financial support and relief food.

(ii) Orphans were also noted to exhibit elements of successful coping in spite of their circumstances. In the context of secondary trauma, this is likely to enhance self-confidence and self-esteem. Therefore, models of possible approaches to community based care of young people orphaned by AIDS need to be urgently developed by scholars, the NGOs, CBOs and FBOs dealing with orphans in order to supplement the observed successful coping. In such a case, ethnographic approaches would be most appropriate given the diverse cultural ethos in Kenya.

(iii) The process by which some orphans seem to have developed resilience while others have not should be clarified, established and developed by clinicians so that orphans can all be helped to achieve this desired end.

(iv) Clinicians should support children of parents living with HIV/AIDS and conduct assessments with them to evaluate if they are coping well with the increased responsibility or whether they are getting overwhelmed. Such clinical interventions for AIDS orphans should include a focus on skills building that increases their positive coping with increased caregiving and family responsibilities and that which helps them to maintain developmental opportunities in the context of secondary trauma.

5.4.3 Recommendations for further research

The purpose of this study was to assess the prevalence and extent of severity of STS symptoms among young people orphaned by AIDS in Rachuonyo District, Kenya. It also identified factors

that predispose young people orphaned by AIDS to STS. Based on the study findings, further research is therefore recommended with regard to the issues articulated hereunder:

(i) The study established the presence of STS symptoms in 61.16 percent of the participants, which implies that some 38.84 percent of them were not affected. Therefore, there is need for further study about the process of developing STS. The key research question to be addressed in such a study will be how some orphans develop STS symptoms, while others appear not to be in distress.

(ii) It is important to note that the researcher has based some of the explanations for the observed differences in prevalence and extent of severity of STS mainly from a cultural perspective. Other non-cultural factors not investigated in this study might have also influenced the results. Therefore, a study designed to tease out alternative explanations for the development of STS symptoms will be worthwhile.

(iii) As suggested previously, the observed feelings of distress among orphans may well have been a matter of cultural orientation. This implies that our understanding of cultural idioms of distress needs a search for the cultural-specific sources of local indigenous knowledge systems. An investigation of the concept of STS as understood culturally will be worth the time and effort.

(iv) A cross-cultural comparison of Secondary Traumatic Stress among young people orphaned by AIDS and their family members will be useful in offering a further explanation of the STS phenomena.

(v) In addition, research is needed to examine the cultural sensitivity of STS measures used in this study. For example, the way in which certain STS symptoms are described such as

"feeling emotionally numb" may not necessarily be the way in which young people orphaned by AIDS in Africa (and Kenya for that matter) describe their emotions. In other words, they may find such expression as "feeling emotionally numb" unfamiliar terms, which consequently affects their responses and, hence, the reliability of the questionnaire.

(vi) Additionally, given the instrument used in this study, it is possible that some respondents may have failed to identify changes in their lives that ocured gradually over a long period of time. Clearly, there is a need for a longitudinal study to clarify the cumulative effects of STS on young people orphaned by AIDS.

(vii) Research on emotional expression will offer important conceptual understandings that enhance social support pedagogy by providing evidence to support the deleterious effect that certain emotions can have on overall well-being and quality of life of young people orphaned by AIDS.

(viii) Additional research to help build and develop theory related to burnout, compassion satisfaction and compassion fatigue will be worthwhile. Specifically, from a stand point of grounded theory, it will be imperative to design a study where responses on the sub-scale of STS (Burnout, Compassion Satisfaction and Compassion Fatigue) can be compared with groups of respondents and their differences developed into a theory.

(ix) As questions in STS test used in this study related only to trauma associated with AIDS orphanhood, these findings may not be generalizable outside of this group of respondents to the wider domain of traumatology research and to children orphaned by other causes. It is important, therefore, that research with other children who may be traumatized due to other causes of orphanhood, other than AIDS, be investigated. Additionally, research with other people working in the field of HIV/AIDS, other than orphans, would be enlightening. Also,

AIDS orpahns from other districs in Kenya, and other regions within the Sub-Saharan region should be investigated for STS and results compared with the present study findings. With these recommendations, I rest my case.

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APPENDICES

Appendix 1: The Questionnaire

PART 1: BIOGRAPHICAL QUESTIONNAIRE

Before you begin we would ask you to answer a few general questions about yourself: by circling the correct answer or by filling in the space provided.

1	What is your gender?	1. Male 2. Female
2	How old are you?	--------- Years (Age in years NOT date of birth)
3	What is the highest education you received?	1. None at all 3. Secondary 2. Primary 4. University
4	What is your marital status?	1. Single 4. Separated 2. Married 5. Divorced 3. Living as married 6. Widowed
5	When were you orphaned?	1. By Father ---------- (Enter year e.g. 2000) 2. By Mother ----------(Enter year e.g. 2003)
6	Were you involved in anyway as a caregiver to your parent(s) when they were sick?	a. Yes b. No.
7	If the answer to question 6 above is yes, what did your work involve as a caregiver?	1. Household chores 2. Farm work 3. Nursing care 4. Household head (income generating) 5. Other.
8	Who were you taking care of?	1. Father only 2. Mother only 3. Both Father and Mother 4. Only my Brothers and Sisters 5. Mother, Father and my Brothers and Sisters.
9	How many hours per day did you spend caring for your sick parent(s)?	----------(Enter number of Hours e.g. 5 Hrs per day)
10	For how long did you work as a caregiver to your parent(s)?	----------(Enter number of months/years e.g. 5 months)

		Very poor	Poor	Neither poor nor good	Good	Very good
G1	How would you rate your quality of life?					

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
G2	How satisfied are you with your health?					

PART II: QOL – SECONDARY TRAUMATIC STRESS (STS) TEST

Instructions

Helping your parent(s) put you in direct contact with their lives. This assessment asks how you feel about your quality of life, health, or other areas of your life. **Please answer all the questions.** If you are unsure about which response to give to a question, **please choose the one** that appears most appropriate. Consider each of the following characteristics about you and your **current** situation. Please keep in mind your standards, hopes, pleasures and concerns. We ask that you think about your life **in the last one (1) Month.**

Please read each question, assess your feelings, and circle the number on the scale for each question that gives the best answer for you.

		Not at all	Rarely	A few times	A moderate amount	Very much	An extreme amount
1 (BO.1)	I am happy I enjoy life.						
2 (BO.2)	I feel connected to and accepted by the people I know.						
3 (BO.3)	I am losing sleep over my parent's traumatic experiences.						
4 (BO.4)	I feel that physical pain prevents me from doing my daily work?						
5 (BO.5)	I have beliefs that sustain me.						
6 (BO.6)	I accept my bodily appearance because I am the person I always wanted to be.						
7 (BO.7)	I feel too exhausted to perform my daily activities.						
8 (BO.8)	I have enough energy for everyday life.						
9 (BO.9)	I feel "bogged down" by my physical environment.						
10 (BO.10)	I am a too sensitive person.						
11 (CS.1)	I get satisfaction from the fact that I was able to help my parents.						
12 (CS.2)	How available to you is the information that you need in your day-to-day life?						
13 (CS.3)	I liked my work as a helper because it made my life meaningful.						
14 (CS.4)	I am pleased with how I keep up with my peers' in spite of my parents' death.						
15 (CS.5)	I am satisfied with myself.						
16 (CS.6)	I have happy thoughts and feelings about my family members and friends.						
17 (CS.7)	I believe I cam make a difference in the life of my family members and friends.						
18 (CS.8)	How much do you fear the future?						
19 (CS.9)	I am satisfied with my access to health services.						
20 (CS.10)	I am satisfied with my capacity to do my work.						

21 (CF.1)	I am bothered by the physical problems related to my parents' death.						
22 (CF.2)	I jump or am startled by unexpected sounds.						
23 (CF.3)	I find it difficult to separate my personal time from my time for leisure activities.						
24 (CF.4)	I think that I might have been "infected" by the traumatic stress of my parents.						
25 (CF.5)	I am bothered about people blaming me for my parents' status and death.						
26 (CF.6)	I feel depressed in my daily life as a result of my parents' sickness and death.						
27 (CF.7)	I feel as though I am experiencing the trauma of my parents whom I helped.						
28 (CF.8)	I avoid certain activities or situations because they remind me of frightening experiences of my parents.						
29 (CF.9)	As a result of helping my parents, I have intrusive, frightening thoughts.						
30 (CF.10)	I can't have enough money to meet my needs.						

Do you have any comments about the assessment? ----------

Thank you for your help

PART III: KII/FGD Guide

The following are a list of the criteria for STS

A	The person has been exposed to a traumatic event in which both of the following were present:
	The person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others.
	The person's response involved intense fear, helplessness, or horror. Note: In children, this may be expressed instead by disorganized or agitated behaviour
B	The traumatic event is persistently re-experienced in one (or more) of the following ways:
	Recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions. Note: In young children, repetitive play may occur in which themes or aspects of the trauma are expressed.
	Recurrent distressing dreams of the event. Note: In children, there may be frightening dreams without recognizable content
	Acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur on awakening or when intoxicated). Note: In young children, trauma-specific re-enactment may occur.
	Intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event
	Physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event
C	Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:
	Efforts to avoid thoughts, feelings, or conversations associated with the trauma
	Efforts to avoid activities, places, or people that arouse recollections of the trauma
	Inability to recall an important aspect of the trauma
	Markedly diminished interest or participation in significant activities
	Feeling of detachment or estrangement from others
	Restricted range of affect (e.g., unable to have loving feelings)
	Sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)
D	Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following:
	Difficulty falling or staying asleep
	Irritability or outbursts of anger
	Difficulty concentrating
	Hypervigillance
	Exaggerated startle response
E	Duration of the disturbance (symptoms in Criteria B, C, and D) is more than 1 month.
F	The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Appendix 2: The Questionnaire in Local Dialect

MIGAWO MOKWONGO: NONRO MARI

Kapok ichako to dewaher penji penjo moko kuomi iwuon: ka ilworo kata chiwo dwoko makare ei nafas momiyi mwalogi.

1	In wuowi koso nyako	1. Wuowi 2. Nyako
2	In jahigni adi?	--------- Years (Higni magi. Kid indik odiochieng nyuol)
3	Somo mari rom nadi?	1. Ok adhi skul kata matin 2. An ja Secondary 3. An ja Primary
4	Nade, isekendo koso osekendi?	1. An rawera 4. Wabalo 2. An gi oda 5. Ne wawere 3. Wadak kagima wasekendore 6. Jaot osetho
5	Nade, janyuolni ne onindo kar ang'o?	1. Wuoro ----------(Ndik higa, kuom ranyisi 2000) 2. Miyo ---------- (Ndik higa, kuom ranyisi 2003)
6	Nade, bende ne itiyo tich moro amora mar konyo janyuolni kane otuo?	1. Ee en kamano 2. Ngang' ok kamano
7	Ka dwoko mamalono en Ee, tiji to ne en ang'o kaak jakony?	1. Tije mag ot 2. Tich puodho 3. Tich rite e yor tuo 4. Kaka jarit nyithindwa mamoko (manyo yor konyruok) 5. E yoo moro ma ok onyis malokanyo.
8	En ng'ano mane irito?	1. Wuora kende 2. Mama kende 3. Wuora gi Mama 4. Owetega kod nyiminega kende 5. Mama, Wuora kaachiel kod owetena gi nyiminena
9	Gin seche adi, odiochieng' ka odiochieng' mane itiyogo e yor konyo janyuolni ka otuo?	----------(Ndik kar kwan seche, kuom ranyisi seche 5 e odiochieng')
10	Tij konini ne itime kuom kinde madirom nadi?	----------(Ndik kar kwan dweche kata higni ma mae nokawo, kuom ranyisi, dweche 5)

		Rach ahinya	Rach	Ok rach, be ok ber	Ber	Ber ahinya
G1	Era kaka inyalo pimo kit ngima ma idago?					

		Ok amorgo kata matin	Ok amorgo	Akia kata amorgo kata ok amorgo	Amorgo	Amorgo ahinya
G2	Nade, ere kaka ineno kit ngimani?					

MIGAWO MAR ARIYO: QOL – PENJ KUOM KIT WECHE MOKO MATIMORE E NGIMANI

Weche monego ilu

Konyo janmyuolni keti ebedo e achiel kod ngimagi. Penjogi fuono kaka kaka iwinjo kaluwore kod kit ngima ma idago kaachiel kod weche moko mag kit ngimani. **Yie idwok penjogi tee.** Ka ok in kod adiera kod dwoko monego ichiw to yie **iyier achiel kuom mago manenore ni nimachiegni ahinya** kod kaka iparo. Par ahinya kuom weche mochiw mwalo kaegi kaluwore kod in iwuon gi ngimani ma saani. Ndir pachi e kit dwaro mari, geno mari, gombo ni kaachiel gi gik machando chunyi. Wakwayi mondo ipar wechegi e kit ngimani mar **dwe achiel.**

Yie isom penjo ka penjo, inon kaka iwinjo, kaeto ilwor namba e rang'iny mar penjo mamiyi dwoko maber moloyo kuom dwo mochiwgi duto.

		Ok kamano chutho	Pore	Ka dichiel	E diere	Di mang'eny	Mang'eny ahinya
1 (BO.1)	Amor, adak maber.						
2 (BO.2)	Awinjora gi joma adakgo kendo gihera.						
3 (BO.3)	Nindo ok tera ka aparo jonyuolna.						
4 (BO.4)	Rem marama mona timo tijega ma pile.						
5 (BO.5)	An gi yie marita.						
6 (BO.6)	Ayie kod kaka an nikech ayudo ka achal gi kaka owinjore abedi.						
7 (BO.7)	Awinjo ka aol ahinya ma ok anyal timo tiojega mapile.						
8 (BO.8)	An gi teko moromo mar dago ngimana mapile.						
9 (BO.9)	Chunya ojok gi kama adakie.						
10 (BO.10)	Ngima makoro adago ni omiyo pacha koro tiyo matek.						

11 (CS.1)	Awinjo ka amor nikech kony mane akonyogo jonyuolna ka gituo.						
12 (CS.2)	Nade, ere kaka iyudo weche makonyi e ngimani mapile?						
13 (CS.3)	Ne ahero tich konyo jonyuolna nikech nomiyo ngimana bedo maber.						
14 (CS.4)	Amor gi kaka ariwora gi mbesena, kata bed ni aonge jonyuolna kamano.						
15 (CS.5)	Amlor chutho gi kaka an.						
16 (CS.6)	An kod paro mabeyo chutho kuom wedena kod osiepena.						
17 (CS.7)	An gi yie ni anyalo kelo lokruok maber e kit ngima mar wedena kod osuiepena.						
18 (CS.8)	Nade, be in kod lworo moro amora e kit ngimani mabiro?						
19 (CS.9)	Amor gi yorena mag yudo weche thieth.						
20 (CS.10)	Amor gi teko ma ango mar timo tijena.						

21 (CF.1)	Aol gi sandruok maneno bang' thoo mar jonyuolna.						
22 (CF.2)	Koko, ywak kata dhawo ma ok ahikorane buoga.						
23 (CF.3)	Di mang'eny ayudo ka adich ma ok anyal yudo kata kinde mar yweyo.						
24 (CF.4)	Aparo ni sandruok mane jonyuolna oneno pod chando chunya nyaka kawuono.						
25 (CF.5)	Aol gi ji masiko wuoyona kuom two kod tho mane onego jonyuolna.						
26 (CF.6)	Chunya okuyo pile kaluwore gi two kod tho mane onego jonyuolna						
27 (CF.7)	Chalna mana ka gima asandora kaka ne asandora kane atwoyo jonyuolna.						
28 (CF.8)	Abedo mabor gi timbe moko kata kuonde moko nikech giparona sandruok malich mane jonyuolna oneno.						
29 (CF.9)	Kony mane akonyogo jonyuolna pod miyo abedo gi paro moko maricho.						
30 (CF.10)	Nyaka ne jonyuolna tho, koro ok anayl yudo manyonge mar ng'iewo gira moro madwaro.						

Nade, dibed gi wach moro amora kuom penjogi? ----------

----------**Erokamano kuom dwoko penjogi**

MIGAWO MAR ADEK: PENJ MAG NGOYO MBAKA GI JO PINY

Mamwalogi gin ranyisi mag olo ma mero dhano

A	Ka ng'ato osebet gi kit chnadruokni e ngimane makoro weche machal gi mamwalo kaegi yudore:
	Ng'ato ne owinjo, oneno kat room go mak olwer mane okelo bwok mar tho, hinyruok kata hinyruok ne en owuon kata jomamoko.
	Ng'atni nobedo gi luoro, nyosruok mar chuny, yomyom, kata midusi miwuoro. E yoo machielo en ni kuom nyithindo, ma nyalo nyisore e yor ngohruok kata timbe machienglo.
B	Bwok malichne dhi yime ka iwinjo e kit ngima a achiel kuom yore ma mwalo kaegi:
	Paro maricho mosiko e yor gik mineno, paro matut, kata gombo. Kuom nyithindo, ma nenore e tugo achiel minwoyo ka nyiso kit chandruokmalich ma gisebedogo e kit ngimagi.
	Nworuoik mag lek maricho. Kuom nyithindo, ma nenore elek maricho matindgi fuono tek.
	Timruok ka gima timo olo ni (komedore gi mijing'o mar yudo konyruok, paro magalagalakaachiel kod gombo gik mabeyo mosekadho, kata mane otimore ka ng'ato omer). E nyithindo, chandruok ma masirani kelo nyalo nenore ayanga.
	Paro matut kuom weche mahiye machal g imago makelo paro maricho.
	Tekruok mang'eny kuom gino manade machal kod kata kelo paro magala-gala.
C	Tamruok pile riwruok kod gogo makelo paro kaahiel kod kido (mane onge kapok chandruok kobetie), kinyise e achiel kuom yore mamwalogi:
	Temo matek mar geng'o paro, winjo, kaachiel kod weche moko makelo paro
	Tamruok timo tivh, dhiyo kuonde mamoko, kat jogo mamoko mamedi paro mar chandruok
	Lalo paro kuom gik madongo mosetimoreni
	Bedo maonge kod gombo mar timo gigo ma jomamoko timo kendo yudoe mor
	Pogruok e kanyakla
	Bedo manonge kod chuny mar hera
	Paro mar bedo kod ngima machwok (kuom ranyisi bedo ma onge genomar bedo ko jaot, somo kod tich maber, nyithindo kaachiel kod higni mang'eny)
D	Ranyisi mag mutni mosiko (mane ok ne ka chandruok ne pok odonjo), konyisi kod achiel kata mang'eny ma mwalo kaegi:
	Bedo maonmge nindo kata matin.
	Bedo maonge nyalo kod ichwang' mosiko
	Bedo gi chanduok kuom timo tich
	Pupni
	Bwogruok mang'eny
E	Kinde marom nadi ma chandruokni osekawo (Ranyisi gin manerore e B, C, kod D) mohingo dwe achiel.
F	Thagruok makelo nyosruok mar chuny kata dokchien matut e yor kaka wadak gi jomamoko, e kwondewa mag tich, kata kuonde manade madong'o ma wayudore kinde ka kinde.

Appendix 3: List of Schools from where Pilot Study Subjects were drawn

Schools in Ober Zone	School selected for Pilot Study	Number of respondents		Total
		Male	*Female*	
Ober boys	Ober boys	2	0	2
Ober mixed	Ober mixed	0	2	2
God Ber	God Ber	1	1	2
Kakelo	Kakelo Mixed SS	1	1	2
Omiro	Omiro Mixed SS	1	1	2
Saramba	Saramba	1	1	2
Nyabondo	Nyabondo	1	1	2
Kakiri	Kakiri	1	1	2
Ragogo	Angino Mixed SS	1	1	2
Gangre	Gangre	1	1	2
Dudi	Dudi	1	1	2
Oriri	Oriri	1	1	2
Ranena	Ranena	1	1	2
Riwo	Riwo	1	1	2
Atemo	Atemo Mixed SS	1	1	2
Total	15 Schools	15	15	30

Appendix 4: List of Schools from where Study Participants were traced

Name of Zone	Name of School	Number of Participants by Sex		Total
		Male	*Female*	
Ober	Ober Mixed	63	45	108
Ober	Omiro	41	29	70
Ober	Saramba	16	11	27
Ober	Nyabondo	31	22	53
Ober	Dudi	14	10	24
Ober	Omiro Mixed SS	03	03	06
Ober	Kakelo Mixed SS	04	03	07
Ober	Atemo Mixed SS	04	03	07
Ober	Angino Mixed SS	04	03	07
Total	37 Schools	180	129	309

Appendix 5: Letter of Research Authorization

OFFICE OF THE PRESIDENT

Telephone: (059) 31210 and 31217
When replying please quote
Ref. No. RA. [illegible] VOL. I. ([illegible])
and date

THE DISTRICT COMMISSIONER
RACHUONYO DISTRICT
P.O. Box 1
KOSELE
[illegible] June, 20 05

The District Officer,
[illegible] DIVISION.

RE: RESEARCH

[illegible]

[illegible] is a Ph.D [illegible] He has been authorized to carry out research [illegible] thesis entitled "[illegible] Prac- [illegible] and quality of [illegible] Or- [illegible] Division, Rachuonyo District.

Please assist where necessary.

([illegible])
FOR: DISTRICT COMMISSIONER
RACHUONYO DISTRICT

Appendix 6: Publications and Papers Emanating from the Study

Paper 1
Secondary exposure to trauma and self reported distress among young people orphaned by AIDS Mumah, S. C. J., Nwoye, A., Muga, R. O. and Kigen, E. M.

Presented at the 29th International Congress of Psychology (ICP 2008). International Congress Centrum (ICC) Berlin, Germany, July 20-25, 2008.

Abstract

Given the current knowledge about the influences of exposure, personal history and gender on secondary traumatic stress (STS), we conducted this study to address the following research questions: first, to what extent do AIDS orphans exhibit symptoms consistent with those of STS; and second, to what extent are those symptoms explained by exposure of orphans to their parents' trauma, personal history of trauma, and/or gender? Respondents (N=309) were male (58%) and female (42%) AIDS orphans aged 10-18 years, 71% of whom had been involved in one way or the other as caregivers to their sick parent(s). Using a survey research design, up to 86% male and 81% females were found to be experiencing levels of emotional distress consistent with STS. Levels of care giver role exposure and work related personal traumas were found to be strongly associated with the presence of STS symptoms. Further, there is evidence in this study to suggest that the level of exposure on a short term basis may contribute more to the development of STS. Hence this finding needs to be explored in more depth to better understand the relationship between short term and long term exposure to the traumatic events that orphans face. Ultimately, this research can benefit both the workers in this important field and the orphans whose lives they are helping rebuild.

Paper 2

Secondary traumatic stress: The effects of orphanhood on mind, body, and soul

Mumah, S. C. J., Nwoye, A., Muga, R. O. and Kigen, E. M.

Presented at the 29th International Congress of Psychology (ICP 2008). International Congress Centrum (ICC) Berlin, Germany. July 20-25, 2008.

Abstract

Research in the area of secondary trauma has produced several generalizations about the effect of working with traumatized persons. Core among these is the fact that the people who work with traumatized persons can exhibit the same range of symptoms as victims. Based on this generalization, we conducted this study to assess the prevalence and severity of secondary traumatic stress (STS) symptoms among a sample of young people orphaned by AIDS. Using a survey research design, up to 86% male and 81% female respondents were found to be experiencing levels of emotional distress consistent with STS. Only about 18% of the respondents were found to enjoy good quality of life emotionally, physically and spiritually. In addition, levels of care giver role exposure and work related personal traumas were found to be strongly associated with the presence of those symptoms. Thus, in order to promote our understanding and potential to help orphans, we need further information about the process of how some orphans develop these symptoms, while others appear not to be in distress. Similarly, the differences in distress reported by males and females may be a reflection of differences in willingness to share emotional distress on the part of women.

Paper 3

Secondary exposure to trauma and self-reported distress among orphaned youth: The role of cultural resiliency Mumah, S. C. J., Nwoye, A., Muga, R. O. and Kigen, E. M.

Paper presented during the 19th Congress of the International Association for Cross-Cultural Psychology (IACCP). Jacobs University, Bremen, School of Humanities and Social Sciences, July 27th – 31st, 2008.

Abstract

Since Figley's first suggestion that family, friends and professionals are susceptible to developing traumatic stress symptoms from being empathetically engaged with victims of traumatic events, several authors have argued that traumatic stress symptoms are contagious and can produce similar effects in those who interact with trauma victims. The phenomenon of learning about another's traumatic ordeal, and in the process, experiencing traumatic stress is what is called secondary traumatic stress (STS), and the condition of young people orphaned by AIDS is suspect to STS. This study assessed the prevalence and extent of severity of secondary traumatic stress among young people orphaned by AIDS, identifying the predictive factors of STS that influence quality of life among orphans. Three hundred and nine orphans from Rachuonyo district, Kenya participated in this study. Using a survey research design, up to 23.74% and 30.02% of the participants reported symptoms on at least one sub-scale of STS, between 86% male and 81% female respondents were found to be experiencing emotional distress associated with STS. Levels of care giver work exposure were found to be strongly associated with these symptoms. Consequently, preventive and interventive strategies must address these.

Paper 4

Compassion Fatigue: Understanding the cost of caring between cultures

Mumah, S. C. J., Nwoye, A., Muga, R. O. and Kigen, E. M.

Paper Presented during the 19th Congress of the International Association for Cross-Cultural Psychology (IACCP). Jacobs University, Bremen, School of Humanities and Social Sciences. July 27th – 31st, 2008.

Abstract

This study assessed the prevalence and extent of severity of secondary traumatic stress among young people orphaned by AIDS, as depicted by compassion fatigue- an individual's work-related, secondary exposure to extremely stressful events. Respondents were male (n=180) and Females (n=129) AIDS orphans from a rural district in Kenya. The study adopted the questionnaire as the main tool for primary data collection. Qualitative data were collected in focus groups and through key informant interviews while quantitative data was collected using questionnaires. These were analyzed both quantitatively and qualitatively. Findings include the fact that on average AIDS orphans reported being in distress. More than half of the respondents thought that they might have been "infected" by the trauma of their parents. For males, 30% reported symptoms of compassion fatigue while for Females, close to 28% reported symptoms consistent with compassion fatigue. Here's a call for strategies to address these findings.

Paper 5

Secondary Traumatic Stress and Quality of Life among AIDS Orphans in Rachuonyo District, Kenya Mumah, S. C. J., Nwoye, A., Muga, R. O. and Kigen, E. M.

Presented at the 2008 Summer School of the European Association for Research on Adolescence (EARA) and the Society for Research on Adolescence (SRA). Organized by the EARA & SRA and held at the Faculty of Psychology, Corso San Maurizio 31/A. Torino, ITALY. May 3-7, 2008.

Abstract

Recent advances in Psychological research have suggested that family, friends and professionals are susceptible to developing traumatic stress symptoms from being empathetically engaged with victims of traumatic events. As a result, several authors have argued that traumatic stress symptoms are contagious and can produce similar effects in those who interact with trauma victims. The phenomenon of learning about another's traumatic ordeal, and in the process, experiencing traumatic stress is what is called secondary traumatic stress (STS), and the condition of young people orphaned by AIDS is suspect to STS. For orphans, neither money nor time is available to continue with schooling. Many are dispossessed of their (late) parents' property, and become vulnerable to unscrupulous relatives who grab their (late) parents' immovable properties and land. They must contend not only with the normal stress or dissatisfaction or work, but also with the emotional and personal feelings for their ill and dying parent(s) and the suffering siblings. This study assessed the prevalence and extent of severity of secondary traumatic stress among young people orphaned by AIDS, identifying the predictive factors of STS that influence quality of life among orphans. Specific objectives were to: assess the prevalence and extent of severity of secondary traumatic stress symptoms among young people orphaned by AIDS; investigate predictive factors of secondary traumatic stress among orphans; explore differences in secondary traumatic stress between genders among AIDS orphans; establish the relationship between secondary traumatic stress symptoms and variables that are associated with orphanhood and cumulative stress effect; and, finally, to assess and compare quality of life of AIDS orphans. Three hundred and nine AIDS orphans from Kakelo location of Rachuonyo district in Nyanza province, Kenya participated in this study. The study adopted the questionnaire as the main tool for primary data collection. Qualitative data were collected in focus groups and through key informant interviews while quantitative data was collected using questionnaires. These were analyzed both quantitatively and qualitatively. Findings include the fact that on average AIDS orphans reported being in distress. Between 23.74% and 30.02% of the participants reported symptoms on at least one sub-scale of STS. For males (n=180), over 26% reported symptoms of burnout. About 28% reported symptoms of compassion satisfaction while 30% of them reported symptoms of compassion fatigue. For Females (n=129), close to 24%, 27% and 28% respectively reported symptoms of burnout, compassion satisfaction and compassion fatigue respectively. Overall, 86% males and 81% females reported symptoms consistent with STS.

Paper 6

Secondary Traumatic Stress: The effects of overwhelming experience on adolescent's mind, body and soul Mumah, S. C. J., Nwoye, A., Muga, R. O. and Kigen, E. M.

Paper presented at the 11th International Conference of the Association for Research on Adolescence (EARA) and held at the Faculty of Psychology, Corso San Maurizio 31/A. Torino, ITALY. May 7-10, 2008.

Abstract

This study assessed the prevalence and extent of severity of secondary traumatic stress (STS) among adolescents orphaned by AIDS. Three hundred and nine AIDS orphans from Kakelo location in Rachuonyo district, Nyanza province, Kenya participated in this study. Qualitative data were collected in focus groups and through key informant interviews. Using a survey research design, between 86% male and 81% female respondents were found to be experiencing emotional distress associated with STS. Additionally, there is some evidence to suggest that the level of exposure on a short term basis may contribute more to the development of STS than the overall duration worked as care giver to the sick parent(s). Results further indicate that beyond the harm of orphanhood, adolescents orphaned by AIDS face a greater likelihood of becoming more seriously traumatized in their continued work as caregivers to their siblings. Consequently, preventive and interventive strategies must address the phenomenon of STS among young people orphaned by AIDS and how this impact on their quality of life.

Paper 7

Secondary Traumatic Stress among young people orphaned by AIDS in Kenya

Mumah, S. C. J., Nwoye, A., Muga, R. O. and Kigen, E. M.

Presented at the Training Workshop on "Communicating Population and Health Research to Policy Makers". Organized by the Population Reference Bureau (USA); Population Studies and Research Institute, University of Nairobi; and the National Coordinating Agency for Population and Development (Kenya). Nairobi, KENYA. May 28th – June 8th, 2007.

Abstract

In 1978, Figley suggested that family, friends and professionals are susceptible to developing traumatic stress symptoms from being empathetically engaged with victims of traumatic events. Since then, several authors have argued that traumatic stress symptoms are contagious and can produce similar effects in those who interact with trauma victims. The phenomenon of learning about another's traumatic ordeal, and in the process, experiencing traumatic stress is what is called secondary traumatic stress (STS), and the condition of young people orphaned by AIDS is suspect to STS. For orphans, neither money nor time is available to continue with schooling. Many are dispossessed of their (late) parents' property, and become vulnerable to unscrupulous relatives who grab their (late) parents' immovable properties and land. They must contend not only with the normal stress or dissatisfaction or work, but also with the emotional and personal feelings for their ill and dying parent(s) and the suffering siblings. This study assessed the prevalence and extent of severity of secondary traumatic stress among young people orphaned by AIDS, identifying the predictive factors of STS that influence quality of life among orphans. Specific objectives were to: assess the prevalence and extent of severity of secondary traumatic stress symptoms among young people orphaned by AIDS; investigate predictive factors of secondary traumatic stress among orphans; explore differences in secondary traumatic stress between genders among AIDS orphans; establish the relationship between secondary traumatic stress symptoms and variables that are associated with orphanhood and cumulative stress effect; and, finally, to assess and compare quality of life of AIDS orphans. Three hundred and nine AIDS orphans from Kakelo location of Rachuonyo district in Nyanza province, Kenya participated in this study. The study adopted the questionnaire as the main tool for primary data collection. Qualitative data were collected in focus groups and through key informant interviews while quantitative data was collected using questionnaires. These were analyzed both quantitatively and qualitatively. Findings include the fact that on average AIDS orphans reported being in distress. Between 23.74% and 30.02% of the participants reported symptoms on at least one sub-scale of STS. For males (n=180), over 26% reported symptoms of burnout. About 28% reported symptoms of compassion satisfaction while 30% of them reported symptoms of compassion fatigue. For Females (n=129), close to 24%, 27% and 28% respectively reported symptoms of burnout, compassion satisfaction and compassion fatigue respectively. Overall, 86% males and 81% females reported symptoms consistent with STS.

Paper 8

Burnout, compassion fatigue and quality of life among young people orphaned by AIDS

Mumah, S. C. J., Nwoye, A., Muga, R. O. and Kigen, E. M.

Paper presented at the 26th International Congress of Applied Psychology. Organized by the International Association of Applied Psychology and held at the Divani Caravel Hotel, Athens, GREECE. July 16th – 21st, 2006.

Abstract

Current estimates indicate that 1.5 million people have died of HIV/AIDS in Kenya, leaving behind approximately 1.3 million orphans. Young people orphaned by HIV/AIDS have neither money nor time to continue with schooling. They must contend with not only the normal stress or dissatisfaction, but also with the emotional and personal feelings for their dead parent(s) and suffering siblings. For many, the only resources they have to help them cope with this emotional, physical and spiritual distress are themselves, making them vulnerable to burnout, compassion fatigue and poor quality of life. This study used quantitative and qualitative methods to investigate burnout syndrome among AIDS orphans and assess their quality of life among. Three hundred orphans from a rural district in Kenya participated in the study. Preliminary results indicate high prevalence of physical, emotional, and mental exhaustion among orphaned youth caused by a depletion of their ability to cope with care roles resulting from their responses to the death of their parent(s) and resultant household role changes. High levels of cumulative stress in the lives of orphaned caregivers have negatively affected their resiliency further making them more susceptible to compassion fatigue and impacting very negatively on their overall quality of life.

Paper 9

Secondary traumatic stress among children orphaned by AIDS in Kenya: Prevalence, severity and predictive factors Mumah, S. C. J., Nwoye, A., Muga, R. O. and Kigen, E. M.

Paper presented at the 26th International Congress of Applied Psychology. Organized by the International Association of Applied Psychology and held at the Divani Caravel Hotel, Athens, GREECE. July 16th – 21st, 2006.

Abstract

This study assessed the prevalence and severity of secondary traumatic stress (STS) symptoms among a sample of AIDS orphans (n=305) in a Kenyan rural district. Using a survey research design, up to 61% of the respondents were found to be experiencing significant levels of emotional distress associated with and STS. Additionally, personal traumatic events in the line of caring for the (late) parents and the duration and intensity of exposure to parent's traumatic material were found to be strongly associated with the presence of those symptoms. Preventive and interventive strategies to address these findings are suggested.

Paper 10

Burnout, Compassion Fatigue and Quality of Life among Orphaned Children in Kenya

Mumah, S. C. J.

Pilot study data presented at the Second ICOH International Conference on PSYCHOSOCIAL FACTORS AT WORK (ICOH-WOPS2005). Organized by the Okayama University Graduate School of Medicine and Dentistry, Hygiene and Preventive Medicine and held in Okayama, JAPAN, August 23rd – 26th, 2005.

Abstract

Current estimates indicate that 1.5 million people have died of HIV/AIDS in Kenya, leaving behind approximately 1.3 million orphans. With an HIV prevalence rate of 13% and a mortality rate of 700 per day among adults of reproductive age, the country is producing orphans at an alarming rate. Many children orphaned by HIV/AIDS have neither money nor time to continue with schooling. They must contend with not only the normal stress or dissatisfaction of work, but also with the emotional and personal feelings for their dead and/or dying parent(s) and suffering siblings. For many, the only resources they have to help them cope with this emotional, physical and spiritual distress are themselves, making them vulnerable to burnout, compassion fatigue and poor quality of life. This study used quantitative and qualitative methods to assess burnout syndrome among children orphaned by HIV/AIDS; explore differences in compassion fatigue among them and assess and compare quality of life of AIDS and non-AIDS orphans. Two hundred orphans from a rural district in Kenya participated in this study. Preliminary results indicate high prevalence of physical, emotional, and mental exhaustion among orphaned children caused by a depletion of their ability to cope with care roles resulting from their responses to the death of their parent(s) and resultant household role changes. High levels of cumulative stress in the lives of orphaned caregivers have negatively affected their resiliency further making them more susceptible to compassion fatigue and impacting very negatively on their overall quality of life.