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2011-11-23
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Stress And Healthcare Workers Caring for People Living With HIV/AIDS in Polokwane Municipality Clinics

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A research report submitted to the Faculty of Health Sciences, University of the Witwatersrand, in fulfilment of the requirements for the degree
of
Masters in Family Medicine

Johannesburg, 2010

DECLARATION

I, _____declare that this research report is my own work. It is being submitted for the degree of Masters of Science in Family Medicine in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other University.

_____
Signature of Candidate

_____
Date:

Abstract

Aim

Stress among healthcare workers (HCWs) working with HIV/AIDS patients is an important deterrent to provision of services to HIV patients. The main aim of this study was to determine the prevalence of stress levels among HCWs in Polokwane Municipality HIV clinics.

Method

Forty-four HCWs in four different clinics completed a self administered questionnaire. Questionnaire consisted of demographic info, the *Maslach Burnout Inventory*, the *AIDS Stress scale* and the stressors and rewards of HIV/AIDS work.

Results

The majority of the healthcare workers (HCWs) in this study were female (77%) and married (64%). The biggest professional group were nurses (46%) followed by lay counsellors (25%). The mean age of the HCWs was 39. The results of this study revealed that half of the respondents (52%) had high level of emotional exhaustion and depersonalization. A total of 27% of HCWs had moderate to severe AIDS stress as measured by *AIDS Stress Scale*. An overwhelming majority (95%) of HCWs reported that they enjoy their work with HIV/AIDS patients.

Conclusion

Despite the high levels of burnout, the majority of HCWs in the HIV clinics find HIV/AIDS work rewarding. Workplace related stressors rather than the actual work with HIV/AIDS patients is a major source of stress.

Acknowledgements

Firstly, I wish to thank my supervisor, Prof Ian Couper for guiding me through this project. Many thanks to Dr Anne Wright, the course coordinator for MFamMed for the enthusiasm and encouragement.

I am grateful to the various managers of the hospitals and HIV clinics for their co operation and to the Department of Health in Limpopo Province for allowing me to proceed with this project.

I wish to thank Mr Sam Ntuli, statistician at Polokwane hospital for his assistance in analysing the data.

Special thanks to the HCWs who took time from their daily routines to participate in this study

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CHAPTER 1: Introduction

Background

An estimated 5.6 million South Africans were HIV positive in 2008; this is the largest number of HIV infected people in any country in the world[1]. The prevalence rate among adults between the ages of 20 and 64 was estimated to be 16.5% which is higher than the rate in sub Saharan Africa and globally[2]. The prevalence rate is much higher among women of reproductive age and an estimated 180 000 children are HIV infected. In 2006, an estimated 350 000 South Africans died of HIV related illnesses - comprising 47% of all deaths[3]. It is clear from this estimates that South Africa is experiencing a serious epidemic.

In 2003 the South African Government approved the operational plan for comprehensive HIV and AIDS care, management and treatment. Subsequently ART clinics were established in all 9 Provinces. The main goal of this plan was to provide holistic care for HIV infected individuals. A range of services are available at these clinics including medical treatment (antiretroviral therapy), voluntary counselling and testing services, nutritional assessments and psychosocial support. These ART clinics use the services of an array of healthcare workers (HCWs) in order to provide comprehensive care for patients. The team of healthcare workers include medical officers, nurses, pharmacists, dieticians, social workers and counsellors.

The public health system which is responsible for providing heath care services to the majority of the South African population, is crippled by severe shortages of healthcare workers especially professionals. This is because of a shift of HCWs to other countries and to the private sector. In a rural province like Limpopo this is worsened by the disproportionate distribution of HCWs favouring more urban provinces. Poor working conditions and uncompetitive remuneration are also cited as reason for attrition of professionals in the public sector. The ART programme has increased the need for skilled professionals in an already disadvantaged public health system[4].

Some researchers have reported high levels of work- related stress among HCW caring for people living with HIV/AIDS (PLWHA) [9,21,25]. The occurrence of stress and burnout among HCWs can have serious consequences for the healthcare system. It can result in high staff turnover, increased absenteeism and reduced quality of care for patients. The success of the ART programme is dependent on an optimally functioning work force to meet the goals of

providing ART to thousands of people who need it. This study looks into the issue of stress among healthcare workers caring for PLWHA in ART clinics in the Polokwane municipality area.

Aim of Study

The aim of this research was to determine the prevalence of stress and its related factors in HCWs caring for PLWHA in Polokwane municipality HIV clinics. The objectives included the following:

Objectives of Study

1. To document the demographic profile of the healthcare workers in Polokwane municipality HIV clinics
2. To determine the prevalence of perceived stress among these HCWs
3. To explore the perceived stressors of these HCWs when providing care for PLWHA
4. To explore the perceived rewards experienced by HCW when providing care for PLWHA.

Motivation for the study

HIV medicine dominates the scope of clinical practice especially in the public sector. This is what pushed me to be involved in this field and to work at the ART clinic. As the only doctor at the time my experience was conflicted. At times I experienced sadness and frustration because of the many challenges we faced. However, at the same time, I have never experienced such rewarding work because some of the patients we treated would recover almost miraculously and claim their life back. The motivation for this study was to highlight the impact of HIV work on the HCWs.

Significance of Study

In March 2007 the South African department of health released the National HIV & AIDS and STI Strategic Plan (NSP). The two major goals of the NSP are to reduce the incidence of HIV in South Africa by 50% by 2011 and to ensure that at least 80% of those eligible for antiretroviral treatment (ART) have access to it. Lack of human resource capacity is a major threat to the success of the ART programme. This research focuses on healthcare workers in

ART clinics. Enhanced insight on experience of HCWs at the ART clinics will assist in optimizing the workforce to meet the goals set by the government.

Furthermore, because of the higher prevalence of HIV and the scarce resources in developing countries, it is essential that research focus is shifted from more developed countries to developing countries. This will improve comprehension on issues that healthcare workers face in developing countries. Improved understanding will assist in planning strategies to retain HCWs currently in the system and improve the quality of services offered.

CHAPTER 2: Literature Review

2.1 Introduction

The literature on stress and HIV caregivers has evolved since the beginning of the epidemic where the disease was universally fatal and was associated with homosexuality and drug abuse. This literature review includes the background on stress and burnout syndrome as well as the prevalence of stress and stressors associated with caring for HIV/AIDS patients. In addition to this, three important areas are highlighted. These include the impact of HAART, the developing country context and the positive aspects of caring for patients with HIV/AIDS.

The literature review began with a search using the Pubmed database. The key words used were 'burnout' and 'HIV/AIDS'. This search revealed 45 articles related to this topic. Three review articles were identified in the search and were used for secondary searches. A general search engine was used with the same key words and South Africa as an additional key word. South African reports on this subject were identified.

2.2 Stress and Burnout Definitions

Occupational stress occurs when there is a "discrepancy between the demands of the workplace and an individual's ability to meet these demands"[5]. Burnout is a more severe form of occupational stress. It is an end stage consequence of prolonged stress in the work environment. Because of the personal interaction with people and exposure to emotional content, burnout occurs more frequently in healthcare workers[5]. There are three distinct components of burnout namely emotional exhaustion, depersonalization and reduced personal accomplishment[6]. According to Payne, emotional exhaustion is the initial stage of burnout, followed by depersonalization, which is a coping strategy, and finally a sense of reduced personal accomplishment is experienced[6].

Emotional exhaustion is experienced when the emotional capacity of a worker is decreased such that they are not able to respond emotionally[7]. Then depersonalization occurs where the worker become hardened and displays an uncaring, pessimistic and unsympathetic attitude towards the patients[7]. Depersonalization impacts negatively on the quality of service rendered

by healthcare workers. Reduced sense of accomplishment involves the tendency among HCWs to evaluate positive job performance and achievements negatively[7]. These three components of burnout form the subscales of the Maslach Burnout Inventory (MBI) which is the most frequently used burnout measure[7].

Prolonged stress at work contributes to the deterioration of interpersonal and occupational functioning[8]. At a personal level, one may experience physical symptoms such as insomnia and chronic fatigue. Increased alcohol and other drug use have also been reported. Family and relationship difficulties may occur in people who experience stress at work. At an organizational level the impact may be seen in absenteeism, high staff turnover and low morale among workers[8]. In Health care organizations, this will impinge on delivery of quality services.

2.3 Prevalence of Stress among HIV/AIDS HCW

Concern about the impact of caring for patients with HIV/AIDS is widely reflected in the literature since the outset of the pandemic in the early nineteen eighties. Numerous studies have reported a high level of stress among health workers in the HIV/AIDS field[9,21,25]. On the other hand a number of studies have reported relatively lower levels of stress amongst HCWs in the HIV/AIDS field[10,11]. Therefore work in the HIV field even though it is potentially stressful does not necessarily result in stress and burnout.

Another question is whether HIV /AIDS workers experience more stress than workers in other fields. A UK study by Bennet and Michie comparing oncology and AIDS unit nurses found that nurses in the field of oncology suffered burnout in greater frequency than nurses in the AIDS field[12]. However nurses in the AIDS field suffered greater intensity of burnout. David Miller in the UK Multi-centre Occupational Morbidity study found no difference in burnout scores between the oncology workers and HIV/AIDS workers[13]. These findings suggest that HIV/ AIDS workers experience similar stress levels to other workers in challenging fields.

Some researchers have investigated the factors that influence the development of burnout. Younger workers are more likely to experience stress than older workers[14]. Other variables such as gender, marital status, occupational group and years in giving AIDS care appear to be consistently unrelated to burnout[10,14,24]. In the USA, a survey of 445 nurses examined the

importance that different coping strategies have on burnout in the field of HIV/AID[15]. The results supported the notion that HCWs who used internal coping strategies (i.e. expression of feelings, patience, persistence, time-out techniques) rather than the external coping strategies (pessimistic strategies, passiveness, religiosity and denial) experienced lower levels of burnout. This is attributed to the fact that those who used external coping mechanisms usually believe that they have no control over work related stressors and passively accept a difficult situation.

The dawn of ARV medication in the mid 1990s caused a shift in the care of HIV/AIDS patients. During the era before highly active antiretroviral therapy (HAART), often referred to as the dark years of the epidemic, workers experienced demoralization, frustration and helplessness. A study in the US done in AIDS service organizations after the advent of HAART found that overall respondents rated the level of stress in their work as moderate and not high[11]. In fact the respondents rated the reward higher than the stressors. The researcher concluded that the level of stress associated with AIDS caregiving may have diminished because of the advances in treatment. However, the fact that the HIV Volunteer Inventory rather than the MBI or the AIDS impact scale was used to collect the data render this study difficult to compare with prior studies.

2.4 Context of Developing Countries

It is important to review the impact on HCWs in poorer countries like South Africa. Developing countries share the challenges of higher prevalence of HIV, poor socio-economic status of patients and inadequate health resources. South Africa like other Sub Saharan Countries is experiencing a more generalized epidemic that is not limited to high risk groups such as commercial sex workers, intravenous drug users and men having sex with men (MSM). In a cross sectional study conducted among 52 healthcare workers in palliative care centers in Bangalore, India, Chandra et al reported high levels of burnout among the respondents[16]. The MBI and the AIDS Stress scale were both utilized to measure the extent of the problem. This study focused on the palliative care context and did not look into the issue of ARV treatment.

Another study of 52 medical residents in Kenya, using questionnaires and semi structured interviews, found that 84% of the resident reported added stress when working with HIV/AIDS patients[17]. The residents cited overwhelming HIV infection rate in the hospital as

one of the important factors that negatively affected their motivation and aspiration to continue with a medical career. This study was done in an environment characterized by lack of resources and a large number of patients affected by HIV/AIDS. ARV treatment was not available to treat these patients. It supports the notion that lack of resources and treatment coupled with poor working conditions would increase the experience of stress among HCWs.

Similarly in a more recent study in two rural districts in Zambia HCWs reported moderate to high levels of emotional exhaustion among 62% of the respondents[18]. The MBI score correlated with the answers provided on in-depth interviews where workers often felt frustrated, tired and overworked. The researcher concluded that HIV/AIDS complicates an already difficult work environment. In this study the issue of access to HAART was not fully addressed. Three of the eight hospitals involved in the study had some access to ART.

In South Africa a study by the Human Science Research Council (HSRC) examining the impact of HIV/AIDS on healthcare workers was commissioned by the National Department of Health. This was part of a broader study investigating the impact of this disease on the South African health sector[19]. Face to face interviews were used to collect data from health professionals and non health professionals using semi- structured questionnaires. All the 9 provinces were included in the study and a total of 1922 interviews were conducted.

A total of 44% of the respondents in this study felt that the prevalence of HIV impacted on their work. They indicated that they experienced frustration, fear and depression due to contact with patients living with HIV/AIDS and the limitations in the working environment. The respondents cited several factors including stressful working conditions, heavy patient load, staff shortages and low morale as work-related issues that affected them in their workplace. There was no standardized tool used to estimate the level of stress or burnout in this study and therefore it is not easily comparable with other studies. The study was commenced before the introduction of HAART in the public sector.

A later study investigated stress and compassion fatigue among nurses in the Free State[20]. A total of 543 nurses were surveyed; 183 of these nurses were employed at ART facilities and 361 were employed in primary health care clinics (PHC) clinics. This study employed various measuring instruments including the MBI. The majority of the respondents (both ART and PHC nurses), 68% and 85% experienced high levels of emotional exhaustion and depersonalization respectively. In addition only 12% of respondents had high levels of personal accomplishment. The majority of respondents (91%) had moderate levels of personal

accomplishment. There were no significant differences observed in terms of burnout between the nurses in PHC clinics and nurses in ART clinic. These findings endorse the notion that HIV/AIDS workers do not experience more stress than other workers in other fields. Researchers conducted this study in the early phase of the ART program; the situation may have changed currently.

2.5 Stressors of HIV/AIDS Work

In the early years of the pandemic when there was no treatment available, medical care of patients consisted of mostly palliative and symptomatic care. HIV infection was mostly considered as a fatal disease. Studies done in those years identified the following stressors: clinical manifestations of AIDS and course of the illness, ethical concerns about confidentiality and decisions regarding treatment, risk of contagion, exposure to repeated death of young patients, stigma associated with the illness, dealing with issues of homosexuality and drug addiction[21].

HCWs in the HSRC survey identified the impact of secrecy as major challenge. HCWs were faced with the dilemma of whether or not they should withhold information to partners and relatives who maybe at risk of acquiring infection from patients[19]. The stigma associated with the illness, resulting in late presentation of patients, was also cited as a significant stressor.

The availability of HAART has shifted medical treatment of HIV infection to a chronic manageable illness. Some more recent studies have focused on the experiences of HCWs in the changing context of care[10]. Adherence to HAART has replaced death as a central focus of care among HIV/AIDS workers. HAART requires very high levels of adherence to avoid treatment failure and emergence of resistant virus strains. The relationship between HCWs and patients has been shown to impact on adherence. Adherence issues have placed pressure on this relationship, causing frustration and tension[22].

Healthcare workers are also challenged by the uncertainty that is often part of HAART treatment. They have to balance the optimism about the therapeutic benefits of treatment and uncertainty about the long term efficacy and side effects of treatment[22]. HIV infected patients have to deal with complex psychosocial issues such as adhering to difficult regimens in daily life, financial security and loss of medical benefits. HCWs are faced with the task of supporting their patients as they face these issues[22].

The stressors that characterized the era before HAART did not completely disappear. HCWs continue to be challenged by the emotional burden of caring for dying patients. This is more distressing now in the era of hope and survival. A qualitative study of physicians caring for late stage HIV patients in the post-HAART era emphasizes the difficulty of caring for dying patients in an era of efficacious treatment[23]. Fear of contagion which was considered to be a major stressor in earlier studies, seems to be less significant since advancement of treatment. In a cross sectional study of 180 diverse group of health workers in the AIDS service organizations in New York, respondents rated fear of disease as the least important stressor in their jobs[11].

In the HSRC survey, HCWs reported workplace related stressors which involved increased work load, lack of resources and lack of support as important stressors in their work[19]. Similar findings were reported in the Zambian study of healthcare workers and the study of residents in a Kenya hospital[17,18]. These findings are also confirmed by studies conducted in developed countries[24]. Workers in the AIDS service organizations in New York cited paperwork and inadequate remuneration as the main sources of stress[11]. Relationships with colleagues, supervisors and administrators also contribute to burnout in workers in the HIV/AIDS field[13,24].

2.6 Rewards of HIV/AIDS work

The majority of the research on the impact of caring for HIV patients concentrates on the negative aspects of this work. Some researchers have reported rewards and satisfaction experienced by HCWs in this field. Nashman et al, in a study of AIDS care-givers in the USA noted that factors that contributed to satisfaction include the following: being able to help, relationships with patients, providing non stigmatized care to stigmatized patients, providing comfort and support and receiving positive feedback from patients and families[25].

A later study among HCWs in the United States elaborated on this finding. Rewards associated with AIDS caregiving were rated higher than the stressors in terms of importance in this study[11]. The researcher concluded that this finding was related to the advances in treatment. A survey among 174 HIV volunteers in Australia, using both the MBI and HIV Volunteer Inventory examined the relationship between stressors, rewards and burnout[26]. The results indicated that a lack of personal effectiveness and recognition contributed to frequency

of burnout. The researchers suggest that recognition and rewards experienced by workers can act as a buffer against stress and burnout.

2.7 Conclusion

It appears that HIV/AIDS work can impact negatively and positively on the experiences of HCWs working in this field. Numerous studies in developed and developing countries have reported high levels of stress and burnout among these HCWs. Work-related stressors contribute significantly to the occurrence of burnout. Some researchers suggest that the introduction of HAART has positively influenced the experiences of HCWs in the HIV field. In light of the above this research will focus on the experience of stress among HCWs in a developing country where there is access to HAART.

CHAPTER 3: Methodology

3.1 Study design

This was a descriptive cross sectional study.

3.2 Study Site

The HIV clinics selected for the study include Phela O Phedise (POP) clinic, Hope clinic, Thekganang clinic and Tiirisano clinic. Hope clinic and POP clinic were the first HIV clinics to be established in Limpopo province in 2004. POP clinic is situated 30km east of Polokwane town in Mankweng hospital. The name Phela o phedise translates to "Live and help live". It provides HIV services for the people in Mankweng and surrounding areas. Hope clinic is located in the Petersburg hospital in Polokwane.

Thekganang clinic, which means "support each other" clinic was approved as an ART site in 2007 as part of the drive to improve access to antiretroviral therapy. It is located at Seshego hospital which is situated 15km from Polokwane town. They offer HIV Care to Seshego township and surrounding villages.

Tiirisano clinic, which translates to 'work together' clinic, was established in 2008. It is located at the Rethabile Health centre which is a primary health facility in Polokwane. It is located just outside the Polokwane hospital. Tiirisano clinic was established as part of the drive to integrate HIV services with primary healthcare services.

3.3 Study population

The study population consisted of 54 healthcare workers (HCW) working in the above mentioned clinics during the month of August 2009. The number of each professional group is indicated in table I below.

Table I The number of HCWs at the clinics

	Hope clinic	POP clinic	Rethabile	Seshego	**Total**
Doctors	3	2	1	2	8
Prof nurses	3	4	2	4	13
Other nurses	3	4	1	1	9
Counselor	7	3	1	3	14
Social worker	1	1	0	1	3
Dietician	1	1	1	1	4
Pharmacist	1	1	1	0	3
Total	19	16	7	12	**54**

3.4 Sampling

All the HCWs working at the respective clinics at the time of the study were invited to participate in the study. A total of 54 HCWs attended the information sessions and were approached to participate in the study and 8 HCWs did not return the questionnaire. The reasons for failure to return questionnaires were not indicated. HCWs with less than 1 month at the HIV clinic were excluded from the study because of the short period of exposure to working with PLWHA.

3.5 Measuring Tool.

A four part self report questionnaire was used to collect the data from the respondents (Appendix A).

- The first part covered the demographics of the HCWs. (Appendix A)
- The second part utilized the Maslash Burnout Inventory (MBI) to assess the degree of work related stress in HCWs caring for PLWHA. The MBI was used in various studies to measure stress in HCW caring for PLWHA18[16,18,20]. It is recognized as a measure of choice for self-reported assessment of burnout syndrome. It consists of 3 sub-scales that assess 3 aspects of burnout namely: emotional exhaustion, depersonalization and personal accomplishment. (Appendix A)
- A modified version of the AIDS Stress Scale (ASS) was used in the third part of the questionnaire, to assess the challenges faced by HCWs as a result of their work with

PLWHA[27]. For the purpose of this study, a Likert-type replaced the yes-no question to assess whether they feel their knowledge is sufficient to deal with the emotional and physical needs of their patients and their families. The scale was modified to allow for an increased variety in responses rather than just Yes or No. The mean score of the original AIDS Stress Scale was found to correlate significantly with the AIDS contact scale and the AIDS phobia scale[28, 29]. The reliability coefficient of AIDS Stress Scale was reported to be 0.73 in one study[30]. (Appendix A)

3.6 Data collection

The researcher approached the manager at each clinic to identify a suitable time for an information session. During the information session the research was explained to the healthcare workers. Some HCWs were not able to attend due to their various duties so the researcher explained to these HCWs on an individual basis. HCWs were given information a letter, a consent form and a questionnaire to complete. The researcher followed up the questionnaires individually with the HCWs. Forty six HCWs out of 54 managed to complete and return the questionnaires to the researcher.

3.7 Pilot study

The questionnaire was administered to the healthcare workers working at Rethabile clinic general OPD. There were no changes made to the questionnaire after it was piloted. Data from the pilot study was excluded in the analysis.

3.8 Data Analysis

The 8 items of modified AIDS Stress Scale (ASS) were scored similar to according to the suggested scoring method[27]. The mean of the 8 items represents the score for the scale. The possible scores range from 1-4 and a score of 4 indicates a high degree of AIDS stress. The ASS's scores were divided into low (< 2), moderate (2-2.9) and severe (3-4) for the purposes of this study.

The MBI was scored according to the score sheet attached in Appendix 4. The scoring was used in other studies on burnout in South Africa[16,20]. HCWs with high emotional exhaustion (≥27) or high depersonalization (≥10) were defined as meeting criteria for burnout.

Data obtained from the questionnaires was captured and initially analyzed using EPI info. Descriptive analysis was used to summarize the data. Before analysis the data was checked for errors.

Further analysis was done using Stata version 9.0. Fisher's exact test was used to compare the HCWs with burnout and those without burnout with regard to the selected variables.

3.9 Ethics

Written informed consent was obtained from the participants. Anonymity of the participants was maintained as no names appeared on the questionnaires. When the results of the study are released to the employer, the respondents will not be able to be linked to the questionnaire. Every effort was made to ensure that the research did not interfere with the provision of services to the clients at each clinic.

The research protocol was approved by Wits Human Research Ethics Committee (Medical) as well as the Department of Health and Social Development, Limpopo Province. (See attached approvals in Appendix D and E)

CHAPTER 4: Results

4.1 Introduction

Four clinics in Polokwane Municipality were chosen for the study. Forty six of the fifty four healthcare workers (HCW) participated in the study. Two of the HCWs were excluded in analysis due to incomplete questionnaires. The response rate was 82% (n=44/54). Table II indicates the number of HCWs who completed the questionnaires at the various clinics.

Table II The number of Healthcare Workers in the Study

Clinic Name	No of HCWs	Percent of total respondents
Hope clinic	18	39%
POP clinic	9	21%
Rethabile clinic	6	13%
Seshego clinic	11	26%
Total	44	100%

4.2 Profile of Participants

Demographic Profile of Participants

The age of the participants ranged from 24 to 63 with the mean age of 39. The majority (46%) of the participants were in the 30 to 39 age group. The majority were female (77%) and married (64%). The biggest group of health professionals was nurses (43%) (Table III).

Work Experience of Participants

A total of 34 (77%) of the healthcare workers had work experience of at least 3 years. In terms of experience in the field of HIV/AIDS, 18 (41%) healthcare workers had experience of at least 3 years. Table IV illustrates the work experience of the various profession groups.

Workload of the Participants

In terms of workload, half of the participants (22) reported that they were assisting more than 50 patients per day. Table V shows the number of patients cared for per day as reported by HCW's at the various clinics

Table III The demographic information of the study participants , n=44

	No	%
Age		
20-29	11	25
30-39	17	39
40-49	8	18
50-59	4	9
60+	4	9
Gender		
Female	34	77
Male	10	23
Marital status		
Single	12	27
Married	28	64
Widowed/ Divorced	4	9
Professional Group		
Counsellors	11	25
Doctors	7	16
Nurses	19	43
*Others	7	16

**Others include Dietician, Pharmacist and Social worker*

Table IV Work experience of Professional groups

	Doctor	Nurse	Counsellor	Other	Total
No. of yrs in profession					
<1	0	0	2	0	2(5%)
1-3	0	3	4	1	8 (18%)
4-6	4	2	4	3	13(30%)
7-9	1	1	1	2	5(11%)
>9	2	13	0	1	16(36%)
Total	7	19	11	7	44
No of yrs caring for HIV/AIDS patients					
<1	1	1	2	2	6(14%)
1-3	3	8	5	4	20(45%)
4-6	3	3	2	0	8(18%)
7-9	0	3	1	0	4(9%)
>9	0	4	1	1	6(14%)
Total	7	19	11	7	44

Table V Number of HIV/AIDS patients per HCW per day at various clinics

	Hope clinic	POP clinic	Rethabile clinic	Seshego clinic	Total
No. of HIV/AIDS patients per HCW per day					
<20	2(11%)	0	0	2(18%)	4(9%)
20-30	6(33%)	0	0	2(18%)	8(18%)
31-40	3(17%)	0	2(33%)	1(9%)	6(14%)
41-50	2(11%)	0	1(17%)	1(9%)	4(9%)
>50	5(28%)	9 (100%)	3(60%)	5(46%)	22(50%)
Total	18	9	6	11	44

4.3 The Prevalence of Perceived Stress among Healthcare Workers

Maslash Burnout Inventory (MBI)

The MBI was used here to asses the extent of work related stress. It consists of three subscales that assess 3 aspects of burnout: Emotional exhaustion, Depersonalization and Personal accomplishment. High emotional exhaustion (≥27) or depersonalisation (≥10) were defined as

meeting criteria for burnout. The results of this study indicated that 23 (52%) of the HCWs were experiencing burnout.

Emotional Exhaustion: The mean score was 20 with the range of 0 to 51. The highest possible score was 54. The results indicated that 52% of respondents had moderate to high levels of emotional exhaustion.

Depersonalization: The score ranged from 0 to 22 with a mean of 7.8. The highest possible score was 30. Of the 44 respondents 57% had moderate to high levels of depersonalization.

Personal Accomplishment: The mean score for this domain was 37 with a range from 10 to 48. The possible score range was 0 to 48. A moderate to high level of personal accomplishment was seen in the majority (75%) of the respondents.

The AIDS Stress Scale

A modified version of the AIDS stress scale was utilized to measure the stress of HIV/AIDS work. The respondents' scores ranged between 1 and 3.1, with a mean of 1.7. A total of 27% of respondents had moderate to severe AIDS stress scores (Table VII).

Table VI MBI Scores

	No	%
Emotional Exhaustion		
Low 0-18	21	48
Moderate 19-26	10	22
High ≥27	13	30
Depersonalization		
Low ≤5	19	43
Moderate 6-9	8	18
High ≥10	17	39
Burnout		
Yes	23	52
No	21	48
Personal Accomplishment		
Low 0-33	11	25
Moderate 34-39	11	25
High ≥40	22	50

Table VII AIDS Stress Scale Scores

AIDS Stress Scale score	No.	%
Low (1-1.9)	32	73%
Moderate (2 - 2.9)	11	25%
Severe (3 -4)	1	2%
Total	44	100%

The Relationship between AIDS Stress Scale and Burnout

The relationship between Emotional Exhaustion scores and AIDS Stress scale (ASS) scores and between Depersonalisation scores and ASS scores were examined using a Scatter graph. The Scatter graph showed no relationship between Emotional Exhaustion scores and ASS scores. Similarly, there was no relationship found between Depersonalisation scores and ASS scores. (See appendix G)

4.4 Demographic Characteristics and Burnout

Fisher's Exact test was used to compare the HCWs with burnout and those without burnout with regards to the selected variables. There was no significant association found between burnout and gender, marital status and profession (Table VIII). Furthermore, a comparison of the respondents using work experience, age group, number of patients/day and clinic location did not reveal any significant difference between the group with burnout and the group without burnout. (Table IX).

Table VIII Association between Burnout (MBI) and selected demographics

	Burnout		**p-value**
	No	Yes	
Gender			
Female	15(46%)	19(56%)	**0.300**
Male	6(60%)	4(40%)	
Marital Status			
Single	342 (25%)	9(75%)	**0.074**
Married	17(61%)	11(39%)	
Widow/Divorced	1(25%)	3(75%)	
Professional GR			
Doctors	4(57%)	3(43%)	**0.768**
Nurses	8(%)	11(58%)	
Other	9(50%)	9(50%)	

Table IX Association between Burnout (MBI) and Age group, work experience and work load

	BURNOUT		
	No	Yes	
Age Group			**P-value**
<30	5(24%)	6(26%)	0.973
30-39	9 (43%)	8(35%)	
40-49	3(14%)	5(22%)	
50+	4(19%)	4(17%)	
Work Experience			
<1	0	2 (100%)	0.366
1-5	9(53%)	8(47%)	
6+	12(48%)	13(52%)	
No. of Patients/day			
<10	3(14%)	1(4%)	0.578
20-30	3(14%)	5(22%)	
30-40	2(10%)	4(17%)	
40-50	1(5%)	3(13%)	
50+	12(57%)	10(43%)	
Clinic			
Hope Clinic	8(44%)	10(56%)	0.800
POP Clinic	4(44%)	5(56%)	
Seshego clinic	5(46%)	6(54%)	
Rethabile Clinic	4(67%)	2(33%)	

4.5 Stressors and Rewards of HIV/AIDS WORK

Stressors of HIV/AIDS Work

Forty eight percent of the respondents reported that they felt stressed by their work with HIV/AIDS patients (Table X). The majority of respondents reported working with HIV infected children, increased workload, caring for dying patients and failure of treatment as stressful aspects of HIV AIDS work. Fear of contagion was reported less frequently as a stressor. Table X illustrates the stressful aspects of HIV/AIDS work.

Rewards of HIV/AIDS Work

The overwhelming majority of the respondents (95%) reported that they enjoyed their work with HIV/AIDS patients (Table XI). The majority of these respondents (98%) reported that they enjoy receiving positive feedback from clients and providing support and comfort for patients and families. Table XI indicates the aspects of HIV/AIDS work that they indicated as rewarding.

Table X Stressors experienced by HCW's when caring for PLWHA

Feel stressed by working with HIV/AIDS patients	**Yes**	**No**
	21(48%)	23(52%)
*Aspects stressful to HCW when working with HIV/AIDS patients		
	Yes	No
1. Children who are HIV +ve	38(88%)	5(12%)
2. Increase no. of patients	37(86%)	6(14%)
3. Treatment failure	36(84%)	7(16%)
4. Caring for dying patients	35(83%)	7(17%)
5. Pregnancy among HIV +ve clients	32(74%)	11(26%)
6. Side effect of ART	31(72%)	12(28%)
7. Risk of contracting HIV	27(63%)	16(37%)
8. Counselling for adherence to treatment	16(37%)	27(63%)

**Priority determined by adding the number of respondents who specified each factor. Order of priority from most frequently experienced to least frequently experienced*

Table XI Rewards experienced by HCW's *when caring for PLWHA*

Enjoy working with HIV/AIDS patients	Yes	No
	43(98%)	1(2%)
*Aspects enjoyed by HCW when working with HIV/AIDS patients		
	Yes	No
1. Receiving positive feedback from patients and families	41(98%)	1(2%)
2. Providing support and comfort to patients and their families	41(98%)	1(2%)
3. Counselling of patients and their families	38(88%)	5(12%)
4. Developing meaningful relationships with patients and families	38(88%)	5(12%)
5. Diagnosis and treatment of side effects and opportunistic infections	32(75%)	13(25%)

**Priority determined by adding the number of respondents who specified each factor. Order of priority from most frequently experienced to least frequently experienced*

CHAPTER 5: Discussion and Conclusions

5.1 Discussion

The majority of the respondents in this study were female and married. The largest group of professionals in this study were nurses, followed by lay counsellors. The characteristics of this sample are similar to the samples of previous studies on this subject[13,18,19]. In fact nurses have been studied more than any other professional group[9,13]. This finding is indicative of the shortage of other professional groups such as doctors, social workers, dieticians and pharmacists in the South African public sector. Half of the respondents reported to be assisting more than 50 patients a day. This is typical of the high patient load that HCWs are often faced within the HIV clinics.

Half of the respondents in this study experienced high levels of emotional exhaustion and depersonalization (burnout). These results are lower than with the findings of a study done in the Free State where 69% and 85% of the respondents reported high level of emotional exhaustion and depersonalization. The Free State study was done among nurses only and it included the nurses in primary care clinics as well as nurses working in ART clinics. The different settings and occupational group may explain the disparity in burnout levels. The healthcare workers (HCW) in this study reported higher levels of stress than those in the studies by Demmer and Vistini et al[10,11]. This is not surprising because of the much higher burden of disease and the scarce resources in South Africa.

Despite the fact that half of the respondents experienced burnout, an overwhelming majority of them reported that they enjoy their work with PLWHA. This finding is supported by the relatively high mean score for personal accomplishment and the fact that 75% of the respondents reported moderate to high levels of personal accomplishment. The fact that the respondents still reported that they enjoy their work may also explain the relatively lower levels of burnout in this study and supports the notion that rewards act as a buffer against stress.

A modified version of the AIDS Stress Scale was used to assess the challenges faced by HCWs as a result of their work with PLWHA. According to the AIDS stress scale (ASS) the

majority of respondents reported low to moderate levels of AIDS stress. The fact that the mean score for the ASS was lower than that reported in the study conducted in India indicates a lower level of AIDS stress among respondents of this study[16].The lower level of AIDS stress supports the view that workplace-related stressors, contribute more significantly to burnout and stress.

Association between Burnout and selected variables

There was no significant association between variables such as marital status, gender, professional group, the clinic location and burnout. This concurs with the findings of previous studies where these factors were reported to be consistently unrelated to burnout[9]. Surprisingly, there was no significant association found between age of HCWs, work experience and burnout. Age and work experience have been previously reported to have negative correlation with burnout[9,11,24]. Number of patients per day which has been used in this study as a measure of workload was also found to be unrelated to burnout. This is surprising because increased work load has been widely reported to be linked to burnout[19,20,21]. These findings of a lack of association between burnout and selected variables should be interpreted with caution because of the small sample size in this study.

Stressors of HIV/AIDS work

Death and dying was reported by the majority of respondents (83%) as an important stressor. This endorses the view that issues around death are still relevant even in the era of HAART[23]. Fear of contagion, which used to be a key stressor in the era before the advent of treatment, was cited by relatively few HCWs (63%). This concurs with the findings of a more recent study where fear of contagion was rated as the least important stressor[11]. The availability of post exposure prophylaxis and protective barriers may explain the diminished importance of fear of HIV infection as a stressor. The majority of respondents cited HIV infected children as a stressor.

5.2 Limitations of the study

The results of this study must be considered in the light of the fact that a convenience sample was used, thus reducing the generalizability of the results. Furthermore, it is possible that the HCWs who were stressed at work volunteered to participate in the study. The fact that HCWs who were on leave and ex workers of HIV clinics were not included might understate the levels of stress reported in this study.

This study concentrated mainly on the stress resulting from work with PLWHA rather than other sources of stress in the work environment. Future research in this topic should investigate the work related stressors such as staff conflicts, remuneration and workload. Previous studies have revealed that administrative issues and institutional context contribute significantly to stress[9,17,16].

This study relied mostly on quantitative data and a questionnaire based approach. An interview based approach and a qualitative method approach may reveal more details on the stressors and the rewards that HCWs experience.

There was no control group in this study. Previous research which included control groups revealed that HCWs in the HIV field experience similar levels of stress as other HCWs in demanding fields like Oncology[13,20].

The AID Stress scale was modified for the purposes of this study. This may impact on the reliability and validity of the scale.

However, the strength of this study is that the response rate was good and that a validated scale (MBI) was used to measure the stress experienced by HCWs.

5.3 Recommendation for future research

In light of the limitations above, further research in this area should use a more qualitative approach in order to expand on the issues raised by this study. More information is needed in order usefully to influence the design of stress and burnout intervention strategies. Further research should also investigate coping strategies that HCWs utilize to deal with the issues that they face.

Because of the high prevalence of HIV in South Africa, HCWs may face HIV in their personal lives and this may affect their work. Further research should examine the impact of HCW's own HIV status and the experience of HIV infection in their personal context.

Further research is needed to outline the reasons for the high degree of job satisfaction and personal accomplishment among HCWs caring for PLWHA.

5.4 Conclusions

The following main conclusions emerged from this research

- The results indicated that 52% and 57% of the respondents in this study experienced moderate to high levels of emotional exhaustion and depersonalization respectively

- Workplace related stressors rather than the actual work with PLWHA appear to be the main source of stress for HCWs.

- Despite the high levels of burnout, the majority of HCWs find HIV/AIDS work rewarding. Furthermore, 75% of HCWs experience moderate to high levels of Personal Accomplishment

In light of the above, interventions should be designed reduce the high level burnout among HCWs working with PLWHA. These interventions should focus on workplace related stressors. Management of hospitals should be involved in creating a positive and supportive work environment. Strategies such as recognition of good work and positive feedback from management would assist to buffer against stress.

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