

**EFFECTS OF SUPPORTIVE GROUP THERAPY ON LEVELS OF HOPELESSNESS  
IN PATIENTS WITH CERVICAL CANCER AT CANCER DISEASE HOSPITAL IN  
LUSAKA, ZAMBIA.**

**BY**

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**(MBCHB)**

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OF MEDICINE IN PSYCHIATRY**

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**DECLARATION**

I hereby declare that this dissertation entitled “Effects of Supportive Group therapy on levels of Hopelessness in patients with cervical cancer at Cancer disease hospital in Lusaka, Zambia.” presented for the degree of Master of Medicine in Psychiatry represents my own work and has not been previously or currently submitted wholly or in part for any other degree at this or any other university. It has been prepared in accordance with the prescribed guidelines for the postgraduate studies dissertation of the University of Zambia.

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This dissertation has been submitted for examination with my approval

Signed.....

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## CERTIFICATE OF APPROVAL

This dissertation by Christine Mutelo has been approved as a partial fulfilment of the requirement for the award of Master of Medicine in Psychiatry by the University of Zambia.

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## ABSTRACT

Hopelessness is a subjective appraisal of negative expectations about the occurrence of a highly valued outcome coupled with the sense that one lacks control over desired events in the future. Hopelessness is an early symptom of depression and is comorbid with cervical cancer. Supportive Group therapy offers an economical and time efficient solution. This study aims to ascertain whether supportive group therapy can reduce levels of hopelessness in cervical cancer patients at Cancer disease hospital in Lusaka Zambia.

The study design was a Single blinded Randomized Controlled Trial (RCT) conducted at Cancer Disease Hospital in Lusaka Zambia. 49 participants completed Pre (Hopelessness in illness Questionnaire) HAI questionnaire results noted. The participants were then randomised into control and intervention group. The intervention group then attended one hour Supportive group therapy sessions weekly for four weeks. The control group continued to receive the usual support of their family members and CDH staff. Both groups were then administered the post HAI questionnaire and results noted and analysed using SPSS. The null hypothesis was accepted as there was no difference between the control group and the intervention group.

In conclusion, Supportive group therapy showed modest reduction in levels of Hopelessness. Such a minimal improvement, with a general trend toward overall reduction of levels of hopelessness and helplessness, was equally observed in other psychological interventions for cancer patients (Linn *et al.*, 2002). Social/family support as the most dependant factor of hopelessness in cervical cancer patients should be enhanced by deliberating inquiring and facilitating its provision.

## **DEDICATION**

To my late father, Mr. Joseph Butler Mutelo, he has inspired me to work towards excellence.

## **ACKNOWLEDGEMENTS**

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## **List of Abbreviations**

UTH	university Teaching Hospitals
CDH	Cancer disease Hospital
CBT	Cognitive Behavioral Therapy
HAI	Hopelessness Assesment in illness Questionnaire
SGT	Supportive Group Therapy

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## **CHAPTER ONE**

### **INTRODUCTION**

This chapter details the background information on hopelessness as it relates to cervical cancer as well as stating the actual problem that results from these facts and the consequent significance of the study and its objectives.

#### **1.1 Background**

Worldwide cervical cancer was the fourth most common cancer among females in 2012. New cases were estimated at 528,000 of which 85% occurred in developing countries. It was also estimated that 266, 000 females died of cervical cancer with 87% of these deaths occurring in less developed region (Ferlay, Soerjomataram and Ervik, 2012).

In Zambia, cervical cancer is the most common morbidity and mortality amongst women (Mulele, Lishimpi and Meza, 2012). This morbidity and mortality is partially due to the cancer itself but also affected by comorbid conditions such as HIV/AIDS, psychiatric and psychological conditions such as depression. This was evidenced in the prevalence study done at University Teaching Hospital (UTH) and Cancer Diseases Hospital, were 85% of the cervical cancer patients had comorbid depression. 43% of this prevalence had varying degrees of Hopelessness (Paul, Musa and Chungu, 2016).

Being diagnosed with cervical cancer brings with it both physical and psychological distress. There is the initial crisis of adapting to the catastrophic news and later desperate need to control emotions whilst making crucial and often poorly explained treatment decisions. The patient has many concerns such as; fear of death, dependency, disfigurement, disability and abandonment, as well as disruption in relationships, role functioning, and financial status (Sandock and Rauz, 2009; Gruman and Spiegel,2003; Song 2003; Taylor, 2003 ). Often these patients experience a sense of helplessness and hopelessness. Hopelessness being a subjective

appraisal of negative expectations about the occurrence of a highly valued outcome coupled with the sense that one lacks control over desired events in the future (Alloy, Abramson and Metalsky, 1988). Hopelessness is one of the symptoms of depression and closely linked to suicidal ideation ( Beck et al., 1974; Abramson et al., 1989; Johnson et al., 2001; Gil et al., 2001; Beedie et al., 2002; Jones et al., 2003; Burgess et al., 2005;Schairer et al., 2006). A patient with hopelessness will perceive their past with a lot of guilt, their present and future with a lot of negative attribution and a general sense of wanting to give up. This inevitably affects the patient's compliance to treatment and eventually affects the prognosis (Sandock and Rauz, 2009).

Levels of hopelessness are affected by medical, psychological and interpersonal factors.

Medical factors include site of cancer, symptoms and predicted course. Psychological factors include pre-existing character style, coping ability, and ego strength, developmental stage of life, and impact and meaning of cancer at that stage. Interpersonal factors refer to family and social support systems (Sandock and Rauz, 2009). Knowledge of these factors forms a key component in psychotherapeutic interventions aiming to reduce levels of psychological distress in cancer patients.

There are a number of forms of psychotherapy including; Behavioural therapy, cognitive behavioural therapy (CBT), individual psychodynamic therapies, group therapy, couples therapy, family therapy and social skills training. More often than not these therapies are administered in combinations as determined by the diagnosis and unique patient factors. In Zambia all the mentioned types of therapy are available however they may not be fully administered due to limited numbers of available psychologists. In such a resource limited situation, group therapy can allow for efficient provision of therapy to a large number of patients. With particular regard to use of group therapy in cancer patients; it was

demonstrated via a randomised clinical intervention trail that supportive expressive group therapy with emphasis on providing support and helping patients deal with disease related stress, can help reduce distress in patients with metastatic breast cancer (Clansen and Butler, 2001).

In contrast, another study demonstrated minimal improvements in anxiety and desire for death in patients with advanced cancer who had been randomised to supportive group therapy as opposed to those randomised to meaning-centred group therapy (Breitbart and Rosenfield, 2014).

In Zambia, the effect of supportive group therapy interventions on psychological distress in cancer patients is yet to be determined. This study therefore aims to determine the effect of supportive group therapy intervention on levels of hopelessness in cervical cancer patients at Cancer disease hospital in Lusaka, Zambia.

## **1.2 Statement of the Problem**

Cervical cancer patients at UTH and CDH have a high prevalence of hopelessness at 43% (Paul et al. (2016). Hopelessness exists not only as part of the symptomatology of depression in these cervical cancer patients but as a separate psychopathology (Brans and Eynde, 2003; Beck et al., 1974; Abramson et al., 1989; Johnson et al., 2001; Gil et al., 2001; Beedie et al., 2002; Jones et al., 2003; Burgess et al., 2005; Schairer et al., 2006;). The extent to which hopelessness affects cervical cancer patients in Zambia is yet to be determined. However, a strong correlation between depression and hopelessness in Turkish patients with cancer undergoing chemotherapy was noted (Asylan & Celebioglu, 2009). In the same study it was observed that these high levels of hopelessness affected; their compliance to treatment, quality of life and ultimately prognosis of the cancer. Similarly cancer patients at CDH, currently Zambia's only cancer hospital, have been (anecdotally) observed to lose hope in their future or possibility of

recovery. Often they are observed to be psychologically withdrawn and attach little importance to compliance to their treatment. This is especially observed in those whose cancer is at an advanced stage and is being managed palliatively. At CDH the exact levels of hopelessness in these cervical cancer patients is yet to be objectively measured.

Despite supportive group therapy being used worldwide in cancer patients (Virginia and Brabender, 2004), in Zambia and particularly at CDH no such structured psychological support groups exist. This could either be because the clinicians are unaware of the benefits or effectiveness of supportive group therapy or not enough evidence has been provided to validate the effectiveness of supportive group therapy. With this background it was imperative to determine whether supportive group therapy could help alleviate levels of hopelessness in cervical cancer patients. Considering the strong association between hopelessness and Depression (Beck *et al.*, 1974; Abramson *et al.*, 1989; Johnson *et al.*, 2001; Gil *et al.*, 2001; Beedie *et al.*, 2002; Jones *et al.*, 2003; Burgess *et al.*, 2005; Schairer *et al.*, 2006;), any reduction in levels of hopelessness could prevent the occurrence or reduce the severity of Depression in these cervical cancer patients.

### **1.3 Significance**

An intervention study such as the one in question was helpful. Firstly, in demonstrating that a non-evasive, economic, and therapeutic option such supportive group therapy could lower levels of hopelessness. It improved treatment compliance through psychoeducation on the meaning of cervical cancer diagnosis. Although not objectively analysed, such improved understanding of their diagnosis lead to better treatment compliance and possibly a reduction or prevention of Depression (Whose prevalence stands at greater than 80% prevalence (Paul *et al.*, 2016.)) Secondly, the study shed light on the extent of hopelessness among cervical cancer patients at CDH and indirectly in Zambia. Lastly, the study served as a pilot research on how

to implement psychotherapeutic treatments in cancer patients whose routine management is packed with a lot of chemo radiotherapy sessions and investigations. As well as dealing with high mortality rate. Success and challenges encountered have helped consideration of policy for implementing routine psychotherapy for psychologically distressed cancer patients.

#### **1.4 Research Question**

What are the effects of supportive group therapy on the levels of hopelessness in patients with cervical cancer at the Cancer Diseases Hospital in Lusaka?

#### **1.5 Objectives**

**1.5.1 General objective** was to assess the effect of supportive group therapy on levels of hopelessness in patients with cervical cancer.

##### **1.5.2 Specific objectives**

**1.5.2.1** Was to establish the social-demographic characteristics of cervical cancer patients who present with hopelessness.

**1.5.2.2** Was to establish factors associated with high levels of hopelessness in cervical cancer patients.

**1.5.2.3** Was to assess whether Supportive Group Therapy could lower the Hopelessness assessment in illness questionnaire (HAI) scores.

#### **1.6 Ethical Considerations**

##### **1.6.1 Authority to conduct research**

Permission to carry out the research was sought from Cancer Disease Hospital and Department of Psychiatry. Ethical clearance and approval were sought from ERES Converge IRB.

### **1.6.2 Voluntarism**

Informed consent was sought from all the participants of the study. It was up to the participant to volunteer to participate without any form of coercion. Furthermore, the participants were free to drop out of the study at any time without any repercussions.

### **1.6.3 Maintaining confidentiality**

All information sought from the participants, contents of group discussions and results of the study were held in strict confidence and only used for academic purposes. When seeking sensitive information, appropriate privacy was provided to the participants. No private or demeaning remarks were tolerated during the group discussions. Only free and active participation in line with the Group psychotherapy schedule was encouraged by the overseeing qualified psychotherapist.

### **1.6.4 Benefits/ Incentives**

No incentives of any form were given to the participants. Apart from the in-built nature of an intervention study no other benefits were denied to any participant. The non-intervention group were still availed the current supportive care of the medical staff and their families.

### **1.6.5 Maleficence**

No psychological or physical harm was caused to any of the participants neither were any participants denied their usual recommended treatment.

## CHAPTER TWO

### LITERATURE REVIEW

A review of books and research articles conducted to address the statement of the problem. This chapter discusses the strengths, weakness and shortfalls of these prior works and how this present study intends to build and improve on them.

#### 2.1 Cervical Cancer Related Psychological Distress

The psychological impact of being diagnosed with cancer has been broadly defined. The psychological distress includes major psychiatric disorder as well as minor psychological distress. Inclusive in the psychological distress symptoms experienced by cancer patients are; fatigue, worry guilt and hopelessness. The most common psychiatric disorders include depression, anxiety and adjustment disorders (Mitchell and Chan, 2011). Higher rates of depression, hopelessness and loneliness have been reported in patients with cancer (Dansuck and Argagun, 2002). The severity to which these symptoms are expressed is dependent on multiple factors including; anatomical site of the cancer, the patients meaning of the cancer diagnosis, stage and prognosis of the cancer as well as the strength of the patient's support system (Sandock and Rauz, 2009). Patients with metastasized cancer tend to exhibit more severe psychological distress mainly due to the fact that a cure may not be possible and the consequent social, occupational and physical dysfunction (Sandock, and Rauz, 2009). This inevitably affects their quality of life. A study on the psychological and social effects experienced by women treated for advanced stages of cervical cancer, noted that even patients that had been cured of the cancer still maintained some level of psychological distress (Klee and Thranov, 2000). Here in Zambia Depression was found to have a prevalence of 85% among cervical cancer patients at CDH (Paul *et al.* 2016) 43% of these had varying degrees of hopelessness. With the understanding that hopelessness is one of the cardinal symptoms of

depression, it can be anedoctically inferred that levels of hopelessness in these cervical patients are equally high.

## **2.2 Hopelessness**

By definition, hopelessness is a subjective appraisal of negative expectations about the occurrence of a highly valued outcome coupled with the sense that one lacks control over desired events in the future (Alloy *et al.*, 1988). It is a form of anticipatory grief that can arise in response to one's own inevitable death (Sullivan, 2003). It has further been characterized as an embittered, dark state that can lead to feelings of emptiness and despair (Levine, 2007). Hopelessness is one of the symptoms of depression as described by the American Psychiatric Association and closely linked to suicidal ideation (Fwazy and Fwazy, 1993; Beck *et al.*, 1974; Abramson *et al.*, 1989; Johnson *et al.*, 2001; Gil *et al.*, 2001; Beedie *et al.*, 2002; Jones *et al.*, 2003; Burgess *et al.*, 2005; Schairer *et al.*, 2006). Hopelessness is part of symptomatology of depression but also exists as a separate psychopathology (Fwazy & Fwazy, 1993). A patient with hopelessness will perceive their past with a lot of guilt, their present and future with a lot of negative attribution and a general sense of wanting to give up. This inevitably affects the patient's compliance to treatment and eventually affects the prognosis as was seen in breast and haematological cancer patients (Watson and Homeland, 2004). A longitudinal study of 2,428 middle-aged Finnish men demonstrated that individuals with high levels of hopelessness are slower to recover from medical interventions and consequently had increased mortality (Everson and Goldberg, 1996). Sahin *et al.*, in their study of Hopelessness, Depression and Social support with end of life cancer patients noted a number of factors associated with high levels of hopelessness. These included; being illiterate, married, living in rural areas, prolonged disease duration, metastatic disease and receiving radiotherapy treatment.

## **2.3 Social demographic characteristics and Hopelessness**

(Rustoen and Wiklund, 2000; Tan et al., 2005) reported that cancer patients with low levels of education as well as those who lived in rural areas had significantly higher levels of hopelessness. Other studies, (Avci *et al.*, 2009; Yldirim *et al.*, 2009; Pehlivan *et al.*, 2012) found no such relation. This association was attributed to various negative factors including; insufficiency of healthcare, social isolation and difficulties in transportation to nearby health facility for treatment. These afore mentioned factors influenced the coping abilities of cancer patients and their families in rural areas.

Hopelessness has been measured in clinical and population research in a variety of ways including systemic interviews and psychometric measures such as; the Beck Hopelessness Scale (Beck and Weissman, 1974), Hopelessness Assessment in Illness Questionnaire HAI (Rosenfeld *et al.*, 2011) and the Mental Adjustment to Cancer scale (Fraser and Burnell, 2014).

#### **2.4 Group Psychotherapy**

Psychotherapy is main form of treatment for hopelessness. Therapy can either be administered individually or as a group. Group psychotherapy is a treatment modality involving a small group of members and one or more therapists with specialised training in group therapy. It is designed to promote psychological growth and ameliorate psychological problems through cognitive and affective explorations of interactions among group members and between members and the therapist. It has been in theoretic existence as early as 1920-1930 (Sandock and Rauz, 2009).

As an intervention group psychotherapy works via therapeutic factors. These include; supportive, self-revelation, learning from others and psychological work factors. Supportive factors are cardinal for supportive group therapy because they embody certain elements such as; instillation of hope, acceptance, altruism, universality and cohesion (Virginia and

Brabender, 2004). Instillation of hope involves individual positing goals, recognizing that there are feasible routes by which the goals can be achieved and perceiving one's self as being able to sustain these goals. Self-revelation via catharsis and self-disclosure allows members to share both the cognitive and affective psychological challenges (Brabender and Fallon, 2004). Furthermore by learning from others, members are able to model or vicariously adopt good psychological coping strategies. Throughout the sessions the therapists is actively involved in guiding group discussions as well as ensuring that every member actively and freely participates in the discussions.

The effectiveness of group therapy as opposed to no therapy at all was demonstrated via a meta-analytic review, in which depressed persons who participated in the group therapy had more favourable outcomes than 80% of controls (Robinson and Berman, 1990). In a review of more than 700 group studies, it was concluded that the group therapy reliably provided beneficial results across treatment models to individuals with a variety of disorders and problems (Furlinman and Burlingame, 2001). Individual therapy was said to be superior to group therapy (Dush and Hirt, 1983). Other scholars argued the opposite (Toseland and Siporin, 1986). A Meta review found both group and individual therapy to be equally effective (McRoberts and Burlingame, 1998). Overall group therapy significantly reduced depression, anxiety and increased illness knowledge of cancer patients (Virginia and Brabender, 2004). In prostate cancer patients of America, the support group "Us Too" has its fundamentals embedded in group therapy (Edward, 1994). As noted in its motto, "learning to cope through knowledge and hope", this support group has helped both prostate cancer patients and their families deal with the psychological challenges associated with prostate cancer.

A longitudinal randomised clinical intervention trail of 125 women with breast cancer whose intervention group was administered Supportive expressive group therapy noted a significant

reduction in distress at the end of the one year intervention period (Claassen *et al.*, 2001). A more recent study on the effect of supportive psychotherapy on mental health status and quality of life of female cancer patients receiving chemotherapy for recurrent disease noted that; of the 40 breast and ovarian cancer patients randomised to the intervention, their post intervention anxiety and Depression scores had significantly reduced as well as a marked improvement in their quality of life score (Mukherjee & Mazumder, 2017). These results were achieved after only a month of scheduled supportive psychotherapy. Unfortunately none of the mentioned studies particularly assessed the effect of supportive therapy on hopelessness. Regional and local search for similar research/publications specific to supportive psychotherapy for cervical cancer patients was not forthcoming.

Despite supportive group therapy being used worldwide in cancer patients, in Zambia and particularly at CDH no such structured psychological support groups exist (anecdotally). This could either be because the clinicians are unaware of the benefits or effectiveness of supportive group therapy or not enough evidence has been provided to validate the effectiveness of supportive group therapy. Lack of screening for co-morbid psychiatric conditions such as depression/hopelessness in these patients also means that consultation for or request for supportive therapy cannot be made. With this background it was imperative to determine whether supportive group therapy can help alleviate levels of hopelessness in cancer patients. This longitudinal intervention study aimed to ascertain if indeed group therapy could reduce levels of hopelessness in cervical cancer patients (Scherer-Rath, 2001; Pessin *et al.*, 2002).

## **CHAPTER THREE**

### **METHODOLOGY**

A detailed description of exactly how the study was conducted, data collected and analysed.

#### **3.1 Study Design**

The study design was a Single blinded Randomised Controlled Trial (RCT). The participants were “blinded” (they did not know whether they would be in the intervention group or control group). This study design was chosen because it limited bias and limited confounders.

#### **3.2 Null hypothesis**

There is no difference in treatment outcomes of cervical patients receiving supportive group therapy to those not receiving supportive group therapy.

#### **3.3 Alternate hypothesis**

There is a difference in treatment outcomes of cervical cancer patients receiving supportive group therapy to those not receiving supportive group therapy.

#### **3.4 Study Site**

The study was conducted at Cancer Disease Hospital in Lusaka Zambia. CDH was at the time of this study, Zambia’s largest and only cancer hospital. All patients from all the 10 provinces of the country were referred to this tertiary institution for their treatment. CDH accepts referrals of only histologically confirmed cancer diagnosis.

#### **3.5 Target Population**

The study was done on patients with histologically confirmed cervical cancer diagnosis and receiving treatment from CDH.

### **3.6 Study Population**

The study population included all female patients with histologically confirmed cervical cancer diagnosis who were referred to us by the oncologist. These were recruited over a two month period.

### **3.7 Selection Criteria**

#### **3.7.1 Inclusion criteria**

All participants were; 18 years of age or older, had a diagnosis of cervical cancer, consented to participate in the study, and had Agreed to follow-up therapy sessions.

#### **3.7.2 Exclusion criteria**

All participants with; acute Medical or surgical condition, were unable to speak or vocally participate in group discussions and those with any Severe psychiatric disorders (limiting a person's ability to think and comprehend) were excluded from the study.

### **3.8 Sample Size**

The sample size of 44 was calculated using the formula below

$$N = \frac{(z_{\alpha} \times z_{\beta}) \times 2 \times p(1-p)}{(d)^2}$$

Observations in one experimental group (*E*) and one control group (*C*) of the same size

Success = 2-year survival after treatment (expected to be 70% (0.7) in the experimental group and 40% (0.4) in the control group); failure = death within 2 years of treatment

Where  $z_{\alpha} = p=0.05$ ; 95% confidence desired (two-tailed test);  $z_{\alpha} = 1.96$

Where  $z_{\beta} = p = 20\%$  beta error; 80% power desired (one-tailed test);  $z_{\beta} = 0.84$

Difference to be detected = 30%; 30% difference between the success (survival) of the experimental group and that of the control group. i.e.  $0.7 - 0.4 = 0.3$

Losses to follow up: assumed to be two

Variance, expressed as  $p(1-p)$ ;  $p = 85\% = 0.85$  and  $1-p = 0.15$

$$N = \frac{(1.96 \times 0.84) \times 2 \times 0.85 (1 - 0.85)}{0.3^2}$$

$$0.3^2$$

$$N = \frac{7.84 \times 2 \times 0.85 \times 0.15}{0.09}$$

$$0.09$$

$$N = \frac{7.84 \times 0.255}{0.09}$$

$$0.09$$

$$N = \frac{1.9992}{0.09}$$

$$0.09$$

$$N = 22$$

**$N = 22$  participants per group x 2 groups = 44 participants in total**

### 3.9 Procedure

Patients with histologically confirmed cervical cancer were referred to us by the Oncologist. Only patients who met the selection criteria mentioned in (Section 3.5) were recruited in the Study. Written Consent was then sought from each participant as outlined in Appendix B. The

research team then obtained a detailed clinical history and demographic information from each participant.

Using simple randomisation with computer generated numbers; the recruited participants were divided into two groups; a control group and an intervention group. The participants were blinded as to which group they had been randomised; however their individual choice of group was noted. The psychologist administered the Hopelessness in Illness Questionnaire (HAI) appendix 7.7 to both groups. The results were scored and noted as the baseline pre-intervention HAI scores.

The intervention group was further divided into groups of 10. Each of these groups were then administered Supportive group therapy by a psychologist. Weekly one hour meetings were held for a total duration of four weeks. The sessions were conducted by a qualified psychologist competent with the skill of supportive group therapy supervision. Each session followed the guided module for Supportive group therapy (Appendix 7.6). The language in which the discussions were held was determined by the group. (Were necessary the psychologist interpreted the module to language of choice of the group in keeping with his/her vocabulary competence). Ultimately, the group members decided the preferred language of discussion. Contents of each discussion were held in confidence and only used for the academic purpose of the study.

The control group had the usual supportive care of staff and family that cervical cancer patients are currently receiving at CDH.

At the end of the four weeks, both groups were administered the HAI questionnaire again. Results were scored and noted as final HAI Scores. The differences between baseline and final HAI scores were calculated and statistically verified to allow for interpretation and discussion.

- In line with ethical judgment, any participant from the control group who scored highly on the HAI was availed supportive group therapy. However their post therapy HAI score was not be used in the study data analysis. . None of the participants scored highly on the HAI hence none were referred to clinic 6 for intensive therapy.

### **3.10 Variables**

#### **3.10.1 Independent Variables**

1. Age
2. Marital status
3. Occupation
4. Level of education
5. Family/social support
6. Clinical presentation;
  - a) Stage of cervical cancer
  - b) Treatment intent
7. Pre- HAI score

#### **3.10.2 Dependant Variables**

1. Post- HAI score

### **3.11 Data Analysis**

Data was analysed using Statistical Packaging for Social Sciences (SPSS) version 21. Bias was avoided as all participants were randomised to either intervention or non-intervention group. Randomization was done using computer generated Numbers. Errors were minimised by using a double entry system, ranges and consistent checks. Chi square test was used to determine the association between categorical variables such as the sociodemographic characteristics of cervical cancer patients. Multivariate regression analysis was used to determine the relationship between several factors associated with hopelessness in cervical cancer patients.

Whilst a paired t-test was used to determine the effect of supportive group therapy in the intervention group compared to the control group. Statistical significance was conducted at 95% confidence level (p-value 0.05). The results were entered in excel sheet and then presented in form of tables, charts and graphs.

## **CHAPTER FOUR**

### **RESULTS**

This chapter documents all the findings of the study. It further gives the statistical interpretation and meaning of each result as it relates to the hypothesis and specific objectives.

The study recruited 49 participants. Four participants did not complete follow up to post HAI administration. This was due to the following reasons. One participant died shortly after recruitment. Cause of death was not established. Three were lost to follow up. 45 participants fully completed the study and the data was analysed and presented as follows.

#### **4.1 Social demographic characteristics of participants**

Table 1 below shows the sociodemographic characteristics that included age, marital status, occupation, level of education, and family/social support

**Table 1: Sociodemographic characteristics of the participants**

Age group	Control Group n (%)	Intervention Group n (%)
21-30	1 (4.5)	1 (4.5)
31-40	4 (18.2)	6 (27.3)
41-50	12 (54.5)	7 (31.8)
51-60	2 (9.1)	4 (18.2)
61-70	2 (9.1)	4 (18.2)
71-80	1 (4.5)	0 (0)
<b>Marital Status</b>	<b>Control Group n (%)</b>	<b>Intervention Group n (%)</b>
Single	2 (9.1)	3 (13.6)
Married	11 (50)	12 (54.5)
Divorced	3 (13.6)	0 (0)
Widowed	6 (27.3)	7 (31.8)
<b>Occupation</b>	<b>Control Group n (%)</b>	<b>Intervention Group n (%)</b>
Employed	8 (34.4)	4 (18.2)
Not employed	14 (63.6)	18 (81.8)
<b>Level of Education</b>	<b>Control Group n (%)</b>	<b>Intervention Group n (%)</b>
Nil	4 (18.2)	6 (27.3)
Primary	8 (36.4)	11 (50)
Secondary	10 (45.5)	4 (18.2)
Tertiary	0 (0)	1 (4.5)
<b>Family/social support</b>	<b>Control Group n (%)</b>	<b>Intervention Group n (%)</b>
Present	14 (63.6)	18 (81.8)
Not present	8 (34.4)	4 (18.2)
<b>Total</b>	<b>22 (100)</b>	<b>22 (100)</b>

## 4.2 Factors associated with hopelessness in cervical cancer patients

### 4.2.1 Associations between sociodemographic factors and hopelessness

Table 2 below shows that there were no statistical significance between sociodemographic factors and pre/post HAI in all patients in the control group as all p-values were above 0.05. In the intervention group, there was only one statistical significance and it was between social or family support vs Pre HAI with a p=0.047.

Table 2: Associations between sociodemographic characteristics and hopelessness

Sociodemographic characteristics	Control group p-value	Intervention group p-value
Occupation vs Pre HAI	<b>0.393</b>	<b>0.128</b>
Occupation vs Post HAI	<b>0.414</b>	<b>0.368</b>
Level of education vs Pre HAI	<b>0.434</b>	<b>0.922</b>
Level of education vs Post HAI	<b>0.733</b>	<b>0.781</b>
Social support vs Pre HAI	<b>0.519</b>	<b>0.047</b>
Social support vs Post HAI	<b>0.585</b>	<b>0.558</b>
Age vs Pre HAI	<b>0.661</b>	<b>0.220</b>
Age vs Post HAI	<b>0.979</b>	<b>0.632</b>
Marital status vs Pre HAI	<b>0.722</b>	<b>0.441</b>
Marital status vs Post HAI	<b>0.332</b>	<b>0.469</b>

#### 4.2.2 Stage of Cervical cancer

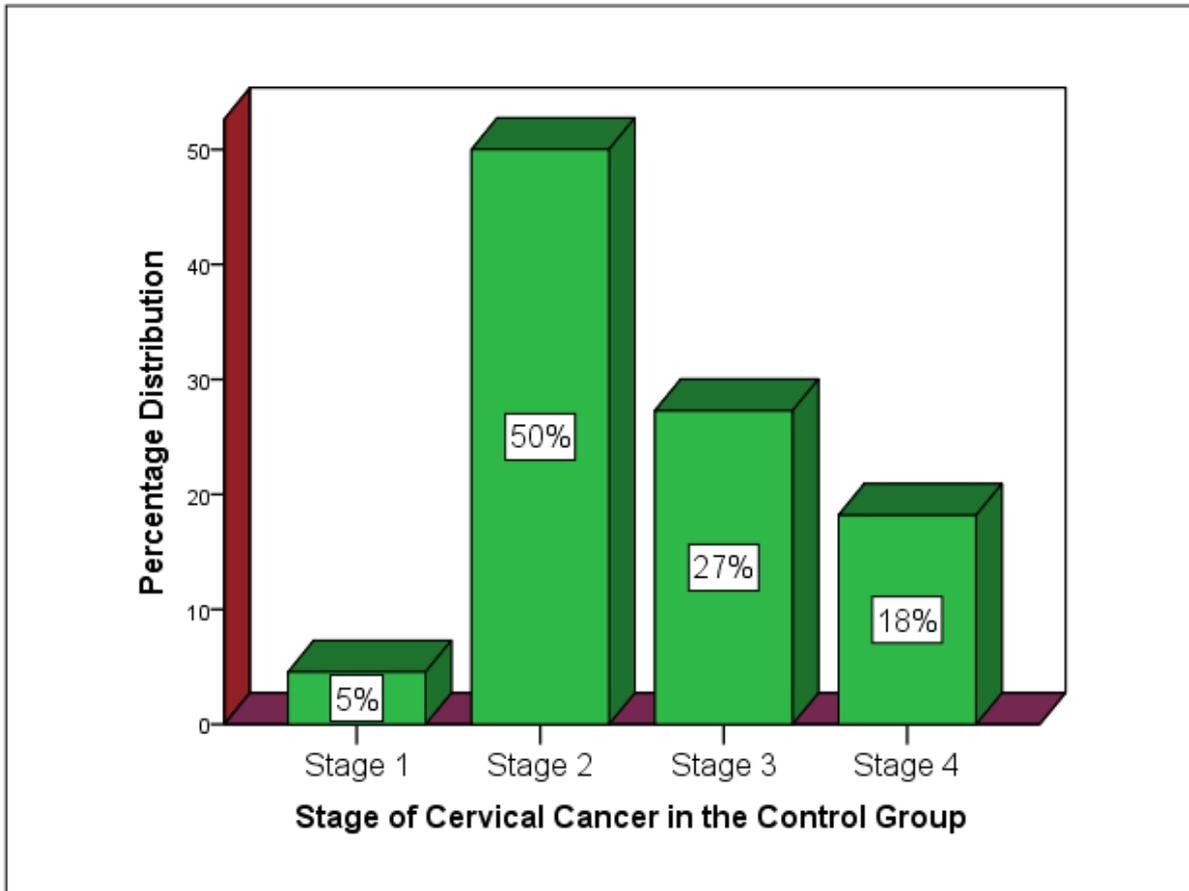


Figure 1: Stage of cervical cancer in the control group

**Note:** Majority of participants in the control group were at stage 2 of cervical cancer. 50% (11/22) in the control group were in Stage II cervical cancer. This was followed by patients in Stage III 27% (6/22), Stage IV 18% (4/22) and Stage I 4.5% (1/22) respectively. There was a statistical significance in Cervical cancer distribution among patients in the control group with a  $p=0.022$

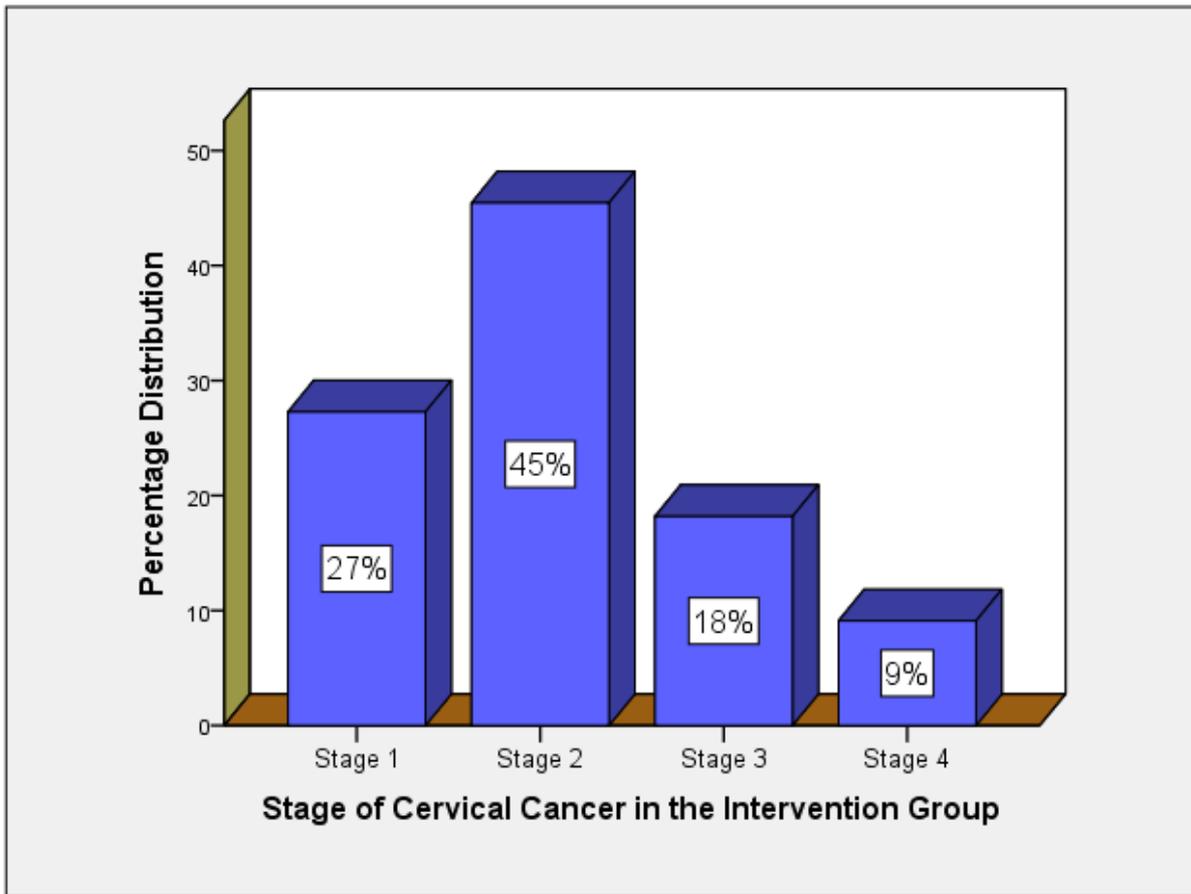


Figure 2: Stage of cervical cancer in the intervention group

**Note:** The majority of participants in the intervention group were at stage 2 of cervical cancer. 45% (10/22) in the intervention group were in Stage II cervical cancer. This was followed by patients in Stage I 27% (6/22), Stage III 18% (4/22) and Stage IV 9% (2/22) respectively. There was no statistical significance in cervical cancer distribution among patients in the intervention group with a  $p=0.095$ .

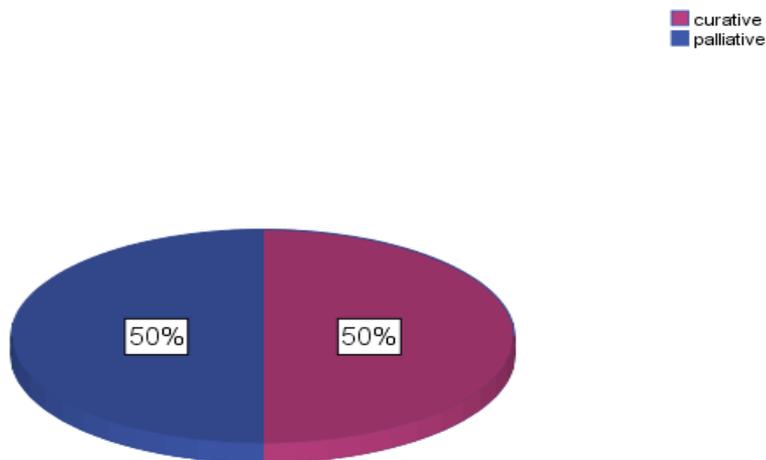
### 4.2.3 Associations between the stage of cervical cancer and Hopelessness scores

Table 3 below shows that there was no relationship between the stage of cervical cancer and Pre/Post HAI as shown by  $p=0.695$  and  $p=0.264$ . However, the results show that there was an improvement in the outcome after treatment.

Table 3: Associations between stage of cervical cancer and hopelessness

Variable association	p-value
Stage of Cervical Cancer vs Pre HAI	0.695
Stage of Cervical Cancer vs Post HAI	0.264

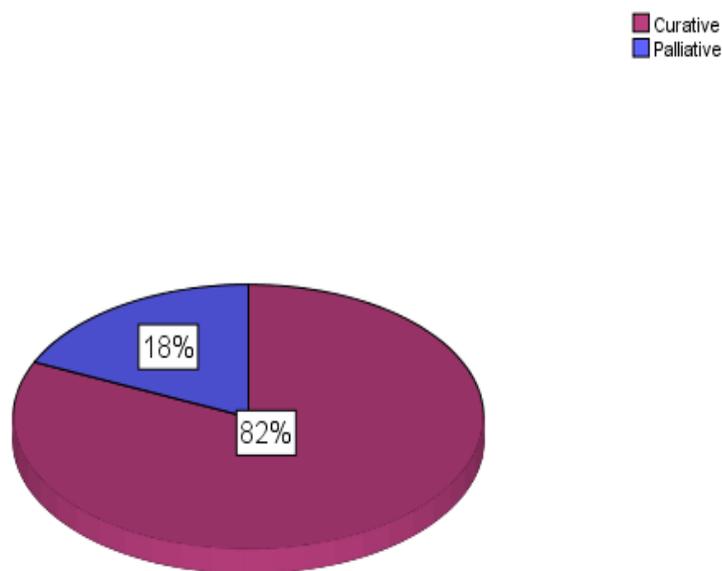
### 4.2.4 Treatment intent of participants



Treatment Intent For Patients in the Control Group

Figure 3: Treatment intent for patients in the control group

**Note:** Equal numbers of participants in the control were receiving palliative treatment or curative treatment. 50% (11/22) of patients in the control group received curative treatment and 50% (11/22) received palliative care. There was no statistical difference between treatments among patients in the control group as given by a  $p=1.000$ .



**Treatment Intent For Patients in Intervention Group**

Figure 4: Treatment intent for patients in the intervention group

**Note:** Majority of participants in the intervention were receiving curative treatment. 82% (18/22) in the intervention group received curative treatment while the minority 18% (4/22) received palliative care. There was a statistical significance in treatment intents among patients in the intervention group as given by a  $p=0.004$ .

### 4.3 Effects of Therapy on Hopelessness in Illness Assessment (HAI) scores

Table 4 below shows that there was no statistical difference between therapy and reduction in HAI in both the control and the intervention group as all p-values were greater than 0.05. The intervention group showed a better reduction in HAI compared to the control group as shown in table 4 below. The null hypothesis is therefore accepted, there is no difference in treatment outcomes of cervical patients receiving supportive group therapy to those not receiving supportive group therapy.

Table 4: Effects of therapy on Hopelessness Assessment Intervention

<b>Relationship between treatment and HAI</b>	<b>p-value</b>
Pre HAI in control group	0.707
Post HAI in control group	0.683
Pre HAI in intervention group	0.621
Post HAI in intervention group	0.368

Table 5: Associations between Pre HAI and Post HAI

Variable associations	p-value
Pre HAI vs Post HAI in control group	0.088
Pre HAI vs Post HAI in intervention group	0.680

## CHAPTER FIVE

Chapter five covers a lengthy discussion of the result findings as they relate to each specific objective. Comparing and contrasting them to similar studies as well proving the authors understanding for such a finding

### DISCUSSION

#### 5.1 Sociodemographic Characteristics

This study showed that majority of the participants in both the intervention and control group were aged 41-50 years. This was followed by the age group 31-40 years for both intervention and control group. The least represented age group across control and intervention was age 21-30 and age group 71-80 years old. The average age for the control group was 47 years whilst that of intervention was 49 years. The youngest recruited participant was aged 29 years, whilst the oldest was aged 76 years. These results correlated well with a study done by Mulele et al which established the average age specific incidence of cervical cancer in Lusaka was 40 years of age. In contrast a similar study done in Latin America had an average age of cervical cancer participants as 48 years old (Ashing-Giwa *et al*, 2008). This could be due lower life expectancy in an economically challenged sub-Saharan nation such as Zambia.

With regard to marital status, majority (50%) from the control group and (54.5%) from the intervention group were married. This meant that majority of the participants were married. This reflects high significance Zambian women attach to being married. However, despite the majority of participants being married, there was no statistical difference between hopelessness scores of married or single/divorced patients. This correlated well with following studies (Hert, 1992; Tan and Karabulutlu, 2005; Yildirim *et al.*, 2009; Pehlivan *et al.*, 2012). In contrast (Sahin *et al.*, (2013) noted in their study that participants that were married had higher levels of hopelessness. The quality of the marital relationship could have had a bearing on our

findings. One could be married but may not necessary have the emotional financial or physical support from ones spouse and/or children.

Majority of participants from both the intervention (81.8%) and control group (63.6%) were unemployed. With regard educational status majority of the participants in the control group had been be to secondary school (45.5%) with no participant reaching tertiary education. Majority of the participants in the intervention group had been to primary school with (4.5%) participant who had tertiary education. This too correlated well with Mulele *et al.* study findings of the demographic features of cervical cancer patients. The majority of the participants (63.6%) in the control group had received social support while majority of the participants (81.8%) in the intervention group received social support. The intervention group had more social support compared the control group. The overall demographic features of this study were very similar to Mantegna *et al* findings. Mantegna *et al.* noted that the vast majority of patients in their study were: married, (63.8%), lived with someone (87.6%), had higher education (84.1%) and (51.7%) were unemployed.

## **5.2 Associations between Social Demographic Factors and Hopelessness**

There was no statistical significance between sociodemographic factors and pre/post HAI in all patients in the control group as all p-values were above 0.05. In the intervention group, there was only one statistical significance and it was between social or family support vs Pre HAI with a  $p=0.047$ .

This means social support is associated with levels of hopelessness as was described in literature that having social or family support will lower levels of hopelessness as the family provides comfort and care throughout the cancer illness (Akechi *et al.*, 1998; Sandock, and

Rauz, 2009; Gil *et al.*, 2001; Nasheen and Kamal, 2007). However, other studies and literature reported contrary (Tan and Karabulutlu, 2005). It is important to state that this study captured the presence or absence of such social and or family support. It did not quantify as to whether the family members were actually providing care or the quality of care and support. It remains to be known as to whether the reported larger presence social/family support provided by the intervention group was indeed effective to account for higher baseline HAI scores. What is certain is the positive relationship between actual and not perceived social support and health (Tan and Karabulutlu, 2005). Actual Social support is well documented as one of the most popular, functional and preferred modes of coping with hopelessness (Scherer-Rath, 2001).

### **5.3 Clinical factors associated with hopelessness in cervical cancer patients**

Majority of participants from both the control (50%) and intervention (45%) group were in stage II cervical cancer. Yi-long Yang *et al.* noted similar clinical features with 42.4% of the participants being in stage II. From the control group 27% were in stage III, 18% in stage IV and only 5 % in stage I. whilst from the intervention group, 18% were in stage III, 9% in stage IV and 27% in stage I. There was no relationship between the stage of cervical cancer and Pre/Post HAI as shown by  $p=0.695$  and  $p=0.264$ . However, the results show that there was an improvement in the outcome after treatment. This meant there was no significant association between stage of cervical cancer and levels of hopelessness however there was an improving trend towards lower hopelessness levels. This correlated well with these studies (Mystakidou *et al.*, 2009; Voigtmann *et al.*, 2010, Sahin *et al.*, 2013). These afore mentioned studies provided evidence that advanced/ higher stages of cancer (greater than stage II) were associated with increased levels of hopelessness. This is explained by the greater physical pain and health deterioration that occurs in greater than stage II when the cervical cancer has spread outside of the cervix to other parts of the body (metastasis).

Treatment given at cancer disease hospital is given in form of chemotherapy and or radiotherapy. The intention of treatment is either to completely eradicate the cancer, curative intent or simply to limit the spread and allow for palliative care, palliative intent. In this study 50% of participants from the control group were receiving treatment for palliation with the remaining 50% receiving treatment for curative purposes. In the intervention group, 18% were receiving treatment for palliation whilst the majority (82%) were receiving treatment for curative purposes. This study did not correlate treatment intent to levels of hopelessness as has been reported in other studies (Mystakidou *et al.*, 2009; Voigtmann *et al.*, 2010, Sahin *et al.*, 2013)

#### **5.4 Effects of therapy on Hopelessness in Illness Assessment scores**

There was no statistical difference between therapy and reduction in HAI scores in both the control and intervention group as all the p-values were greater than 0.05. However, the intervention group showed a better reduction in HAI scores than the control group. This entailed that some clinical improvement or alleviation of hopelessness occurred. Such a minimal improvement yet with a general trend toward overall reduction of levels of hopelessness and helplessness was equally observed in other psychological interventions for cancer patients (Linn *et al.*, 2002). They conducted individual psychotherapy to a series of metastatic cancer patients and noted no significant difference in outcomes of the control and intervention group. Similarly (Cunningham *et al.* 1998) randomised women with metastatic cancer to 35 weekly sessions of group therapy (Supportive and CBT) or a control group. At 5 years follow up similar levels of helplessness/hopelessness were noted. In their defence the authors pointed out that the control group receiving supposed usual care of treatment may have not entirely been “no treatment”. They further noted that 28% attended other forms of

supportive therapy (not necessary structured). This latter fact may have contributed to such a result of our study as noted from the demographic findings that in fact the control group had 63.6% social support compared to 81.8% for the intervention group. It remains to be known as whether the 63.6% social support of the non-intervention was more tangible than that of the intervention group. It is also possible that the both intervention and control group may have had other forms of non-structured support such as pastoral/ Religious group of which this study did not take into consideration.

Furthermore time constraints and indeed a small sample size may have limited the results of this study. As mentioned earlier cancer treatment involves a loaded schedule of appointments for chemotherapy and or radiotherapy as well multiple pre-treatment investigations. The participants of this study were in most instances occupied in such appointments .This made it challenging to conduct group therapy for even for 4weekly sessions.

Despite recording only modest improvement in HAI post intervention, results of many studies; (Levin *et al.*, 2000; Elderman *et al.*, 2000; Moorey *et al.*, 1998; Wu *et al.*, 2014 and Greer *et.al*, 1992), indicate that supportive group therapy helps to enhance positive mental health by reducing anxiety and depressive/ hopelessness symptoms.

## **CHAPTER SIX**

### **6.0 CONCLUSION AND RECOMMENDATIONS**

This chapter gives the final verdict as well as discusses several possible solutions to the challenges raised in the discussion.

#### **6.1 Conclusion**

This study revealed two main findings; firstly, that patients with cervical cancer at Cancer Disease hospital showed a modest improvement in Hopelessness with a general trend towards lower levels of HAI post intervention scores. Secondly, that, social support was the only variable that correlated to high levels of hopelessness. Considering the strong association between Hopelessness, Depression and suicide, such a reduction in hopelessness resulting from brief Supportive group therapy indicates the possibility of prevention/ reduction of Depression in Cervical cancer patients. Further, this study has shown that further improvements in hopelessness could be possible if the patient's social support systems were strengthened.

#### **6.2 Recommendations**

The Ministry of Health will need to seriously consider providing Supportive group therapy to all cervical cancer at CDH as part of their routine treatment. Nursing staff can be trained to conduct Supportive group therapy session to all patients on admission. In view of time limitations, these therapy sessions can be conducted whilst patients are on the wards awaiting completion of pre-chemo radiotherapy laboratory workups. Establishment of a Supportive therapy Hotline will cater for continued psychological support on discharge or as well as cover any out patients. In order to improve psychoeducation and knowledge of cervical cancer diagnosis, video bulletins in local language can be shown in waiting rooms and on the wards. This will be most helpful in educating patients about cervical cancer and what treatment they are/will be receiving. Furthermore, regular refresher training for doctors and nurses on use of

good communication skills will be helpful to further bridge the language barriers encountered whilst providing care to patients.

Overall, these measures outlined above will reduce levels of hopelessness in these patients which in turn can prevent or improve depression and/or suicide. It is also recommended that social support systems (patients relatives, friends, spiritual/ church associates, workmates, cervical cancer patient survivors) be encouraged and strengthened so as to increase levels of hope.

### **6.3 Areas for further research**

The results of this study should be considered cautiously as such a research demanded a larger sample and longitudinal method across many months, both of which this study did not fulfil. Furthermore, confounding variables such as participants accessing other forms of support or therapy outside that provided by the research as well as quantifying and verifying the effectiveness of social/family support provided to the participants prior to intervention. For future research replication of the study with a larger sample size and consideration of confounders would be recommended.

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## **APPENDICES**

### **Appendix A**

#### **PARTICIPANT INFORMATION SHEET**

My name is Christine Mutelo. I am a postgraduate student of UNZA pursuing a master's degree in Psychiatry under the department of Psychiatry at UTH. As per academic requirement, am conducting a research study on the Effectiveness of Supportive Group Therapy on levels of Hopelessness in Cervical cancer patients at CDH.

Your participation will require you to give a detailed demographic and clinical history. As well as fill in the HAI. The HAI is a written questionnaire that asks questions to score the level of hopelessness or despair you may have. Thereafter, you will be admitted either to an intervention group or a non-intervention. Your preference of the two groups will be noted however you will be randomly assigned to either group. No benefit will be denied to you by belonging to either group. The intervention group will then attend four weeks of supportive group therapy. Each weekly session shall be an hour long. During the sessions a trained psychologist shall guide the group participants in various modules concerning dealing with feelings of despair, rebuilding morale and motivation and having a positive outlook for the future. At the end of the four weeks both groups will fill in the HAI again.

Your personal information, contributions during therapy discussions and HAI scores shall be held in confidence. All documents bearing such information shall be kept under lock and key with access given only to the researchers.

During this study your participation shall be voluntary and written and signed consent will be obtained from you to prove that you have understood what will be required of you during the study. If at any time during the study, you feel inconvenienced to continue, or feel injured or

are simply unwilling to continue, you will be permitted to withdraw. Such a withdrawal will not disadvantage you in any way neither will it affect the routine treatment and care you are currently receiving.

If you have any queries or need clarifications you can contact me on +260 977 477 196, Psychiatry Department UTH. Or you may contact the University of Zambia Biomedical Research Ethics Committee, Ridgeway campus, box 50110, Lusaka.

## **Appendix B**

### **CONSENT FORM**

I have read the information, or it has been read to me. I have had the opportunity to ask questions concerning the study and these have been answered to my satisfaction. I consent to voluntarily participate in this study.

Name of participant

Signature/thumb print of participant

Date

### **STATEMENT BY RESEARCHER**

I have accurately read out the information sheet to the participant and to the best of my ability made sure the participant understands that the following is expected of them;

Fill in the HAI questionnaire

Participate in support group therapy discussions

I confirm that the participant was given an opportunity to ask questions about the study and all the questions have been answered correctly and to the best of my ability. I confirm that the participant has not been coerced into giving consent and that it has been given freely and voluntarily.

Name of Researcher

Signature of Researcher

Date

**WITNESS FORM**

I have witnessed the accurate reading of the consent form to the participant and the individual had the opportunity to ask questions. I confirm that the participant has given consent freely.

Name of witness

Signature / Thumb print of participant

Date

## Appendix C

### DATA COLLECTION SHEET

NO	QUESTION	CODING CATEGORY
Part A: Social Demographic-information		
A1	Age	
A2	Marital status	Married.....1 Widowed/widower....2 Single.....3
A3	Occupation	Employed.....1 Not Employed....2
A4	Level of education	Nil.....1 Primary...2 Secondary....3 Tertiary.....4
A5	Family/social support	Present.....1 Not present....2
Part B: Clinical Presentation		
B1	Stage of Cervical cancer	Stage 1.....1 Stage 2.....2 Stage 3.....3 Stage 4....4
B2	Type of treatment	Curative.....1 Palliative....2
Part C: Psychometric Testing		
C1	Hopelessness in illness questionnaire Baseline score....	

C2	HAI Post intervention score	
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## Appendix D

### SUPPORTIVE GROUP THERAPY MODULE

Session	Topic
1	Group members introductions
2	Coping with medical tests and communicating with providers
3	Coping with family and friends
4	Coping with vocational issues
5	Coping with body image and physical function
6	Coping with the future and meaning of cancer diagnosis to patient
7	Termination; where do we go from here

## Appendix E

### Hopelessness Assessment Illness Questionnaire

1.	0	I don't feel discouraged about my future
	1	I sometimes feel discouraged about my future
	2	I often feel discouraged about my future
2.	0	I don't have inner strength to keep fighting this illness
	1	I don't know if I have inner strength to keep fighting this illness
	2	I have the inner strength to keep fighting this illness
3.	0	It is hard to think about anything besides my illness
	1	Sometimes I can about things other than my illness
	2	I can put my illness out of my mind most of the time
4.	0	I don't let myself feel hopeless
	1	I try to stay hopeful but sometimes I cant
	2	I can't help feeling hopeless much of the time
5.	0	I dread everyday
	1	Sometimes it's hard for me to face the day

	2	I usually look forward to each day
6.	0	I feel a sense of control over my life
	1	I feel in control of some parts of my life
	2	I have no control over my life
7.	0	I have nothing to look forward to
	1	I am looking forward to some things
	2	I am looking forward to many things
8.	0	I almost always feel hopeful
	1	Sometimes I feel hopeless but then it passes
	2	I almost always feel hopeless

Total score ranging from 0-16