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Original Article

EFFECTIVENESS OF EXISTENTIAL GROUP THERAPY FOR TREATMENT OF PSYCHOLOGICAL PROBLEM OF CERVICAL CANCER PATIENTS

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ABSTRACT

Background: Cervical cancer or cancer of cervix is one of just a few cancers caused by a virus. The virus, called Human Papilloma Virus (HPV) can infect a woman's cervix when she has sex. Now a days the prevalence of it is evidenced that approximately 83% of the world's new cases and 85% of all cervical cancer deaths reported are from developing countries.
Objective: This study examined the effectiveness of Existential Group Therapy in treating psychological problem (Depression)among patient with cervicalcancer in Ethiopia.
Method: The study was a non-equivalent control group pretest-posttest, quasi-experimental design. Thirty research participants were selected purposefully based on inclusion criteria. They were divided in to two groups (psychotherapeutic group and control group). Standard scale namely, Beck Depression Inventory II, were used to measure the dependent variables at two occasions; pre-test and post-test. Research participants in the psychotherapeutic group received Existential Group therapy for nine sessions; three sessions per week for ninety minutes of each session.
Result: Result of dependent t-test illustrated that, after treatment, research participants engaged in psychotherapeutic group showed statistically significant reduction in the level of Depression compare to the control group.

Keywords: Cervical cancer, Depression, Existential Group Therapy

INTRODUCTION

Cancer is a disease in which abnormal cells grow and reproduce uncontrollably and invade nearby tissues by spreading to other parts of the body through blood streams and lymphatic systems hindering the activities of the normal cells (Ethiopian cancer Association, 2007).

The body is made up of hundreds of millions of living cells. Normal body cells grow, divide, and die in an orderly fashion. During the early years of a person's life, normal cells divide faster to allow the person to grow. After the person becomes an adult, most cells divide only to replace worn-out or dying cells or to repair injuries. Cancer begins when cells in a part of the body start to grow out of control. There are many kinds of cancer, but they all start because of out-of-control growth of abnormal cells. Cancer cell growth is different from normal cell growth. Instead of dying, cancer cells continue to grow and form new, abnormal cells. Cancer cells can also invade (grow into) other tissues, something that normal cells cannot do. Growing out of control and invading other tissues are what makes a cell a cancer cell (American cancer society, 2010).

Cancer remains a major cause of mortality worldwide. Despite being potentially among the most preventable and treatable chronic diseases nearly 7 million lives were lost in cancer in 2005 alone. Many cancer incidence rates could increase substantially in the future with up to 15 million new cases in 2020, most of which will be in developing countries(Ekortari&Rowdeno, 2006).

Cancer occurs when cells in an area of the body grow abnormally. Cervical cancer starts in the cervix, the narrow opening at the bottom of the uterus (or womb), also known as the mouth of the womb. The uterus is where a baby grows during pregnancy. The cervix connects the uterus to the vagina, which leads to the outside of a woman's body. These reproductive organs are located in the pelvis, close to the bladder and rectum. It can take many years for cervical cancer to develop. Normal cells in the cervix tissue may become abnormal (or precancerous) for a number of reasons. These cells can usually be detected by Pap tests. Sometimes these abnormal cells are not detected because screening was not done or they were not detected. When this happens and they are not treated, they may turn into cancer cells (ACS, 2010).

Cervical cancer or cancer of cervix is one of just a few cancers caused by a virus. The virus, called Human Papilloma Virus (HPV) can infect a woman's cervix when she has sex. Most cervical cancer is related to a virus which is transmitted through sexual contact. This connection may shock many or make them feel embarrassed. It's important for them to remember that sex is a normal part of adult life. HPV is common in all women who have had sex. Most are just fortunate not to get cancer from the virus. It is not possible to know when or from whom one got HPV, and spending energy on guilt, blame or anger is just not helpful. One will need to focus one's energy on getting through their cancer care.

Cancer of the cervix is a leading cause of deaths among women worldwide. It is estimated that 493,000 new cases and 274,000 deaths occur every year due to this preventable disease.The women of poorer communities are mostly affected with this condition. It is evidenced that approximately 83% of the world's new cases and 85% of all cervical cancer deaths reported are from developing countries. This condition affects not only the health and lives of the women, but also their children, families and their communities at large (Ferlay, Bray, Pissani, Parkin, Globocan, 2002).

The prevalence of HPV is very high among young, sexually active adult women. The primary determinant of level of sexual activity in a given population is its Sexually Transmitted Disease (STD) rate (Vail-smith, White, 1992).

Cervical cancer is the most common malignancy among women in developing countries (Denny, 2005). Clinical studies had confirmed that human papillomavirus (HPV) is the cause of cervical cancer (Cogliano, Baan, Straif, Grosse, Secretan, &Ghissassi, 2005). HPV- 16

and HPV-18 are the most prevalent high-risk viruses and contribute to about 70% of all cervical cancers (Clifford, Smith, & Plummer, 2003). Two vaccines had been developed in recent years to prevent cervical cancer caused by HPV-16 and HPV-18. Both vaccines gave 100% efficacy in women who were not infected by HPV- 16 and 18 but they are only prophylactic and do not protect against all oncogenic HPV (Kaufmann, and Schneider, 2007). Pap smear test is the main screening method used for the secondary prevention of cervical cancer. It can detect precancerous cells easily (Kotaniemi-Talonen, Anttila, & Malila, 2008).

According to the 2003 World Cancer Report, 80 percent of cervical cancer cases occur in developing countries, where in many regions it is the most common cancer among women. In fact, it is the second most common cancer among women worldwide.

Very little formal psychological support, such as group or individual therapy, is available to cancer patients in developing countries, although evidence from developed-country settings has shown that it can be an important aspect of cancer care. Psychological support has been found to reduce distress and show beneficial effects on anxiety and depression among patients with cancer.

Psychological interventions can play an important role in women's lives at what is often a particularly stressful time. These interventions, particularly group techniques, are inexpensive in contrast to invasive medical procedures. Systematic reviews of the literature suggest that group therapies, education, and counseling are among the psychological therapies found to be most effective for medium- and long-term benefits among patients with cancer.

As per knowledge of the authors there is no such study published in developing country in such area, so this study try to fill the gap in the literature and act like as a bench mark for other study in the future.

As we discussed or based on the above explanation about the cancer as well as cervical cancer, this research attempts to answer the following research question;is there a significant statistical difference in depression from pre to post treatment measures between a psychotherapeutic and control groups by providing Existential Group Therapy?

METHOD

The Research Design

The study was a non-equivalent control group pretest-posttest quasi-experimental design, having subjects in the control and experimental group who are not equivalent in all contexts, which might affect the dependent variable. Consequently, these uncontrolled variables operate as rival hypothesis to explain the outcome of the experiment. (Christensen, 1980, &Cohen, et al 2000):

Pre-test	**Treatment**	**Post-test**
Treatment/psychotherapeutic group	0_1	0_2
Control group	0_3	0_4

Figure 2: A Quasi-Experimental Design

Where:

- The Treatment/psychotherapeutic group were cervical cancer patients who received both usual care provided by the institution and hospital and also Existential Group Therapy delivered by the researcher.
- The Control group was cervical cancer patients who only received usual care provided by the institution and Hospital.
- $\mathbf{0_1}$and$\mathbf{0_3}$refers to mean scores of dependent variables before the Therapy for both the psychotherapeutic group and control group.
- **X** refers to Existential Group Therapy delivered by the researcher.
- $\mathbf{0_2}$and$\mathbf{0_4}$refers to mean scores of dependent variables after the Therapy for both the psychotherapeutic group and control group.

Population and Sampling

The population or research participants in this study were cervical cancer patients who live in Cancer Care Ethiopia (CCE) and follow their treatment in TikureAnbessa Specialized Hospital (TASH). There are some criteria that the researchers used to select respondents, these criteria are stated below;

- They have cervical cancer.
- They suffer from psychological problems: depression (This was got from literature, observation, gathered information from the nurses and administering depression test).
- They were living in CCE and willing to participate in the study.
- They were estimated to wait for two and more months in cancer care home.

Based on the stated criteria 30 eligible participants were selected purposefully. Among 30 participants, 15 participants were for psychotherapeutic group and the rest 15 are for control group. Therefore, after identifying those cervical cancer patients the researcher administered pre-test, then after, the researcher used codes in pre-test questionnaires from 1 to 30, after this random sampling, lottery method by tossing the coin, was used to decide who was folded in control group and psychotherapeutic group, this technique helps the researcher to differentiate who falls in treatment/psychotherapeutic (group that receive Existential group therapy) and control group (group that is used as a comparison group).

Study Variables

Independent variables

The two independent variables for the research design were treatment and time. The treatment variable included Existential Group Therapy for treatment/psychotherapeutic group and no Existential Group Therapy for control group. The time variable was before (pre) and after (post), and included those that received psychotherapy and those that did not received psychotherapy programs.

Dependent Variables

The dependent variables was psychological problem that mostly faces cervical cancer patients, depression. The dependent variable was measured by pre and post-test self-report measures that filled by the respondents.

Research Instrument

In this study, the questionnaire was used by the researcher in two parts: self-developeddemographic data sheet and standardized scales to measure pre- and post-treatment effects of Existential Group Therapy on cervical cancer patient's problems.

Beck Depression Inventory II (BDI-II)

The Beck Depression Inventory II scale was developed by Aaron T. Beck, Gregory K. Brown, and Robert A. Steer. There have been two revisions of the Seek Depression Inventory. There exists the BDI, the BDI-IA, and the latest version, the BDI-II. Each inventory is an instrument for measuring the severity of depression in adolescents 13 years of age and up, as well as adults. The BDI-II contains DSM-IV criteria for depression not included in the two previous versions (Conoley, 1987).

The reliability the BDI-II yields a coefficient alpha of .92 for the outpatient population (n = 500). The coefficient alpha for the college students (n = 120) in the sample was .93. Both surpass the coefficient alphas for the preceding two versions of the BDI. In addition, a one-week test-retest correlation of .93 resulted from a study of 26 outpatients who had been referred for depression and took the BDI-II during their first and second therapy sessions (Beck et al., 1996). In a study with both white and Mexican- American subjects, an internal consistency coefficient of .80 was computed for the BDI-IA. No significant differences were found between participants from the two cultural backgrounds, therefore supporting the test's reliability across ethnic groups and aging populations (Ames, Gatewood-Colwell, &Kaczmarek, 1989).

Translation and Pilot testing

The research questionnaire was translated by the previous researchers present it, but the current researcher has done some modifications in Amharic words with PhD language students that are suitable for cervical cancer patients (like, after you know you have cervical cancer, what is your interest towards sex….). Pilot testing was presented for 10 respondents for the main purpose of determining the reliability of standard scale that was used by the researcher. Accordingly, after administering the instrument for the pilot samples, the response was scored and assess for its reliability and score as .83, .72 and, .93 was presented for Rosenberg self-esteem, Beck Anxiety Inventory and Beck Depression Inventory scale respectively.

Method of Data Analysis

The obtained data from the respondents was analyzed by different statistical analysis methods that the researcher has implemented. The quantitative data collected from the respondents was analyzed using the statistical package for social science (SPSS) software version 20. Among different statistical analysis method the researcher used, the major one are: Descriptive statistics, frequency distributions and percentage were used to describe participants "demographic characteristics". Dependent and Independent t-test are used to compare the mean difference between the pre-test and post-test measures of Beck Depression Inventory (BDI),

RESULTS

The major purpose of the present study was to examine the effectiveness of Existential Group Therapy for psychological problem (depression) of cervical cancer patients in the case of Cancer Care Ethiopia. So as to achieve this objective, the research results are presented as follows, including their demographic data sheet and standard scale questionnaires responses were analyzed in the following way;

Demographic characteristics of participants

Demographic characteristics of the participants in the control and psychotherapeutic group are provided in Table 1. All of participants 30(100%) were female both in control and psychotherapeutic groups. The average age for control group was 34.27 years (SD=10.28; ranged 20-63) and 41.20 years (SD=12.88; ranged 26-73) for psychotherapeutic group. In terms of educational level in control group 8(53.3%) were illiterate and 7(46.7%) were literate, while in psychotherapeutic group 6(40%) were illiterate and 9(60%) were literate. There were similar results shown in terms of marital status, in both groups 13(86.6%) were married, and the rest 2(13.4%) were single in control group and 1(6.7%) were single and divorced in psychotherapeutic group.

Table 1: DEMOGRAPHIC CHARACTERISTICS OF TREATMENT AND CONTROL GROUP (N=30)

Characteristics		Control group (N=15)		Treatment group(N=15)	
		Mean	**SD**	**Mean**	**SD**
Age	20-73 years	34.27	10.28	41.20	12.88
		Frequency	**Percentage**	**Frequency**	**Percentage**
Educational level	Illiterate	8	53.3	6	40
	Literate	7	46.9	9	60
	Total	15	100	15	100
Marital status	Unmarried /single	2	13.4	1	6.7
	Married	13	86.6	13	86.6
	Divorced	-	-	1	6.7
	Total	**15**	**100**	**15**	**100**
Type of treatment	Surgery	-	-	1	6.7
	Radiotherapy	9	60	5	33.3
	Combination of both with chemotherapy	6	40	9	60
	Total	**15**	**100**	**15**	**100**

Almost all participants 14(93.3%) in control group were less than a year, where as in psychotherapeutic group 7(46.7%) were less than a year and 8(53.3%) were a year or more than a year after their diagnosis. When participants asked to answer what type of treatment they follow in TASH, 9(60%) participants in control group follow radiotherapy and 6(40%) were uses combination of both with chemotherapy, while the psychotherapeutic group were 9(60%) respondents respond as they follow surgery and radiotherapy with chemotherapy and the rest are they follow differently. Lastly, when subjects were asked if they had ever received counseling service, all of the participants 30(100%) in control and psychotherapeutic group respond 'No'.

Psychological Problem of cervical cancer patients

Depression level of patients

Table 2: Depression Level Of Psychotherapeutic Group Before And After Treatment (N=15)

Level of Depression	Before Treatment (Pre-test)		After Treatment (Post-test)	
	Frequency	**Percentage**	**Frequency**	**Percentage**
0-13 (Minimal)	1	6.7	2	13.3
14-19 (Mild)	2	13.3	6	40
20-28 (Moderate)	8	53.3	5	33.4
29-63 (Severe)	4	26.7	2	13.3
Total	15	100	15	100

As shown in table 2 depression level of psychotherapeutic group, 12(80%) respondents were in moderate or severe level category, 3(20%) were in mild or minimal level category before they took Existential Group Therapy. Whereas, after treatment or taking Existential therapy, 8(53.3%) were in minimal or mild level category and 7(46.7%) were in moderate or severe depression level category.

Table 3: Depression Level Of Control Group During Pre And Post Tests (N=15)

Level of Depression	Pre-test		Post-test	
	Frequency	**Percentage**	Frequency	Percentage
0-13 (Minimal)	-	-	2	13.3
14-19 (Mild)	3	20	2	13.3
20-28 (Moderate)	5	33.3	6	40
29-63 (Severe)	7	46.7	5	33.4
Total	15	100	15	100

As can be seen from table 3, 12(80%) of patient participants in control group have shown severe or moderate level of depression category, and the rest 3(20%) of respondents were mildly depressed category in pre-test, whereas in post-test, 11(73.4%) were in moderate or severe level category and 4(26.6%) were in minimal or mild depression category level.

Table 4: Dependent T-Test Of The Mean Depression Scores Of The Psychotherapeutic Group Before And After The Treatment (N=15).

	Depression Score			
Psychotherapeutic Group	**Mean**	**SD**	**t**	**p-value**
Before treatment(pre-test)	26.2	8.69	2.597	**.021***
After treatment(post-test)	20.06	8.34		
Paired Differences	6.14			

*Statistically significant at P<.05, df=14

As indicated in table 4, in psychotherapeutic group, it was found that the pre-test mean depression score was 26.2 (SD=8.69) whereas the post-test mean depression score decreases to 20.06. The mean difference in before-after treatment, depression score of psychotherapeutic group was 6.14, A 2-tailed t-test for statistically significant difference between the means indicated that the difference between the pre-test and post-test score was statistically significant at 0.05 level of significance (df=14, t=2.597, P<.05). The result of this finding shows that Existential group therapy had an influence on improving depression level of psychotherapeutic group from pre-test to post-test.

Table 5: Dependent T-Test Of The Mean Depression Scores Of The Control Group Between Pre And Post Test Mean Scores (N=15).

	Depression Score			
Control Group	**Mean**	**SD**	**t**	**p-value**
Before treatment(pre-test)	27.2	5.82	1.974	**.068****
After treatment(post-test)	22.47	9.65		
Paired Differences	4.73			

** Not statistical significant at P>.05, df=14

In table 5, the mean depression score for the control group at earlier measurement (pre-test) was 27.2 with standard deviation (SD) 5.82. Latterly measurement (post-test) shows, it was reduced to 22.47 with standard deviation (SD) of 9.65. The difference of both measures was 4.73. However, the difference is not statistically significance.

Table 6: Independent T-Test Of The Mean Depression Scores Of Psychotherapeutic And Control Groups

	Groups		Mean Difference	t	Sig.
Depression Scores	**Treatment**	**Control**			
Pre-test	26.2	27.2	1	0.370	**.714****
Post-test	20.06	22.47	2.41	0.728	**.472****
Mean Difference	6.14	4.73			

**** Not statistical significance at P>.05, df=28**

As shown in table 6, before therapy/treatment, the mean depression level scores of control group for the pre-test was 27.2, while the mean depression level scores of psychotherapeutic group was 26.2. The mean difference in depression level score between groups for pre-test was -1. A two-tailed significance test for the equality of means indicated that there was no statistically significant difference between control group and psychotherapeutic group during the pre-test at 0.05 level of significance (df =28, t(14)-0.370, P>.05).

In post-test or after treatment, the mean depression level scores both groups shows decrement (control group, 22.47 and psychotherapeutic group, 20.06). The mean difference in depression score between groups for post-test was -2.41. A two tailed significance test for the equality of means indicated that there was no statistically significance difference between control and psychotherapeutic groups during the post-test at level of significance 0.025(df =28, t=-0.728, P>.05). These results indicated that both control and psychotherapeutic groups were not statistically significant, but this does not mean that psychotherapeutic group does not show improvement in their depression level, it came because of control group post-test mean are approximately similar to psychotherapeutic group post-test mean, as measured by the Beck depression inventory Scale from pre-test to post-test in independent t-test.

DISCUSSION

The present research findings indicated that depression level of psychotherapeutic group, above average of respondents were putted in moderate or severe level of depression (80%), and mild or minimal (20%) were scored by psychotherapeutic group before they take the counseling service. Whereas 80% of research participants in control group have shown severe or moderate level of depression, and the rest 20% of respondents were respond as mildly depressed before treatment, this statement also strengthened by Miranda C.R.R, et al (2002) studied in depression before and after uterine cervix and breast cancer neoadjuvant chemotherapy, they found depression in cancer patients is common and may affect treatment outcome either directly or indirectly.

Study done by Simon N.vigod (2011), stated in the study to investigate both depression and psychological distress as determinant of breast and cervical cancer screening, shows in association between Kessler 6item>8 and cervical cancer approached significance in women over age 40.

Following the provision of Existential group Therapy, the findings of the study discovered that psychotherapeutic group had low levels of the mean depression scores with statistical significance at p<0.05 in paired t-test. In addition, the treatment group was compared to the control group and showed improvement on measures of depression. This finding was similar with Abdollah, et al. (2009), in their study of cognitive-existential Group Therapy and Cognitive-Instructional Therapy for Breast cancer patients in improving psychological problems in depressed patients with breast cancer, their MANCOVA results indicated that the depression was lower and hopefulness was higher in the Cognitive-Existential Group Therapy than in the Cognitive-Instructional therapy group.

CONCLUSION

The following are the major finding of the study: Before treatment or therapy research respondents respond as 80% were moderate or severe level of depression in psychotherapeutic group and also the same score was scored by control group.The treatment/psychotherapeutic group showed a statistical significant reduction in the level of depression from pretest to posttest mean of depression scores after the completion of Existential Group Therapy.

Authors recommended that based on the findings are all of the participants responded that they didn't receive any psychological counseling services from the organization as well as in their life and the researcher also observed that there was no counseling service center and a professional counselor who could provide psychological counseling to cancer patients who are found in the organization. Consequently, it is suggested that the organization should employ professional counselors and restructure counseling service center to provide psychological counseling service (especially Existential Group Therapy) for the patients and also recommends to different field of researchers especially psychologist, psychiatrist, and oncologists to conduct a large scale study with more sample size and diversity of cancer type to expand the finding of this study.

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Nothing declared

Conflict of interest

No conflict declared

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