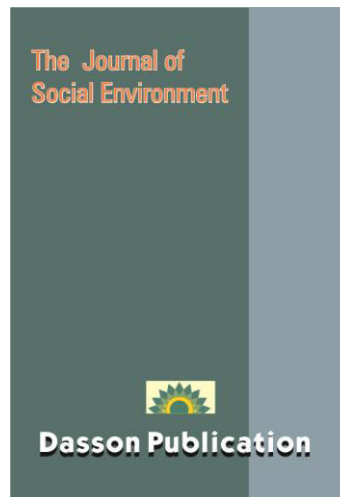# The Journal of Social Environment

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The effectiveness of cognitive behavioral group counseling for depression and anxiety among the elder people in Ethiopia

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Abstract

The study examined whether Cognitive Behavioral Group Counseling (CBGC) is effective in addressing psychological problems of elders in Talita orphans, girls and the aged support organization (TOGASO). Eighty four participants aged 60-85 selected purposefully based on inclusion criteria were randomly assigned into the control and treatment groups each with 24 participants. The research design was a randomized treatment and controlled pre-test and post-test experimental design. Two standardized scales, namely, geriatric depression scale (GDS), and geriatric anxiety inventory (GAI) were used to measure the dependent variables at two occasions: pre-test and post-test. Participants in the treatment group received CBGC for six weeks, three days per week, 1:00-1:20 hours per session for a total of 12 sessions. Results of independent t-test indicated that there was statistically significant difference between treatment group and control group during the post-test at 0.05 level of significance ($df = 46$, $t=4.397$, $p < 0.01$) in depression scores and also in anxiety there was statistically significant difference between control group and treatment group during the post-test at 0.05 level of significance ($df =46$, $t=4.397$, $p<0.01$). Finally, the result indicated that cognitive behavioral group counseling was effective in treating depression and anxiety among the elderly. From these results it was suggested that the application of CBGC has to be expanded to address psychological problems of elders in more other organizations or settings.

Key words: 1.Behavioral Group Counseling, 2.Depression and Anxiety, and 3.Elder People.

Introduction

According to World Health Organization (2006), the issues of mental illness have been becoming a significant public health problem worldwide. Major depression and anxiety are among the most prevalent of psychiatric disorders and the most disabling of medical disorders. Depression is a serious, recurrent disorder linked to diminished role functioning, quality of life, medical morbidity, and mortality. The WHO ranks depression as the fourth leading cause of disability worldwide and projects that by 2020 it will be the second leading cause of death (Spijker et al, 2004 as cited in Bromet et al, 2011). According to the WHO (2006), every year about 120 million people throughout the world suffer from depression while only 25% of them have access to effective treatment.

According to the various developmental process developmental psychologist have basically classified human development in to four periods. These include: childhood, adolescence, adulthood and old age

(Santrock, 1999). But there is no common agreement among psychologists regarding the beginning of old age (Santrock, 1999). In different countries the topics of aging and issues about older persons have got recent attention, especially, since the last two decades. Aging has become a subject for education, an area for research, and an issue for policy making. Thus, aging has surfaced as issue and subject of study; people are examining what it means to be an old person. People's interest in the area is attributed to the increasing number of older person across the world (Cox, 1988).

And, older person's problem and needs have become more wide spread, the more the problem become visible and more widely known (Cox, 1988). Examining aging from varieties of perspectives has brought clarity of thought about aging to researchers, practitioners, and students in the field. Hence growing social awareness and sensitivity to the problems and needs of older persons has emerged (Persen & Sperry, 1996).

Moreover, depression and anxiety symptoms are prominent condition amongst older people with a significant impact on the well-being and quality of life. Scholars depict that the prevalence of depressive symptoms increases with age. Depressive and anxiety symptoms not only have an important place as indicators of psychological well-being but are also recognized as significant predictors declined cognitive functioning in elders (Bruce, 2002).

According to MOLSA (2006), in Ethiopia even though the population has a very large young population due to high fertility rate, an estimated 2.7 million in 1994 and 3,565,161 Ethiopians in 2007 were age 60 and above. The number of older adults in Ethiopia was projected to increase to 3.1 million by the turn of the century and 5.2 million by the year 2020 (CSA, 2007). Conditions of elders in Ethiopia are becoming tragic and severe. Poverty of the country in conjunction with lack of social support has affected the health and psychological well-being of older persons. Like other developing countries, the elderly are exposed to various problems and also the difficulties they have in adjusting to the ever changing societal values in the modern world cause them to be anxious (MOLSA, 2006).

Furthermore, depression and anxiety are the most common psychiatric disorders in the adult population and their prevalence were high (25% and 29% respectively) (APA, 1994). These disorders are also associated with considerable disability and suffering that is not limited only to the affected elder person, but also to family members and friends. It is estimated that depression will be one of the leading causes of suffering in the year 2020 (WHO, 2006). Besides, depression is the most prevalent mental health condition in the older population and a leading cause of disability physically and mentally. Depression in late life is a recognized phenomenon but research suggests that depression is both under-recognized and under-treated in older adults (WHO, 2006).

In Ethiopia, the population of older person is increasing from time to time. According to the 1994 national population and housing census, the number of older persons, who aged 60 and over were 2,569,000 (CSA, 1994). This number increased to 3, 565, 1614 by 2007, (CSA, 2007). This trend has shown that the number of older person increased by 996,161 within a decade. Although the majority (85%) of the elderly in Ethiopia still resides in rural area, the number of urban elders has also showed a remarkable increase as they are moving from rural area to towns in search of food, medication, and better work opportunities. As indicated in 1994 census result, the total number of older persons, 60 and above, in Addis Ababa, were 87,516, of which 52.4% were women (CSA, 1994).

This possibly indicates that there are lots of things to be done regarding the issues of older peoples in towns. As already mentioned in most developed and developing countries, the proportions of elderly individuals have substantially increased over the last decades (MOLSA, 2006). These demographic shifts have increased the focus on health in aging. In developing countries, including Ethiopia assessments on

economic, social, and psychological issue of old age have been less detailed. MOLSA (2006) has also reported that some Nongovernmental and Governmental organizations for older people have mainly focused on economic and social supports who no longer participated in labor force. But, older people are facing low self-esteem stress, loneliness, depression, anxiety, poor housing, low community participation, poor health and illiteracy and all this major psychosocial problems are ignored. However various psychological approaches can be utilized treat late-life problems or to enhance the quality of later life but no single psychological intervention is preferred for older adults. The treatment of choice is guided by the nature of the problem, therapeutic goals, preferences of the older adult, and practical considerations (Appleby L, 1997).

Cognitive behavioral therapy is the most extensive researched psychotherapeutic treatment for non-psychotic depressive and anxiety disorder (Grote NK and Frank E, 2003). It developed from cognitive therapy, which focused on dysfunctional beliefs and then incorporated components of behavioral psychotherapy. Also, its aim is to correct the negative distorted cognitions and dysfunctional underlying beliefs that maintain depressive and anxiety symptoms (Beck, 1997).

Many studies have showed that the difficulties elders have faced in adjusting themselves to the changing societal values in modern world cause them to have much anxiety, low self-esteem and depression (MOLSA,1996).

According to Beck (1979) give some solution for elders physical, mental and psychological problem re different mechanisms but from them cognitive behavioral individual and group therapy, and interpersonal psychotherapy have been shown to be effective in the treatment of one or more late-life mental disorders. These include depression, anxiety, sleep disturbance, and other psychological difficulties. Most studies suggest that antidepressants and CBT are equally effective in the acute, short-term treatment of outpatients suffering from depression and anxiety (Beck, 1979).

According to MOLSA (2006), in Ethiopia the mental issues of elderly has been ignored or has not got attention and even the existing local researches regarding mental health focus on prevalence other than treatment and intervention. Therefore, this study examined the effectiveness of CBGC in treating anxiety and depression among elders. The findings of the present study will be beneficial to professional counseling service providers and psychiatrist especially counselors and social workers that work with elders with regards to the use and effectiveness of need-based CBGC services. The study would increase the professional counselors and public's mental health understanding by recommending ways to enhance awareness about depression and anxiety among elderly people. Also, the findings of the study will indicate what sort of problems elders suffer from and the role of CBGC on the problems of elders.

Methods

Study design

The study was a randomize treatment and controlled pretest and post-test experimental design.

Table 1: study design

	Pre-test		Post-test
Treatment group	O1	**x**	O2
Control group	O3		O4

Study population

The population of the study was depressed and anxious elders who live in TOGASO. The study considered the following point as inclusion criteria: The only elderly people with the age limit of 60 up to 85 were selected. Also, the elderly people who stayed more than six months in the institution; through Geriatric Depression Scale (GDS) and Geriatric Anxiety Inventory (GAI) elders whose depression and anxiety score were above normal (during pre-test). The GDS and GAI result 84 elders were selected and included as the sample of the study from TOGASO. Based on the stated criteria 84 eligible participants were selected purposefully from 170 elders. The participants ranged in age from 60 to 85. All participants were elders who have anxiety and depression. Before the administration of the pre-test, the researcher assigned code numbers to the questionnaire from 01 to 170 for each participant.

Then after the completion of pre-test, the researchers requested participants to write the assigned code numbers and there name on the front of the questionnaire which remained strictly confidential between the participants and the researchers.

The independent variables for the research design were treatment. The treatment variable included CBGC for treatment group and no CBGC for control group. The dependent variables were anxiety and depression.

Data collection

In order to gather data and measure depression and anxiety among older people, standardized scales were adapted and used. For measuring depression, Geriatric Depression Scale (GDS) and Anxiety, Geriatric Anxiety Inventory (GAI) was used. In order to gather data regarding the socio demographic characteristics, questionnaires in addition to the standardized scales were used. It included the following socio demographic measures: age, gender, educational background, marital status and elderly condition of children (whether the elderly have children or not).

Data analysis

Data collected was analyzed using the statistical Package for Social Science (SPSS) version 20.0. Descriptive statistics, frequency distributions and percentage were used to describe the study results.

Dependent and independent t-test was used to compare the mean difference between the treatment and control group existed on pre-test and post-test measures.

Results

The result of the study was presented in three main sections in accordance with the research questions. The first section provides socio demographic characteristics of respondents. The second section describes the level of depression and anxiety among elders. The third section examines whether there is a significant difference between treatment and controlled group after the provision of CBGC for the treatment of depression and anxiety among elders.

Socio demographic characteristics of the respondents

The following section presents the socio demographic variables of respondents in order to enhance understanding of the data gathered well.

Table 2: The socio demographic variables of respondents

Characteristics		Treatment group		Controlled group	
		n	%	n	%
Gender	Male	17	70.8	17	70.8
	Female	7	29.2	7	29.2
	Total	24	100	24	100
Age	60-70	4	16.2	8	33.3
	71-80	11	45.8	7	29.2
	81-85	9	37.5	9	37.5
	Total	24	100	24	100
Educational level	Illiterate	12	50	9	37.5
	Primary	8	33.3	9	37.5
	Secondary	3	12.5	6	25.0
	Diploma	1	4.2	0	0
	Total	24	100	24	100
Marital Status	Single	6	25.0	5	20.8
	Married	8	33.3	1	16.7
	Divorced	5	20.8	5	12.5
	Window	5	20.8	11	50.0
	Total	24	100	24	100
Counseling received before	Yes	0	0	0	0
	No	24	100	24	100
	Total	24	100	24	100

All the subjects who fulfilled the criteria were assigned randomly to treatment group (n=24) and controlled group (n=24). All the participants (100%) had been considered as participants of depression. As we can see majority of the participants from treatment and controlled group were male. With these distribution male participants have covered the larger portion 17 (70.8%) and female 7 (29.2%) from treatment group. Among this participants the treatment group 60-70 age were accounted for 4 (16.2%) followed by those elders aged 71-80 accounted for 11 (45.8%) and above 81 accounted 9 (37.5%). Also, from controlled group 8 (33.3%) were aged 60-70, 7(29.22%) were elders from 71-80 and 9(37.5%) were above 81 age. In terms of educational background, it was found that treatment group 12(50%) were illiterate, 8 (33.3%) were elementary school level, 3 (12.5%) were secondary school level and 1 (4.2%) were diploma holders. While 9 (37.5%) of the controlled group were illiterate, 9 (37.5%) had elementary school level, 6 (25.0%) had secondary school level. And the distribution of marital status in the treatment group 6 (25.0%) were single 8 (33.3%) were married, 5 (20.8%) were divorced and 5 (20.8%) were widow. While, 5 (20.8%) of controlled group were single, 1(16.7%) were married, 5 (12.5%) were divorced and 11 (50.0%) were widow. In addition to this, from the whole participants of treatment group 15 (62.5%) have no children but the rest 9 (37.5%) have children and from controlled group 10 (41.7%) elders have no children but the rest 14 (58.3%) have children.

When participants were asked if they had received any counseling service from the institution, all of the participants 48(100%) in the treatment and controlled group responded "No".

Major psychological problems of elders

Depression

Depression level of treatment group before and after the treatment (n=24)

Table 3: Depression level of treatment group

Level of Depression	Before treatment(pre-test)		After treatment (post-test)	
	Freq.	%	Freq.	%
0-4 (Normal)	20	-	6	25
5-10 (Mild)	4	20	18	75
11-15 (Sever)	4	16.7	-	-
Total	24	100	24	100

The proportions of respondent were mild level of depression (83.3%) before treatment group decreases to (75%) after the application of the treatment. Besides, the proportions of respondents were severe depression before the treatment was 16.7%. But, after the treatment none of them was found to suffer from sever level of depression.

Anxiety

Anxiety level of treatment group before and after treatment (n=24)

Table 4: Anxiety level of treatment group

Level of Depression	Before treatment(pre-test)		After treatment (post-test)	
	Freq.	%	Freq.	%
5-10 (Mild)	18	75	22	91.7
11-15 (Sever)	6	25	2	8.3
Total	24	100	24	100

Table 4 indicates that before the treatment of the control group participants showed mild (75%) while (25%) experienced severe levels of depression. Whereas, the treatment large proportion (91.7%) of the participants showed mild while 8.3%, of the participants showed severe level of depression.

Table 5: Anxiety level of control treatment

Level of Anxiety	Before treatment		After treatment	
	Freq.	%	Freq.	%
0-7(normal)	-	-	22	91.7
5-10 (Mild)	17	71	2	8.3
11-15 (Sever)	7	29	-	-
Total	24	100	24	100

As shown in table 5 before the treatment most (71%) of participants in the treatment group showed mild and (29%) severe level of anxiety. Whereas, after the treatment majority of the participants

showed normal (91.7%) and relatively fewer number of participants displayed mild (8.3%) levels of anxiety.

Table 6: Anxiety level of control treatment group

Level of Anxiety	Before treatment (pre-test)		After treatment (post-test)	
	Freq.	%	Freq.	%
0-7(normal)	-	-	-	-
5-10 (Mild)	18	71	17	70.3
11-15 (Sever)	6	25	7	29.1
Total	24	100	24	100

Table 6 indicates that before the treatment of the control group participants showed mild, 75%, while 25% experienced severe levels of anxiety. Whereas, after the treatment, 70.3% of the participants showed mild while 29.17%, of the participants showed severe level of anxiety.

Table 7: Dependent and independent t-test

Treatment Group	Depression Scores			
	Mean	SD	T	Sign.
pre-test	8.75	2.04	5.79	0.01
post-test	5.83	1.76		
Paired Differences	2.91			

Statistically significant at P<.05

Table 7 indicates that the treatment group was found that the pre-test mean depression scores was 8.7500 (SD=2.04833). Whereas the post -test mean depression score decreases to 5.8333 (SD= 1.76109), the mean difference in depression scores was 2.91667. A 2-tailed t-test for statistically significant difference between the means indicated that the difference between the pre-test and post-test scores was significant at 0.05 level of significance (df = 23, t=5.795, p < 0.01). The implication of this finding is that cognitive behavioral group counseling had impact on the improvement of treatment group depression from pre-test to post-test measures.

Table 8: Dependent t-test of the control group

Control group	Depression Scores			
	Mean	SD	T	Signi.
Before treatment	8.41	1.47	0.96	0.34
After treatment	8.12	1.84		
Paired Differences	0.29	1.48		

Statistically significant at P<.05

Table 8 shows that the mean depression scores in the pre-test was 8.41 with the standard deviation of 1.47 while in the post-test the mean depression scores was 8.12 with standard deviation of 1.84. The mean

difference in depression scores was 0.29. The dependent t -test was used for a comparison of the mean depression scores of the control group before and after the treatment.

The result revealed that there was no statistically significant difference between pre-test and post-test mean of depression scores (df =23, t = 0.960, p = 0.347).

Table 9: Independent t-test of the treatment and control group

Depression Scores	Groups Control	Treatment	Mean treatment	T	Sig.
Pre-test	8.4167	8.7500	0.960	0.647	0.521
Post-test	8.1250	5.8333	2.29167	4.397	0.01
Mean Difference	0.29167	2.8167			

According to table 9 the provision of cognitive behavioral group counseling for treatment group has brought a significance improvement in depression scores over the control group. The treatment group decreased by mean of 2.8167 against 0.2917 in control group after twelve sessions of cognitive behavioral group counseling. The mean difference in depression scores for pre-test between groups was -0.333 whereas for post-test was 2.29167. A 2-tailed significance test for the equality of means indicated that there was statistically significant difference between treatment group and control group during the post-test at 0.05 level of significance (df = 46, t=-4.397, p< 0.01) and no statistically significant difference during the pre-test at 0.05 level of significance (df = 46, t=.0.647, p = 0.521). This finding indicated that participants in the treatment group had a high advantage of improving depression level as measured by Geriatric Depression Scale from per-test to post-test. This implies that the treatment group was improved in anxiety symptoms from pre-test to post-test.

Discussion

The purpose of the study was to examine the effectiveness Cognitive Behavioral Group Counseling (CBGC) in addressing psychological problems of elders. The major findings presented and interpreted in line with the stated objectives. Based on this, the findings discussed as follows:

Psychological problems of elders

Depression

Depression was measured using 15 item geriatric depression scales. The findings of the study revealed that before the cognitive behavioral group counseling intervention, most (80.3%) participants in the treatment group showed mild, and (16.7%) severe level of depression. 75% of participants in the control group showed mild level of depression, while 25% experienced severe levels of depression. It implies that elders from treatment and control group showed higher levels of depression. This finding is consistent with many previous researches. For instance, Wijeratne, Wijesekara, Wijesingha and McDougall (2007) studies.

Both studies were done on institutionalized and non- institutionalized elders. It indicated that out of 100 institutionalized samples studied, majority (56%) was depressed. Also McDougall studied described that institutionalized and non-institutionalized elders in England and come up with the result showing the level of depression in an institution was 27.1% and 9.3% for those not institutionalized elders.

As Hertzog, Van Alstine, Usala, Hult sch, Dixon, and Snowdon stated, (Cited in Greg, et al., 1993), the prevalence of depressive symptoms seems to be fairly high in the elderly, ranging from 5 to 40% and WHO, also stated that depending on the method of measurement besides to elderly, depression has become one of society's most common illnesses WHO (2006), which was of course consistent with the finding of Beach (2001). A local study conducted in elders of Dangila Town in the year 2010 indicted that along with other problems, depression was found with relatively higher prevalence rate, as one of the major psychological problem of elders (Fentei & Tilahun, 2010). The twelve cognitive behavioral group counseling (CBGC) sessions seems to have reduced the symptom of depression disorder over the duration of the experiment among participants in the treatment. The depression pre-test difference between treatment and control group at the baseline was not statistically significance. But at the end of twelve cognitive behavioral group counseling (CBGC) sessions significant reduction of depression scores (df = 46), (t=0 .4.397) and p < 0.01 was observed. Substantial empirical evidence supports the use of CBGC in treatment of elder's depression disorder and Scott et.al, (1997) provided six weeks CBGT sessions. The result indicated that participants in the treatment group recovered at significantly higher rates than the control group immediately after treatment. In addition, Katon et.al, (1996) provided four to six CBGC sessions for depressed patients and the result demonstrated significant improvement for those treatment participants diagnosed with depression when compared to the control group.

Moreover, in a meta-analysis of effectiveness studies for depression in adults, Haley (1996) investigated the effect size associated with CBT for adult depression in routine clinical practice (i.e., referred through usual clinical routes and treated by practicing therapists and therapists in training). Additional subgroup analyses were conducted to examine whether group CBT was as effective as individual CBT. A total of 34 studies were included in the meta-analysis (with 1,880 patients in the completer group and 1,629 patients in the intention-to-treat (ITT) group. The majority of participants in both groups were women with the mean age being 38.6 years in the completer group and 37.4 years in the ITT group. On average, completers were provided with 21.7 individual sessions of CBT or 11.2 sessions of group CBT. Outpatient CBT was effective in reducing depression in completer (d = 1.13) and ITT (d = 1.06) samples. For completer analyses, there were significant reductions post treatment in dysfunctional cognitions, general anxiety, psychological distress, and functional impairment (d values ranged from .67 to .88).

To sum up, this research finding proved that cognitive behavioral group counseling (CBGC) sessions significantly reduced depression symptoms of participants in the treatment group compared to controlled group at post-test treatment.

Anxiety

Anxiety is one of the most common psychiatric complaints across all age cohorts, including older adults over the age of 65 years (Beck & Stanley, 1997). Recent epidemiological data have indicated that anxiety disorders in late life are almost three times as prevalent (7.0% 12-month prevalence) as are mood disorders (2.6%) 12-month prevalence; (Andrews et al., 2010).

The main finding of this study was specified that before treatment, most of the treatment group participants (71%) showed mild, and severe (29%) level of anxiety symptoms. Along with control group participants showed mild, 75%, while 25% experienced severe levels of anxiety. Following the provision of cognitive behavioral group counseling, the findings of the study revealed that the treatment group had low levels of the mean scores 5.8333 (SD 1.76109). In addition, the treatment group as compared to the control group showed improvement on measures of anxiety with statistical significance at p < 0.05 (df = 46, t = 4.397 , p < 0.01). Different studies showed constant findings with this research result demonstrating that cognitive behavioral counseling is a standard treatment for anxiety disorders in older patients, with proven efficacy in seniors in both individual and group formats, and is a useful

alternative or medication adjunct that is often underused among the older adult population (Gorenstein et al., 1999). This research has consistently shown that CBT is efficacious with older individuals. Much of this research has focused on the use of CBT for treating depression and anxiety in adults. Although, there has been increasing in recent years documenting the efficacy of CBGT for the treatment of late-life anxiety (Gorenstein et al., 1999). Finally, the twelve sessions of cognitive behavioral group counseling reduced the symptom of anxiety scores over the duration of the experiment among participants in the treatment. The anxiety post-test difference between treatment and control group at the end of twelve Cognitive Behavioral Group Counseling sessions showed a significant reduction of anxiety symptom.

Conclusion

Based on the findings of the study, the following conclusions were made.

There was relatively high prevalence of depression and anxiety symptom in elders of Talita Orphans, Girls and the Aged Support Organization (TOGASO). Majority of the participants from the treatment group showed mild (83.3%) and severe (16.7%) level of depression and from the control group participants showed mild, 75%, and 25% experienced severe levels of depression. 71%, of the treatment group participants before treatment, showed mild, and (29%) severe level of anxiety symptoms as well as, control group participants showed mild, 75%, while 25% experienced severe levels of anxiety.

Following the completion of cognitive behavioral group counseling, the treatment group showed statistically significant difference between pretest and posttest mean of depression symptoms scores. The control group didn't show statistically significant reduction in the level of depression from pretest to posttest mean of depression scores. After the completion of cognitive behavioral group counseling the treatment group showed that statistically significant improvement in the level of anxiety from pretest to posttest mean of anxiety scores. The control group didn't show a statistically significant improvement in the level of anxiety from pretest to posttest mean of anxiety scores.

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