RESEARCH ARTICLE

TRAUMA-FOCUSED COGNITIVE BEHAVIORAL THERAPY IN TREATING CHILDHOOD DEPRESSION AND NEGATIVE SELF ESTEEM IN POLY-VICTIMIZED, INSTITUTIONALIZED ETHIOPIAN CHILDREN

Mastewal Abawa,[1] Daniel Tsehay,[2] Gebeyehu Begashaw,[3] Yemataw Wondie[4] and Lynne Sanford Koester[5]

ABSTRACT

Numerous children throughout the world are exposed to such traumatic events as child abuse, rape, community violence, natural disaster, vehicular accidents, war and sudden death of parents. Traumatized children are at greater risk of developing higher rates of behavioral and emotional problems (such as depression) and academic failure than are non-traumatized children. A quasi-experimental nonequivalent pre-test-post-test design with intra- and inter-group comparison was employed, including narratives of individual cases of violence. Eighty-three Orphans and Vulnerable Children (OVC) were gathered from their street life at Yenege Tesfa child care organization and comparable groups were formed from the general population. Then, thirty participants were purposely selected as a treatment group to receive Trauma-Focused Cognitive Behavior Therapy (TF-CBT) and the remaining thirty participants served as a control group. The research concluded that TF-CBT is potentially effective in treating symptoms of childhood trauma such as depression, based on pre-test to post-test measures in the Ethiopian context.

Keywords: depression, negative self-esteem, TF-CBT, sexual abuse, emotional abuse, physical abuse, Gondar.

INTRODUCTION

Children throughout the world are exposed to such traumatic events as child abuse, rape, community violence, natural disaster, vehicular accidents, war and sudden death of parents. MacMillan & Munn (2001) noted that these children manifest significantly higher rates of behavioral and emotional problems and academic failure than children who have not experienced such trauma. Common problems include: depression, anxiety, aggression, conduct disorder, sexualized behaviors, eating disorders, somatization and substance abuse (Harris, Putnam & Fairbank, 2006).

1. Lecturer at the Department of Psychology, University of Gondar, Ethiopia. Corresponding author. Email: mastiman1@yahoo.com.
2. Assistant Professor in Social Psychology at the Department of Psychology, University of Gondar, Ethiopia.
3. Assistant Professor in Social and Health Psychology at the Department of Psychology, University of Gondar.
4. Associate Professor of Clinical Psychology at the Department of Psychology, University of Gondar.
5. Professor Emerita of Psychology, University of Montana-Missoula, MT, USA.

According to the American Psychiatric Association (2000), a growing number of studies indicate that complex trauma exposure is associated with a range of symptoms and problems that can involve, but extend beyond, criteria for post-traumatic stress disorder (PTSD). These include low self-esteem, helplessness or hopelessness, dissociation, impulsivity, self -injurious or self-endangering behavior such as suicidality or self-mutilation, excessive or inappropriate sexual behavior, substance abuse and various difficulties involving problems with identity or self-functioning, influence regulation, and capacity to form positive relationships.

The present research investigated poly-victimized institutionalized children who have been exposed to sexual, emotional and physical abuse during their stay on the streets. As a result of this, they manifested multiple forms of trauma. Herman (1992) referred to these multiple sequelae of trauma as complex PTSD, while Kolk (2005) regarded these as developmental trauma disorder (Cohen & Mannarino, 2008).

Amaya-Jackson and DeRosa (2007) reported that there was little empirically-informed psychotherapy available for treating the psychological burdens of children and adolescents with multiple trauma issues. Instead, most currently available intervention approaches have been developed for children with less complex clinical presentations. In this regard, the most commonly studied form of trauma therapy for children is Trauma-Focused Cognitive Behavior Therapy (TF-CBT) (Cohen et al., 2008). Similarly, a study by Belay (2010) in the Ethiopian context, reported that TF-CBT was an effective psychological intervention package for treating PTSD symptoms and depression and for improving the self-esteem of sexually abused children as compared to their counterparts (Gobena, 1998).

Specific elements of the TF-CBT model can be applied to address these psychological burdens in children. These include, emotional expression skills, coping skills training, recognizing the relationships between thoughts, feelings and behaviors, gradual exposure (also referred to as creating the child's trauma narrative), cognitive processing of the abuse experience(s), joint child-parent sessions, psycho-education about child sexual abuse and body safety, and parent management skills (Cohen, Mannarino, Berliner & Deblinger, 2000).

Concerning the present participants, there is little or no effort made by Yenege Tesfa local non-profit organization designed to meet the needs of street children and other vulnerable populations. In consequence the psychological needs of the victims are not addressed. However, the organization provides basic necessities and covers medical and school fees for children. There are few counselors trained in the field of child counseling at the organization. So long as the problem remains untreated, these difficulties may become chronic and produce adverse effects in the academic, social and personal life that may even persist into adulthood. So far, most research in the area has only been descriptive, and intervention based studies are rarely tested to treat multi-traumatized children. Accordingly, to test the efficacy of the intervention modality and to lay the foundation for further investigations, the present researchers employed a

quasi-experimental nonequivalent group pre-test-post-test design. As a result, the goals of this study are twofold: 1) to help victims reduce the burdens they have experienced and to give them insights and motivation for their future life; and 2) to assess the effectiveness of Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) in treating negative reactions (specifically, symptoms of depression and negative self-esteem).

METHODS

Research design

A quasi-experimental nonequivalent group's pre-test-post-test design with intra- and inter-group comparison was employed. Hence, comparable groups of individuals were formed and the groups were treated the same in all respects except that each group received only one level of the independent variable (Shaughnessy, Zechmeister& Zechmeister, 2003). Even though local history possibly affects the internal validity of the research, the researchers systematically controlled extraneous variables through matched random assignment of participants across groups. In addition to experimentation, the researchers also narrated individual cases in a storyline regarding the nature of abuse and how those children felt and reacted to their traumatic experiences.

Table 1: *Nonequivalent groups pre-test-post-test design*

Study groups	First observation	Treatment	Second observation
Quasi-experimental group	O1	X	O2
Nonequivalent control group	O1	–	O2

Notes: O1: First observation of both treatment and control groups; O2: Second observation of both treatment and control groups; X: Quasi-experimental independent variable; – : Second observation without treatment

Study groups

Participants and sampling

There were 83 Orphans and Vulnerable Children (OVC) who were selected from their street life at Yenege Tesfa child care organization. Although this organization provides medical, educational and other basic necessities, psychosocial services are lacking. For this research, a two-stage sampling method was used in selecting study participants from the organization.

First, sixty participants were purposely selected from the general population in collaboration with the care givers and social workers based on those who were brought into the institution recently from street life and those who were exposed to different forms of severe abuse. Then, comparable groups of individuals were formed from the selected participants. Finally, participants were assigned across treatment and control groups randomly. However, treatment and control groups were

living in different *kebele* (small administrative units) so that participants in the control group did not know that participants in the treatment group were getting therapy. The groups were treated the same way in all respects except that each group received only one level of the independent variable. Ages of the participants ranged between 12 up to 18 years because children at this level are believed to have relatively matched cognitive development, and can, therefore, read and write a self-rated questionnaire independently.

Demographic profile of the participants

Of the 30 participants in the treatment group 15 were male (50%) and 15 were female (50%); in the control group (n=30), 20 were male (66.7%) and 10 were female (33.3%). The majority of participants in the treatment group had completed elementary school (n=19, 63.3 %), whereas the highest educational level of the control group was secondary school (n=14, 46%). A majority of the participants from both treatment and control groups were institutionalized because of the death of their parents (n=26, 86.7 % and n=22, 73.3 % respectively). The mean age of treatment group participants was 12.97 years, whereas the mean age of those in the control group was 14.20 years with standard deviation of 1.52 and 1.76 respectively.

A self-developed questionnaire was used to identify the types of abuse to which the participants had been exposed. In the treatment group, 9 (30%) had been emotionally abused, 10 (33%) had been sexually abused, and 11 (36.67%) had been physically abused. For participants in the control group, 15 (50%) had experienced emotional abuse, 5 (16.67%) were victims of sexual abuse, and 10 (33.33%) had been physically abused (33.33%).

Instruments

Procedure

Pre-established test measures (e.g., Beck Depression Inventory or BDI-II, and Rosenberg Self-Esteem scale) and a self- developed questionnaire for demographic data were used as data collection instruments. Before collecting the data, instruments were translated into Amharic (the local language) by the researchers and experts, and then were translated back to the English language. To check the reliability of the instruments, a pilot study was conducted with 34 street children in Gondar city. The reliability of Cronbach's alpha correlation coefficient was 0.84 and 0.61 for the BDI-II and Rosenberg self-esteem scales, respectively.

Beck Depression Inventory: The Beck Depression Inventory (BDI) is a 21-item, self-report rating inventory that measures characteristics, attitudes and symptoms of depression and takes about 5-10 minutes to complete (Beck, 1961, as cited in Quek, Razack, & Loh, 2001). The self-report questionnaire is rated on a four-point scale ranging from 0 (no symptoms) to 3 (severe symptoms). Scores in the range of 0–13 indicate minimal depression, 14–19 mild depression, 20–28 moderate depression, and 29–63 severe depression (Lam, Michalak & Swinson, 2005). Furthermore, internal consistency for the BDI was high for all the items of BDI, indicating a high level of homogeneity among items in the scale with alpha coefficients of .86 and .81 for psychiatric and non-psychiatric populations respectively;

Cronbach's alpha in the present study was 0.84.

Rosenberg Self-Esteem Scale: The Rosenberg self-esteem test is probably the most commonly used and best known tool for measuring self-esteem. The scale is a ten-item Likert scale with items answered on a four point scale - from "strongly agree" to "strongly disagree", and has demonstrated high ratings in terms of reliability (internal consistency = 0.77, and minimum coefficient of reproducibility at least 0.90). Scores are calculated for items 1, 3, 4, 7, and 10 as "strongly agree" (3), "agree" (2), "disagree" (1) and "strongly disagree" (0). Items 2, 5, 6, 8 and 9 needed to be reversed in valence, and are, therefore, calculated as follows: "strongly agree" = 0, "agree" = 1, "disagree" = 2 and "strongly disagree" = 3. The scale ranges from 0-30. Scores between 15 and 25 are within the normal range, and scores below 15 suggest low self-esteem (Rosenberg, 1965). Pre-testing was conducted using street children from Gondar town. Cronbach's alpha in the present study was 0.61.

Treatment procedures in TF-CBT for the present study

The researchers strictly adhered to the traditional treatment manual of TF-CBT prepared by the National Child Treatment Stress Network (2007). The therapy was given based on the procedure recommended by the treatment manual. The specific elements of the TF-CBT model used in this therapy include: feeling expression skills, coping skills training, recognizing the relationships between thoughts, feelings and behaviors, gradual exposure (also referred to as creating the child's trauma narrative), cognitive processing of the abuse experience(s), joint child-parent sessions, psycho-education about child sexual abuse and body safety, and parent management skills (Cohen, Mannarino, Berliner & Deblinger, 2000).

In the present study, female and male participants were placed in different groups so as to manage the therapeutic process and to make them feel better being with the same sex group. It is advisable to use 45 up to 80 minutes in a single treatment session which is also the recommendation of the treatment manual. For the effectiveness of the intervention, the treatment manual advises using 8 up to 12 sessions and the present study used only eight sessions. To create anecdotes and to document the frequency of abuse, some selected participants were interviewed independently.

Statistical analyses

SPSS version 20 was used to analyze the quantitative data. Accordingly, descriptive statistics were used to analyze demographic data. Moreover, various inferential statistics were employed, such as paired sample t-test to test whether there was a mean reduction in symptoms of childhood depression and negative self-esteem from pre-to-post treatment measure within treatment and control groups; independent sample t-test were conducted to decide whether there was a statistically significant mean difference in pre and post-treatment measures of both the groups across sex; and one way ANOVA was employed to decide whether a statistically

significant mean difference exists across types of abuse both in pre- and post-test measures.

Ethical consideration

Researchers followed all ethical guidelines of the University of Gondar so as to avoid harm to the participants and to protect their rights. The research was also conducted in line with the APA (American Psychological Association) ethical standards. More specifically, informed consent was obtained from all participants. The participants were also informed of the confidentiality of the research and all the benefits it could bring to them in lessening depression and negative self-esteem symptoms they were experiencing. Just after the post-test measure had been taken, participants in the control group were given the same therapy the intervention group had experienced to reduce their symptomatology.

RESULTS

Prevalence of depression and negative self-esteem

The prevalence of depression and negative self-esteem within the treatment group from pre-test to post-test measure is reported below.

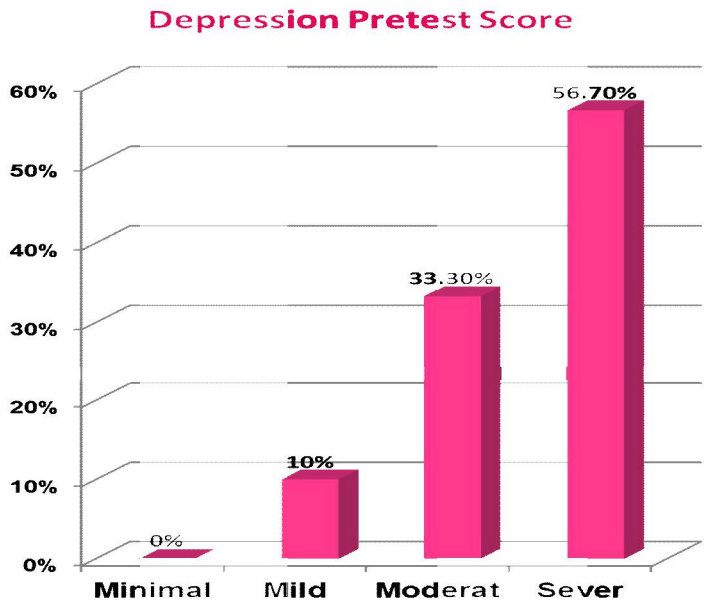

Figure1: *Prevalence of childhood trauma within treatment group*

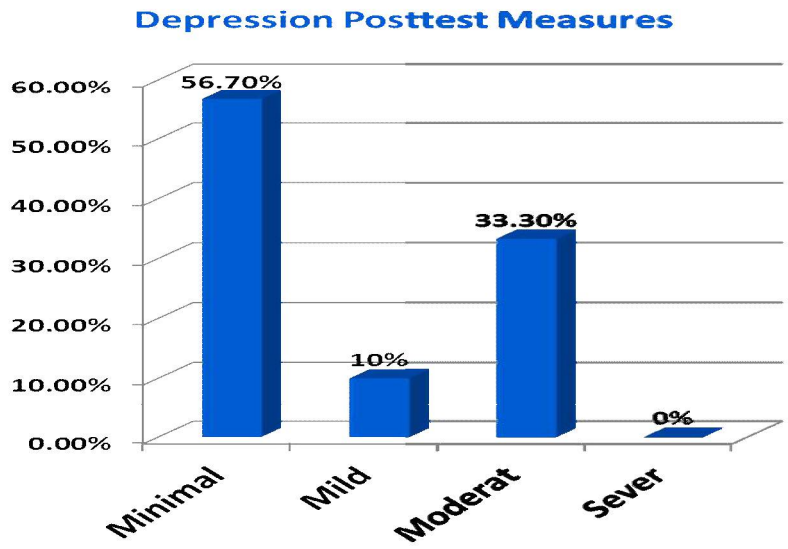

Figure 2: *Depression posttest measures*

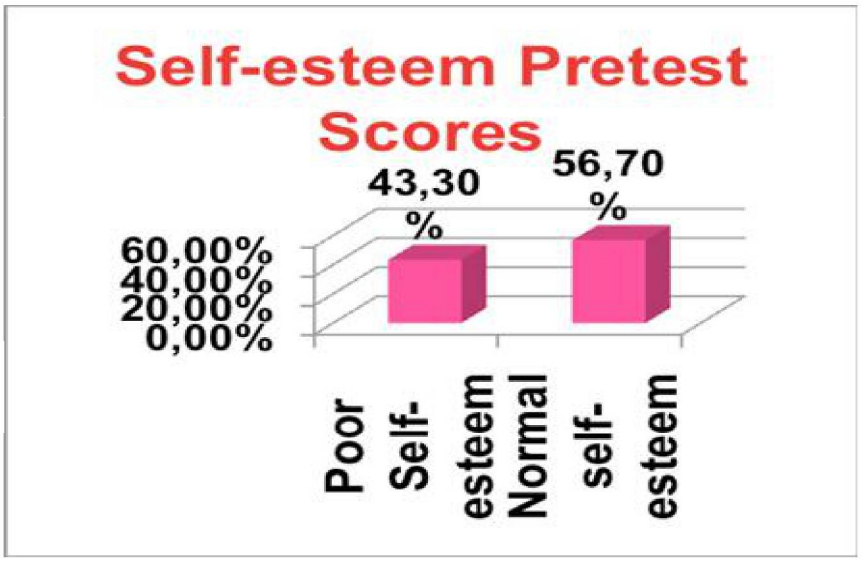

Figure 3: *Self-esteem pretest scores*

Figures 1 and 2 show that for participants in the pre-treatment measure, 10% (3) reported mild depression, 33.3 % (10) moderate depression, and 56.7% (17) severe forms of depression. However, on the post-treatment measure, 56.7% (17) reported minimal depression, 10% (3) mild depression and 33.3% (10) moderate depression. No participant in the treatment group in the post-test measure appears to have experienced severe depression.

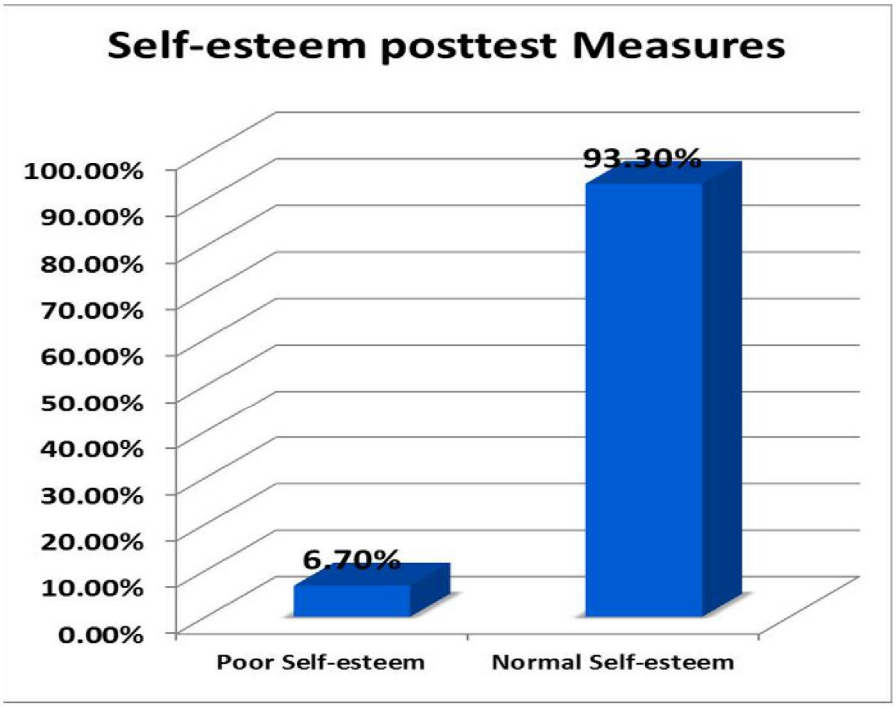

Figure 4: *Self-esteem posttest measures*

The results also show that, of the participants in the pre-test measure of self-esteem, 43.3 % (13) reported negative self-esteem and 56.7 % (17) reported positive self-esteem, whereas in the post-treatment measure, 6.7% (2) reported negative self-esteem and 93.3 % (28) reported positive self-esteem (Figures 3 and 4).

Childhood trauma symptoms before and after intervention

Paired sample t-tests were conducted to determine whether there are significant mean differences from pre-test to post-test measures of depression and self-esteem among treatment and control groups.

Table 3 shows that there is a statistically significant mean decrease in symptoms of depression within treatment group participants from pre-treatment (M=31.13, SD=10.22) to post-treatment measures (M=13.26, SD=8.10); t (29) =6.63, $p \leq 0.05$. The eta squared statistic based on Levine's test is 0.61, indicating a strong effect size. No depression score reduction was reported within the control group.

Results also indicate a significant mean value increment within the treatment group in terms of self-esteem from pre-treatment measure (M=14.66, SD=5.08) to post-treatment measure (M=20.36, SD=4.06); t (29) =4.71, p ≤ 0.05. The eta squared statistic based on Levine's test is 0.32,

also indicating moderate effect size. However, there is no significant mean improvement in self-esteem among control group participants.

Table 2: *Comparative analysis of depression and self-esteem from pre- to post-test measure*

Test variables	Pre-test			Post-test				
Treatment group	M	SD	df	M	SD	t	p	L
Depression	31.13	10.22	29	13.26	8.10	6.63	.00*	0.61
Self-esteem	14.66	5.08	29	20.36	4.06	4.71	.00*	0.32
Control group								
Depression	23.70	10.49	29	21.36	10.04	1.38	.17	0.02
Self-esteem	18.20	4.88	29	18.70	4.26	.52	.60	0.05

Notes: * The mean difference is significant at the $p \leq 0.05$ level (two-tailed); L= Levine's test effect size from pre-test to post-test measure.

Table 4 shows that there is no statistically significant mean sex difference among treatment group participants in terms of *pre-test* levels of depression. However, the results indicate that there is a statistically significant mean difference between male and female treatment group participants in *post-test* measures of depression. The present researchers believe that female participants were more responsive to psychotherapy than male participants, although it is evident that both showed improvement in depression over time.

Table 4 also shows that there are no statistically significant mean sex differences in self-esteem in either the treatment or control groups, both in the pre-test and post-test measures.

Childhood depression and self-esteem across types of abuse

A One-Way ANOVA was conducted to compare treatment and control groups on the pre-test and post-test measures of depression and self-esteem according to the types of abuse participants had experienced.

Table 4 shows that there is a statistically significant mean difference among treatment group participants in the post-test measure of depression, according to type of abuse ($F(2, 27) = 4.81$, $p<05$). However, there is no significant mean difference in the pre-test measures for these same participants. Post Hoc analyses using Tukey's test revealed that it was the sexually abused children who scored significantly higher in depression than the emotionally abused children ($p<0.05$).

Table 3: *Comparative analysis of depression and self-esteem across sex, N=30*

Test variables		Pre-test					Post-test			
Treatment group	Sex	M	SD	t	p	df	M	SD	t	p
Depression	M	30.6	9.89	.28	.78	28	16.46	6.92	2.32 *	.02
	F	31.66	10.86			28	10.06	8.13		
Self-esteem	M	14.2	6.25	.49	.62	28	19.53	3.11	1.12	.26
	F	15.13	3.73			28	21.2	4.79		
Control group										
Depression	M	24.75	10.55	.77	.44	28	21.75	11.13	.29	.77
	F	21.60	10.58			28	20.60	7.90		
Self-esteem	M	18.55	10.58	.54	.58	28	20.15	4.18	2.97	.73
	F	17.50	3.53			28	19.80	2.74		

Notes: * The mean difference is significant at p≤ 0.05 level (two-tailed, t-value taken as equal variance assumed; Treatment group's number of males/females (M=15, F=15), Control group's number of males/females (M=16, F=14).

Table 4: *Comparing group variance across types of abuse, N=30*

Test variables	Pre-test measure					Post-test measure			
Treatment group	Types of abuse	M	SD	F	p	M	SD	F	p
	Emotionally abused	29.77	9.58			18.77	6.90		
Depression	Sexually abused	32.80	10.40	.20	.81	8.50	6.04	4.81*	.01
	Physically abused	30.72	11.30			13.09	8.33		
	Emotionally abused	16.77	4.35			19.77	5.19		
Self-esteem	Sexually abused	15.00	5.05	1.76	.19	20.90	2.88	.17	.84
	Physically abused	12.63	5.31			20.90	4.27		
Control group									
	Emotionally abused	16.46	7.70			15.86	6.49		
Depression	Sexually abused	32.20	3.70	13.25*	.00	29.00	4.00	6.40*	.01
	Physically abused	30.30	8.96			25.80	12.16		
	Emotionally abused	18.73	4.60			19.06	4.74		
Self-esteem	Sexually abused	17.60	4.21	.17	.84	16.20	2.94	1.05	.36
	Physically abused	17.70	5.90			19.40	3.92		

Note: * The mean difference is significant at the p≤ 0.05 level (two-tailed).

Table 4 also shows a significant mean difference among control group participants both in the pre-test and post-test measures of depression (F (2, 27) = 13.25 and F (2, 27) = 6.40 respectively at the $p<05$ level. Post Hoc analyses revealed that emotionally abused children scored significantly lower in symptoms of depression than both sexually and physically abused children ($p<0.05$). Finally, the table shows that there is no statistically significant mean difference in symptoms of self-esteem in pre-test and post-test measures both in the treatment and control groups. The researchers believe that the insignificant mean difference in some variables might have emanated from the small number of participants and an interaction across types of abuse.

DISCUSSION

Effects of childhood trauma on depression and self-esteem

This research used a quasi-experimental non-equivalent group's pre-test-post-test design to determine the efficacy of interventions in treating symptoms of childhood trauma. It, therefore, investigated the effectiveness of the treatment modalities in treating symptoms of depression and negative self-esteem from pre-test to post-test measures among youth in a treatment group, and compared this to similar measures with a control group.

The research found that more than half of the total participants reported minimal to mild forms of depression in a post-test measure, whereas they had reported moderate to severe forms of depression symptoms in the pre-test measure. In line with this empirical finding, up to 15% of the participants would have improved sufficiently to lose their diagnosis of childhood trauma after treatment and monitoring of depressive symptoms. It is assumed that the CBT would result in greater improvements in symptoms of PTSD, depression, and anxiety for the treatment group compared to those in the control (wait listed) group. Therefore, the treatment was efficacious in reducing symptoms of childhood depression in this population (Smith et al., 2007).

Furthermore, at the cut-off point of the Rosenberg self-esteem scale, individuals who score below 15 are exhibiting low self-esteem. However, those who score between 16 and 25 have normal self-esteem (Rosenberg, 1965). The present findings revealed that more than half of the total participants in the treatment group reported negative self-esteem in the pre-test measure; however, about 90% of the participants reported normal self-esteem in the post-test measure.

This finding was also supported by previous research conducted for a 4-week symptom monitoring period, in which 24% of young people with a primary diagnosis of associated trauma improved such that they no longer met criteria for the disorder. Thus, trauma-focused CBT resulted in a significant reduction in symptoms of PTSD, depression, and anxiety; significantly greater recovery from childhood trauma (92% compared with

42% in the WL group); and significant improvement in functioning (Smith et al., 2007).

An anecdote reported by a child who was exposed to violence illustrates the kind of abuse he experienced as a child on the streets:

> As a new child to street environments, an adult of about 35 years old came around and asked me if I was in need of help. I was starving at a time and responded happily by expecting something to be eaten. Consequently, he came with a small vehicle and grabbed me to the edge of the city. As we reached a corner of the city; however, he shouted to me to take off my clothes. I tried to resist, of course. Meanwhile he showed me a knife and positioned me on the ground and warned me angrily. I thought I was going to be murdered. I tried to shout for help but nobody came around. That guy threatened me with a sharp knife and ab*used me sexually.*

While narrating the abusing scene, this child had difficulty in expressing his emotions and the conversation was interrupted several times. Of course, he was not the only child who had been exposed to this kind of abuse. There were many other participants who had experienced similar or other forms of abuse.

Childhood trauma before and after intervention

The present study found that members of the treatment group show a significant mean reduction in symptoms of depression from pre-test to post-test measures; however, as expected, there is no significant mean reduction in symptoms of depression among control group youth from pre -test to post-test measure. The effect size based on Levine's test is reportedly strong. Therefore, the present researchers argue that participants' levels of depression were not changed due to the mere passage of time, but rather it was the effectiveness of psychological interventions that significantly reduced the symptoms of depression.

This conclusion also gains support from a study conducted by Bolton et al. (2007). The authors reported that participants receiving group interpersonal psychotherapy showed substantial and significant improvement in depression symptoms compared with controls (12.61 points; 95% CI, 2.09-23.14). On the other hand, another investigation conducted by Kovacs (1983) to determine the effectiveness of CBT with children, reported that although treatment groups had better outcomes with respect to scores for depression than the control groups, there was no statistically significant difference for overall behavior problems or sexualized behavior (as cited in Ramchandani & Jones, 2003).

It is expected that TF-CBGT can significantly improve the negative self-esteem of multi-traumatized children at different points in time. The present study found a significant mean enhancement of self-esteem among treatment group youth from a pre-test to post-treatment measure.

However, there is no statistically significant mean difference among control group participants from pre-test to post-test measure.

A substantial body of work also provides support for the efficacy of cognitive-behavioral therapy (CBT) for children with PTSD and other symptoms following multiple forms of abuse. For example, a study (Cohen, 2004) demonstrated that TF-CBT (which included anxiety management components such as coping skills training and joint work with parents) with children 3 up to 16 years of age was effective in reducing symptoms of PTSD and improved self-esteem symptoms relative to waitlist groups.

Depression and self-esteem among males and females

As the baseline data indicated, there is no statistically significant mean difference between boys and girls in the treatment group on the pre-test measure of depression. However, female participants in the post-test measure reported better recovery from depressive symptoms than their male counterparts. This might be due to the fact that female participants are more responsive to psychotherapy than their male counterparts.

In agreement with the present study, Bolton et al. (2007) revealed that participants receiving group interpersonal psychotherapy showed substantial and significant improvement in depression symptoms compared with controls. A study conducted by Lanktree, Briere, Godbout, Hodges, Chen, Trimm, ...Freed (2011) also confirmed the potential effectiveness of TF-CBT in a sample of inner-city, socially marginalized children and adolescents in the symptoms of anxiety, depression and post-traumatic stress. However, they reported that average pre–post change scores did not vary as a function of client gender, age, or number of traumas experienced.

In the present study, although the treatment group's self-esteem before therapy was almost comparable across sex, after therapy the levels of self-esteem had improved for both males and females. However; this was not seen among control group participants. Therefore, the present researchers argue that the therapy enhances both male and female participants' self-esteem in the same way. A study conducted by Cohen and Mannarino (1998) comparing CBT with non-directive supportive therapy in children aged 7–14 years also supported the current finding that children in the CBT group had better outcomes with respect to scores for depression and self-esteem (as cited in Ramchandani & Jones, 2003).

Childhood trauma across types of abuse

The present study investigated whether there was a significant mean difference among treatment and control groups across types of abuse on pre-test and post-treatment measures. As reported, most children in the current institution were gathered from street life and from families that adopted them. Thus, the present study found a statistically significant mean difference among treatment group youth in both pre-test and post-test measures of depression, depending upon the type of abuse they had experienced. Further analysis of the present results indicated that

emotionally abused children in the pre-test measure reported lower levels of symptoms of depression as compared to those who were either sexually or physically abused. However, in the post-test measure of depression, emotionally abused children reported the highest degree of positive symptoms of depression when compared to both physically and sexually abused children. This might result from the fact that emotionally abused children were less likely responsive or resistant for psychotherapy than both sexually and physically abused ones.

Earlier research findings in the area revealed that although the relationship between post-trauma symptoms, such as PTSD and depression (Andrews et al., 2000; Feiring, Taska & Lewis, 2002), has been well documented for children who have suffered sexual abuse, research examining these relationships for the physical abuse population is very limited (Deblinger & Runyon, 2005). The present study revealed that there is no statistically significant mean difference between sexually and physically abused children, although emotionally abused children are less likely respond to psychotherapy as compared to both sexually and physically abused children. Clinical data collected at the New Jersey Child Abuse Research Education and Service (CARES) institute indicate that children who suffered physical abuse and/ or sexual abuse often report clinically significant levels of shame as well as negative internal attributions, PTSD, behavior problems, and depression prior to their participation in treatment.

Some researchers in this area have argued that the main effect (e.g., reduction of childhood trauma in this case) represents the overall performance at each levels of a particular independent variable collapsed across (averaged over) the levels of the other independent variable (Shaughnessy et al., 2003). Therefore, the current researchers believe that the insignificant mean difference in some test variables may have resulted from an interaction across types of abuse; i.e., the effect of each independent variable depends on the levels of other independent variables.

CONCLUSION

The present study reported that more than half of the total treatment participants manifested moderate to severe forms of depression in the pre-test measure. However, only one third of the total participants reported moderate to severe forms of depression in the post-test measure. More than half of the total participants reported normal self-esteem in the post-test measure while they were reporting negative self-esteem in pre-test measure. A different body of research indicates that the treatment and control groups may not be necessarily have been exposed to equal levels of traumatic experiences, rather what matters is the changes in outcomes following treatment. Therefore, the present research reveals that when comparing the control group participants to those in the treatment group, the latter revealed more severe forms of childhood trauma on the pretest measure. However, treatment group members showed a significant mean reduction in post-test measures, which was not seen among control group youth.

Although sex differences do exist, the present research found that there was no significant mean difference in symptoms of childhood trauma across male and female participants both in pre- and post-test measures, with the exception of post-test measures of depression. Therefore, TF-CBT can potentially be used to reduce symptoms of depression and to improve self-esteem in similar populations, particularly within the Ethiopian or comparable contexts.

LIMITATIONS

Matching treatment and control groups at the start of experimentation helps to rule out the mere effect of passage of time in reducing symptoms of depression and negative self-esteem in both groups. In the present study, treatment and control groups were matched according to the nature of abuse and living conditions. However, participants did not manifest an equal degree of both depression and self-esteem symptoms in the pre-test measures, although they did report clinically significant scores of childhood trauma; this might be considered a limitation of the study. Further investigations should, therefore, take this into account in an effort to expand the populations being studied and to match the participants in various ways. In addition, the time at which the post-test measure occurred is another limitation, as it was collected just after the last day of the intervention. Therefore, the present research did not consider symptoms of childhood trauma in a follow-up measure, which could provide important information about the durability of these treatment effects.

RECOMMENDATIONS

Child care organizations, as part of providing basic necessities and covering medical and school expenses, should allow mental health professionals to work on the psycho-social burdens of traumatized children. They should also be aware of the potential existence of trauma among institutionalized children.

Since the post-test measure was taken soon after the last intervention, it is impossible to determine whether childhood trauma symptomatologies might change in later follow-up measures. Therefore, the present researchers strongly recommend other researchers to assess the outcome of such interventions in a follow-up measure as the youth progress through school and other developmental milestones.

The researchers believe that the insignificant results across sex and types of abuse could result from using a limited number of participants. Therefore, increasing the number of the participants in the research sample could increase the likelihood of revealing important differences across the variables.

DECLARATION OF CONFLICTING INTERESTS

The authors declare no potential conflicts of interest with respect to the authorship and/or publication of this article.

AUTHORS' CONTRIBUTIONS

Mastewal Abawa contributed to problem identification, first proposal preparation and presentation, data collection, conducting therapy sessions, performing statistical analysis and final report writing and presentation. Daniel Tsehay gave advice regarding the methods section, study design and analyses, and drafting and editing of the manuscript. Gebeyehu Begashaw consulted the team regarding methodology, study design and analyses, and helped to edit the manuscript. Yematawork Wondie provided guidance regarding the entire investigation, (problem identification, proposal preparation, assisting the actual research process, and editing the manuscript). Lynne Sanford Koester advised in the methods employed and edited the final manuscript. All authors read and approved the final manuscript.

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