Contribution of Cognitive Behavioral Family Therapy (CBFT) for Improving Relationships between Parents and Adolescents with Behavioral Problems

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Abstract: Cognitive-Behavioral Family Therapy (CBFT), psycho education in focus, was employed to improve relationships between parents and adolescents with behavioral problems. The current intervention used an experimental design with pretests and a posttest. The family relationship scale was utilized for preliminary screening, and 16 of the 18 parents who participated in the preliminary assessment had reported poor family cohesion, communication, and conflict resolution abilities. Then, sixteen parents with low scores on the scale were randomly assigned to one of two groups, each with eight participants: (i.e., 8 treatments and 8 control group). Then, intervention was conducted on the treatment group using the Psycho-education component of CBFT. The intervention was conducted in five sessions to improve family cohesion, communication, and conflict resolution skills. 'Family Relationship Scale' was used to measure pre-and post-intervention experiences. ANCOVA was employed to test the effectiveness of the intervention by controlling the effects of the pretest. A repeated measure ANOVA with between groups' effects was used to examine differences among cohesion, communication and conflict resolution skills in the two groups. Findings indicated that the quality of family relationship was significantly improved in the treatment group with a large effect-size. Because CBFT with a psycho educational approach in focus demonstrated effectiveness, the method is suggested to be promoted in Ethiopian setting. Since the current intervention was aimed at parents of adolescents with behavioral difficulties, future intervention should include adolescents with behavioral problems as well.

Keywords: Adolescents; Family dynamics; Parent-adolescent relationship; Problem behavior

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1. Introduction

Family is the primary unit and the closest social context for adolescent development (Damon, Lerner and Eisenberg, 2007). Different theories explain how this process of development happens. For instance, according to socialization theories, families can nurture children on how to avoid unwanted behavior, delay gratifications, and respect the rights of others, or their children can also learn aggressiveness, antisocial and violent behavior from their parents (Wright, 1994). For example, it was found in one research (Aufseeser, Jekielek and Brown, 2006) that living in a family with smokers places adolescents at a higher risk of developing the habit themselves; further increasing their chances of developing serious health problems and the same is true for alcoholic behavior.

Likewise, other social learning theorists, for example, Bandura and Walters (2004), as cited in Fagan, 2013) contend that children learn positive and negative behaviors via interaction with others, and that parents, in particular, are important for influencing children's pro-social and antisocial behavior (Bandura and Walters, 2004, as cited in Fagan, 2013). On his part, Mack (2001) stated that parents who endorse attitudes favoring deviant behaviors or fail to correct their children's misbehavior are likely to increase the likelihood that children will view delinquent activities as acceptable to achieve certain outcomes, especially when they perceive more benefits than consequences from engaging in delinquent behavior. Mack also stated in the same study that children copy the behaviors of their immediate role models, particularly their fathers and mothers, and that they learn to mold their behaviors by watching the behavior of their attachment figures. Children build their internal models from their relationships with their caregiver figures. These internal models are representations of the self, attachment figures, and relationships that have been conceptualized as cognitive-affective filters that will influence how children respond to the other and how they see themselves in the social world (Laible, Carlo, Torquati and Ontai, 2004). Likewise, according to" social bonding theory" (Hirschi, 1969) direct consequences of parenting techniques, particularly affective attachments between parents and children, have a crucial role in molding adolescent behavior. According to this theory when parents show affection for their children, communicate effectively with them, provide opportunities for them to be involved in the family, and positively recognize their children for displaying positive behaviors and refraining from delinquency, their children are more likely to behave positively at home and outside of the home (Hirschi, 1969).

A more powerful theory, 'family systems theory', views family environment and functioning as an interplay of actors is influencing one another rather than only one-party bearing influence on the other. Relationship is bidirectional in the sense that children's behaviors influence parents, and parental behavior and family environment in turn shape children's social and emotional functioning (Pardini, 2008). According to this theory, family is composed of highly interdependent systems in which conflict between two members would also affect other family members (Cox and Paley, 1997). In the same vein, (Segrin and Flora, 2005) asserted that family is an active whole, comprised of constantly changing interrelationship in which each person in the family circle impacts the others across a generation. The theory maintains that patterns of interaction between family members call forth, maintain, and perpetuate both problem and non-problematic behaviors (Ray, 2016).

Optimal family functioning, which is characterized by cohesion, better communication, and less conflict, predicts healthy behaviors among family members, whereas dysfunctional family relationships characterized by less cohesion, high conflict, and less communication leads to problem behaviors among family members (Olson, 2000). Despite the line of impact of family functioning, it remains obvious that adolescents are particularly vulnerable to family conflict such that high levels of parent-adolescent and marital conflict are associated with both internalizing and externalizing behavioral problems in children and adolescents (Margolin, Oliver, and Medina, 2001; Repetti, Taylor, and Seeman, 2002). The presence of a dysfunctional and high-conflict family dynamics may increase the likelihood of developing various forms of adolescent pathological behaviors, like alcohol use and gambling (McComb and Sabiston, 2010; Swaim and Stanley, 2018) running away from home, participate in a delinquent behavior (LeFlore, 1988), substance use and abuse, alcoholic behaviors

(Almeida, Wethington, and Chandler, 1999), and conduct disorders (Slee, 1996). Parental conflict amplifies emotional and behavioral dys-regulation in adolescents, resulting in the development of more serious behavior problems (Granic and Patterson, 2006). Besides, parental communications characterized by negativity, criticism, and low warmth have been shown to foster depressive cognitive styles in children, including self-criticism and low self-worth (Garber and Flynn, 2001). Open parent-child communication has been recognized as one of the protective factors among adolescents at risk of psychological and behavioral problems (Guilamo-Ramos, Jaccard, Dittus, and Bouris, 2006). In the same vein, research conducted by US Department of Health and Human Services, (2003) indicated that adolescents who report difficulty talking with their parents are more likely to drink alcohol frequently, smoke, and feel unhappy.

Research conducted in Ethiopia by Asamenew and Pillay (2017) has also indicated that maternal and paternal communication significantly predicted children's well-being as measured by self-reported scores of depression, substance use, and self-esteem. Children's perception of positive communication with both parents was inversely associated with substance use behavior, depression symptoms, and adjustment problems and also correlated directly with self-esteem scores. It appears that open communication with parents protects adolescents from experiencing adjustment problems, low self-esteem, depression, and substance use and abuse, and conduct problems. Some other local researches (Tefera and Sitota, 2016; Tefera and Fentahun, 2014; Birhanu, 1996) have also tangentially addressed family circumstances and its impacts on adolescent development in different ways.

Although prior research in Ethiopia and elsewhere dealt extensively with teenage problem behaviors, a couple of problems loom larger in these investigations. To begin with, there has been a mere focus on adolescents alone ignoring one of the most crucial drivers of adolescents' general behavior: their family relationships. Given adolescent behavior is partially a result of their respective family dynamics, if the primary cause of adolescent problem behavior is to be addressed, the family of the adolescent must be the focus of attention. Given that the research traditions were more of academic exercises, the second problem with family and adolescent research in Ethiopia is lack of focus on solutions than problems alone. Because the nature and circumstances of family climate is likely to deter the behavior and personality of each family member, a better strategy of dealing with adolescent problem behavior is to focus on family intervention measures. For example, to prevent conduct disorders in adolescents and youths, the most preferred strategy is making a family- focused intervention (Fagan, 2013).

As regards intervention approaches to managing adolescent problems, there are lots of family intervention models that are tried out elsewhere, but none of them were validated in the Ethiopian context. However, among others, the most widely employed model of intervention whose contribution is to be examined for improving family relationship living with adolescents having behavior problems in present case is Cognitive-Behavioral Family Therapy (CBFT). Because CBFT is valued for its cost and time effectiveness (Lan and Sher, 2019), its proven effectiveness in bringing about behavioral changes across a wide range of families living with adolescents with behavioral problems (Lan and Sher, 2019; Dattilio and Collins, 2018), and its multicultural applicability (Lucksted, McFarlane, Downing, Dixon, and Adams, 2012; Lan and Sher, 2019), the model support the present argument about the safe materiality of CBFT in the Ethiopian context. Having these assumptions in mind, it is hypothesized that application of CBFT with parents will make a significant change in the family relationship of adolescents with behavioral problems.

The objective of this research is, therefore, to examine the effectiveness of the psycho-educational focused CBFT in improving parents' relationship with adolescent children having behavioral problems. More specifically, it attempts to examine if the intervention can improve: Parental communication patterns/ expressiveness, Family cohesion, and Conflict resolution skills.

2. Research Methods

2.1. Design of the Intervention

The present intervention has employed Pretest-Posttest Control-Group Design. This research design meets the characteristics of a proper intervention design because participants are randomly assigned to either the experimental or control group (Skidmore, 2008). In this design, the pretest allows the researchers to test for equality of groups on the variable of interest before the intervention (Rosenbaum, 1995). After checking up group equivalence through pretest assessment, there is an intervention or treatment which is exclusively given to the experimental group and no intervention (or alternative intervention) is given to the control group. Finally, there is a post-test after an intervention. Hence, the effects of the intervention on the treatment group can be checked by comparing both experimental and control groups.

2.2. Study Area

The study was conducted in Addis Ababa (Bole sub city- Gerji area) where there are a large population of street youth who are engaged in informal sectors for livelihood (Habtemariam, 2014).

2.3. Participants

Owing to different factors, across Addis Ababa, it is common to see adolescents with behavioral problems in large numbers (Habtemariam, 2014). The present intervention focused on parents of adolescents with behavioral problems living in Bole sub-city. Only a limited number of adolescents with behavioral problems were identified with the close support of the social affairs expert working in the Bole District Office. Once the adolescents who repeatedly breached law and participated in delinquent behaviors were identified, their parents were contacted in person as per their convenience. Then, the parents were briefed about the purpose of the intervention and, then, asked if they can consent to, firstly attend the preliminary screening process for intervention and, then, subsequently to partake in the intervention if they earn scores below the designated criterion for healthy family relationship. Accordingly, out of 18 parents who consented to partake in the assessment and fill in the pre-assessment scale (Brief Family Relationship Scale explained below in the method of data collection section), 16 of them were found to score below the average in the family relationship scale; thus qualifying for the intervention for having problems, i.e., serious family cohesion problem, poor communication, and conflicting family. To make the point further clear, the maximum point participants were expected to score on the Brief Family Relationship Scale was 48 with a midpoint of 32 to be qualified as earning a healthy practice of family relationship. Nonetheless, in the present pre-assessment, the observed midpoint was only 25 which is far below the midpoint/ average qualifying for healthy family functioning.

The rest two participants who scored high on the pre-assessment scale were sent home with thanks covering their two-day-expense. Indeed, a two-hours-long orientation was given to them focusing on what should family interaction be like for the well-functioning of any family before sending them home. Sixteen of the parents, who have scored low on family cohesion, communication, and high level of conflict within their respective families, were randomly assigned to control and experimental group each with 8 participants (8 treatments and 8 control group). Parents who were assigned to the control group were advised to go home and then come after two weeks (i.e. after the intervention) to partake in the post-test. Upon their coming back after two weeks, they were asked to take the post-treatment measure along with the treatment group and then were given a half day intervention training merely to quench their curiosities as to why they were needed and, in doing so, help them improve their family functioning.

2.4. Measures

The "*Brief Family Relationship Scale*" was utilized both as a pretest and posttest measure. This scale, derived from the Relationship dimension of the Family Environment Scale, encompasses three key

dimensions: Cohesion (e.g., In our family, there is a feeling of togetherness), Expressiveness (e.g., In our family we can talk openly in our home), and Conflict (e.g., In our family we lose our tempers a lot), which gauge an individual's perception of their family relationship quality (Fok, Allen, Henry, and People Awakening Team, 2014). Operated as a 3-point Likert scale ('Not At All', 'somewhat', and 'A lot'), participants rate their level of agreement with each statement provided (Fok et al., 2014). Comprising 16 items, the scale allocates 7 items to the family cohesion dimension (α = .83), 3 items to expressiveness/communication (α = .65), and the remaining 6 items to conflict (α = .80), with the overall internal consistency (α = .88). Higher scores on cohesion and expressiveness denote stronger bonding and interaction and enhanced idea sharing and mutual understanding within the family, respectively. Items on the conflict dimension are reverse-coded.

2.4.1 Scale validation process

Before employing the scale for the present purpose, several steps have been considered beginning with two experts in the field of psychology verifying the scale's face and content validity. Two PhD holders in psychology were asked to assess the scale's feasibility in terms of relevance, potential effectiveness, appropriateness, clarity, and they endorsed the scale according to these criteria. Once it was decided to use the scales as it is, bilingual language experts, one of whom was a PhD in English as a Foreign Language and the other an MA in Amharic Language, translated the scale forward from English into the native language (Amharic) and then backward from the Amharic version into English. Differences between the two English versions were constantly scrutinized until complete congruence was attained. After that, to check the internal consistency of the scale in the Ethiopian context, the scale was tried out on 63 participants where the obtained internal consistency of the three dimensions of the scale were found to be reasonably high (cohesion α = .79, Communication α = .69 and Conflict α =.76) and internal consistency of the full scale was found to be (α = .81). Accordingly, the scale was used for the intended purpose. The post-test was taken a weeks after the completion of the intervention.

2.5 Approach and Methods of Intervention

2.5.1. Model of intervention

Cognitive-behavioral family therapy (CBFT) integrates behaviorism and cognitive approaches, and applies them to family systems. Because of its flexibility and continued evolution, CBFT has been employed in family interaction styles (Lan and Sher, 2019). Through CBFT, behaviors are targeted directly, with a focus on maximizing positive interactions while minimizing negative ones (Lebow and Stroud, 2016). CBFT, which integrates behaviorism, CBT, and system theory, considers thoughts and behaviors as central to family dysfunction. Accordingly, CBFT operates on the principle that the behavior of one family member influences the thoughts, behaviors, and emotions of others, creating a feedback loop that shapes the cognitive and behavioral processes of all involved.

The primary aim of the CBFT is to help family members recognize distortions in their thinking, restructure it, and modify their behavior to improve their interactional patterns. Furthermore, with the incorporation of systems theory, CBFT maintains focus on the interactive aspects of the family rather than on the internal processes of individuals (Lan and Sher, 2019). CBFT therapists take on the roles of experts, teachers, collaborators, and trainers.

The primary objective of CBFT lies in enhancing parenting skills and fostering constructive family dynamics. This approach incorporates two primary techniques: operant conditioning and skills training. Operant conditioning is particularly impactful within parent-child relationships, focusing on modifying reinforcement contingencies from adults to encourage desirable behavior patterns in children. In CBFT, families are often prompted to engage in activities such as attending lectures, reading books, watching videos together, and engaging in discussions centered around the material they have encountered (Lan and Sher, 2019).

Regarding the latter, communication, problem-solving, and parenting skills training are the predominant focus within CBFT. Communication training aims to enhance abilities in expressing thoughts and emotions, as well as listening attentively to others (Fall, Holden, and Marquis, 2017). Practice of session skills as homework is often employed to reinforce and sustain progress. In problem-solving training, therapists, trainers, or educators utilize verbal and written instructions, modeling, and behavioral rehearsal along with coaching to foster effective problem-solving among family members.

The primary objective of parenting skills training is to alter parents' reactions to their children through educating them about operant learning principles, fostering systematic observation of children's behavior, and guiding them in employing developmentally appropriate strategies to establish constructive boundaries on children's behavior and reinforce positive actions (Dattilio and Epstein, 2016). As parents acquire more effective methods of requesting positive behavior, children likewise acquire better behavioral patterns. Additionally, parents are instructed that by redirecting attention from less crucial behaviors (e.g., wearing a coat in colder weather), more significant behavioral changes are more likely to be integrated. Performance training techniques may include role-playing, modeling, participation in behavioral rehearsal, and prompting, all aimed at enhancing parent-child interactions that are comprehensible to children at their current developmental stage (Dattilio and Epstein, 2016).

The CBFT in this present exercise is focused on using the psycho-education approach type of CBFT practices which emphasizes more on teaching, training, coaching over sticking to the steps of therapeutic procedures. Giving the present intervention is targeted to enhance family relationships living with adolescents having behavioral problems; CBFT with the psycho-educational approach in focus was employed to increase family interaction, family communication, and family conflict resolution skills. Family cohesion training is targeted to optimize parents' awareness and provide insights about each family member's responsibility, acknowledging each other's quality, spending time together, inspiring as a role model, supporting each other and the likes (Texas Education Agency [TEA], 2014). Communication training is targeted to improve emotional self-expression skills, enhance discussion on family member problems, and build up effective listening to the other family members (Sim, Annan, Puffer, Salhi, and Betancourt, 2014). Similarly, conflict resolution skills training is adopted, to enrich parents with conflict resolution skill, generating specific behavioral solutions to the problem, evaluating the advantages and disadvantages of each alternative solution, and selecting and agreeing on implementing a solution (TEA, 2014). Along with the aforementioned contents of the intervention, parents were given a general orientation including healthy family relationships, nurturing developmentally appropriate skills to set constructive limits on children's behavior, and reinforce positive behavior in children, to mention a few.

The CBFT intervention in the present research is a six days intervention; day-one for rapport building and the rest five days for intervention. The intervention was made from October 14 – 21, 2020. The weekend days; Saturday, October 17 and Sunday October 18, 2020 were paused for rest. The intervention was made focusing on the three dimensions of the scale (i.e., Family cohesion, communication, and conflict). The training material was prepared within the framework of the CBFT in the focus of the psycho-educational approach emphasizing on how to increase family cohesion, healthy family communication, conflict resolution skills, and family problem-solving skills.

2.6. Intervention Sessions and Practices

Other materials deemed necessary for the intervention, for example, a manual prepared to improve family relationship by TEA (2014) and locally prepared Life *Skills Training Manual* by Tefera and Tadesse (2010) was also consulted in preparing the training manual for the intervention. Intervention sessions are presented as follows turn by turn.

Session One (Wednesday, October 14, 2020): Rapport building

Building rapport with participants of intervention will play an important role in positive, healthy, genuine, and informative communication between practitioners and clients. It also helps the practitioners relate to the client's situation and create an emotional link and provide transparency and positivity through communication (Fall *et al*., 2017). Therefore, for the effective practice of the intervention, after giving warm greetings to the participants, the practitioners introduced themselves including their names, professional backgrounds, and addressed the purpose and intention of the intervention to the participants. And then, they opened the floor for the participants to introduce themselves. Accordingly, each participant was allowed to introduce himself/herself freely without any interruption. Finally, all participants unanimously agreed not to share any personal information they heard from the intervention session with the other people. Moreover, establishing goals and rules with the participants was made. Hence, the day's session was closed with thanks to meet on the next day.

Session Two (Thursday, October 15, 2020): General orientation about healthy family relationship

In this session, an intervention was made focusing on providing orientations about the characteristics of a healthy family relationship. Some of the issues raised in this session were – qualities of healthy family relationship, what healthy and adjusted families can do? What roles and responsibility each family member can do? What relationship between parents and children should be like were only some of the points raised for discussion during the second session. Strategies for dealing with stress, family problem, dysfunction, and conflict were discussed. The discussion made with participants was so hot that they were freely forwarded and deliberated on their respective families. Finally, the day's agenda was summarized and closed with thanks to meet in the next session.

Session Three (Friday, October 16, 2020): How to build better Family Cohesion?

A summary of the previous session was made before addressing the day's session. And then, the day's agenda was introduced to the participants and let them reflect on some brainstorming activities related to family cohesion. In this session, participants were encouraged to raise issues regarding their respective family cohesion. Different issues were forwarded from the participants regarding their respective family cohesion. Accordingly, the intervention focused on how to build better family cohesion was made. Some of the important points raised to increase family cohesion include each family member responsibility, recognition, spending time together, good role modeling. Because this is the area where serious gaps noted from the pre-assessment screening and the contents of material prepared for intervention were also broad, the intervention training regarding family cohesion was extended to the next day. For the day's participation, participants were acknowledged and they agreed to continue in the next session from where we stopped.

Session Four (Monday, October 19, 2020): The third session agenda continued

After greeting the participants, a summary of the previous session was made. Also, the researchers had tried to check whether or not the parents have begun to practice what they have learned at their respective homes. Family environments, strong bonds between family members, and positive emotional connections in parent-child relationships were duly discussed in this session. Areas left untouched related to family cohesion in the last session were fully addressed in the present session. Some of the strategies to improve family cohesion that discussed in the session were showing appreciation to one another, expressing love unconditionally, offering positive verbal praise and support, and sharing time together. Finally, a summary of the session was made hinting at the next session.

Session Five (Tuesday, October 20, 2020): Family conflict resolution

After the summary of the last session was made, the day's issues to be discussed with parents of adolescents were addressed by the practitioners. In this session, the issue related to family conflict resolution was highly emphasized. To this end, the possible causes of family conflict, what each family member should do to overcome the possible causes of family conflict are some of the issues raised in this session. A hot discussion was made among the participants themselves and with the practitioners as well. Experiences shared among participants were also remarkable. Finally, the practitioners have winded up the day's session after giving a summary of the day's intervention practices.

Session Six (Wednesday, October 21, 2020): Family communication skill

After summarizing the last session, the day's area of intervention was introduced by the practitioners focusing on how to improve family communication skills. In this session, how to build a healthy family relationship through positive and effective communication, listening skills, openness, honesty, trust, and similar issues that help to improve family communications were emphasized. Characteristics and components of effective communication were addressed. Participants were also trained to learn verbal and nonverbal communication and their importance for the healthy relationship of family members. Finally, the summary and closing of the session were made. Posttest was made on 30th October, 2020 calling both treatment and control groups together

2.7. Data Analysis

Data were analyzed employing Analysis of Covariance (ANCOVA) in which scores on the pre-test were treated as a covariate to 'control' for pre-existing differences between the groups. In situations where quite small sample size and small or medium effect sizes are anticipated, ANCOVA appears a very useful model of analysis (Pallant, 2010). To test within subject effects of the dimensions, two ways repeated measures ANOVA was employed.

2.8. Ethical Consideration

In the intervention, participants were involved with their informed consent. After offering warm welcoming hospitality to the participants; overall orientations about the intervention were made ahead of any activity. Based on the discussion made with participants, their full consent to participate in the intervention was achieved. Following that, each participant's agreement to participate in the intervention to the end of the program was achieved. Also, the researchers promised to keep the confidentiality of all information obtained from the participants and anonymity of individuals who participated in the intervention. Accordingly, the full consent to participate in the intervention was obtained from the participants before the intervention.

3. Results

This section presents a description of the study participants followed by impacts of the intervention and then discussion of the findings.

Table 1. Description of participants

Variables	Min	Max	Mean.	Variable		Fre.	Percentage
Age	28	55	36.5	With whom living with	Only children	9	56.3%
					With children and spouse	6	37.5%
					Other	1	6.2%
Number of children	2		7	Type of work	Housewives	5	31.3%
					Labor work	3	18.8%
					Not mentioned	8	50%
Total						16	100%

As it is indicated in Table 1, participants are found between 28 to 55 age ranges. They have a minimum of two and a maximum of 7 children. Of the total participants, 56.5% of them are single parents, whereas 37.5% of them are living together (with their spouse). 31% of them are housewives. Table 2 presents the descriptive statistics of these participants on the pretest and posttest measures.

Table 2. The mean and standard deviation of control and treatment groups on study variable

Variables	Groups	N	Pre-test		Post-test	
			Mean	Std. deviation	Mean	Std. deviation
Total relationship score	Treatment group	8	25.01	3.72	35.75	3.24
	Control group	8	24.68	2.13	24.63	3.20
Expressiveness (communication)	Treatment group	8	4.87	1.35	6.62	1,68
	Control group	8	3.87	1.12	4.5	1.0
Family cohesion	Treatment group	8	9.87	.99	16.36	2.66
	Control group	8	9.12	1.35	10.73	3.5
Conflicts	Treatment group	8	10.12	3.2	12.75	2.75
	Control group	8	9.87	1.45	9.37	1.0

As can be seen in Table 2, slight mean difference seems to exist between treatment and control groups before intervention with M=25.01 and SD=3.72; M=24.68 and SD=2.13 respectively. Mean differences between the two groups seem to increase after the intervention with M=35.75 and SD=3.24 for the treatment and M = 24.63 and SD= 3.20 for the control group. Similar to the total score, mean differences seem to exist between the two groups across the three dimensions (communication, cohesion and conflict resolution skill) of family relationship. The question is, however, how significant these differences are between the two groups.

ANCOVA was carried out to check if significant mean differences still occur after controlling the contribution of the pretest measure on the posttest score. In fact, before running ANCOVA, an attempt was made to check the tenability of the basic assumptions for using this model of analysis (Table 3).

Table 3. Test of homogeneity of regression slopes

Tests of between-subjects effects					
Dependent variable: Post-test score					
Source	Type III sum of squares	df	Mean square	F	Sig.
Corrected Model	499.569[a]	3	166.523	14.185	.000
Intercept	98.388	1	98.388	8.381	.013
Group	6.754	1	6.754	.575	.463
Pre-test score	4.025	1	4.025	.343	.569
Group* pre-test score	.171	1	.171	.015	.906
Error	140.869	12	11.739		
Total	15221.000	16			
Corrected total	640.438	15			
a. R Squared = .780 (Adjusted R Squared = .725)					

As the probability value of "Group* Pre-Test Score" is above the cut-off point (i.e. 907), we can safely assume that the assumption of homogeneity of regression slopes is tenable in the present data. So, it is safe to run ANCOVA for final data analysis (see Table 4).

Table 4. Summary of ANCOVA to explore the difference between treatment and experimental groups after intervention

Tests of between-subjects effects						
Dependent **v**ariable: Post-test score						
Source	Type III sum of squares	df	Mean square	F	Sig.	Partial Eta squared
Corrected Model	499.398[a]	2	249.699	23.015	.000	.780
Intercept	136.448	1	136.448	12.577	.004	.492
Pre-test score	4.335	1	4.335	.400	.538	.030
Family Intervention	490.037	1	490.037	45.168	.000	.777
Error	141.040	13	10.849			
Total	15221.000	16				
Corrected Total	640.438	15				
a. R Squared = .780 (Adjusted R Squared = .746)						

Now, after controlling pre-intervention score, a statistically significant difference between experimental and control group was reported F (1, 13) = 45.17, p = .000, partial eta squared = .78. This is large according to Cohen's (1988) guidelines for determining effect size.

Further analysis is made to determine within-subjects effects (Cohesion, Communication and conflict resolution skills) in the two groups. In fact, before running this analysis, an attempt was made to check the tenability of the basic assumptions for using this model of analysis. As a result, the sphericity test was used to evaluate the tenability of homogeneity of variances, and the assumptions for conducting the test were not broken, indicating that the analysis can be safely pursued. This subsequent analysis is summarized in Table 5.

Table 5. Tests of within-subjects effect

Measures	Tests of within-subjects effects					
Source	Type III sum of squares	Df	Mean square	F	Sig.	Partial Eta squared
Cohesion	4418.000	1	4418.00	571.38	.000	.976
Cohesion * Group	60.500	1	60.500	7.824	.014	.359
Error (Cohesion)	108.250	14	7.732			
Expressiveness	861.125	1	861.125	482.23	.000	.972
Expressiveness * Group	10.125	1	10.125	5.670	.032	.288
Error (Expressiveness)	25.000	14	1.786			
Conflict	276.125	1	276.125	34.945	.000	.714
Conflict * Group	200.000	1	200.000	25.311	.000	.644
Error (Conflict)	110.625	14	7.902			
Cohesion* Expressiveness	3698.000	1	3698.00	550.03	.000	.975
Cohesion * Expressiveness * Group	15.125	1	15.125	2.250	.156	.138
Error (Cohesion*Expressiveness)	94.125	14	6.723			
Cohesion * Conflict	105.125	1	105.125	27.509	.000	.663
Cohesion * Conflict * Group	66.125	1	66.125	17.304	.001	.553
Error (Cohesion*Conflict)	53.500	14	3.821			
Expressiveness * Conflict	4.500	1	4.500	2.447	.140	.149
Expressiveness * Conflict * Group	8.000	1	8.000	4.350	.056	.237
Error (Expressiveness*Conflict)	25.750	14	1.839			
Cohesion * Expressiveness * Conflict	3.125	1	3.125	.856	.371	.058
Cohesion * Expressiveness * Conflict * Group	32.000	1	32.000	8.763	.010	.385
Error (Cohesion*Expressiveness*Conflict)	51.125	14	3.652			

As depicted in Table 5, significant effects on family relationship came in from family cohesion F(1, 14)= 571.381, p = .000, partial eta squared .976), expressiveness/ family communication F (1, 14)= 482.230, p = .000, partial eta squared = .972), and conflict resolution skill F (1, 14) = 34.945, p = .000, partial eta squared = .714). In the same Table, a statistically significant interaction effect was reported between groups for cohesion F (1, 14)= 7.824, P=.014, partial eta squared = .359), expressiveness F (1,14)= 5.670, P=.032, partial eta squared =. 288), and conflict resolution skills F (1, 14) = 25.31, p = .000, partial eta squared =.644); in all the cases the intervention group scoring higher than the control group. With reference to the same table, while the interaction effects among the three subscales 'Cohesion * Expressiveness * Conflict' is insignificant F (1, 14) = .856, P<.371), these interaction effects were significant when compared between groups, i.e. a statistically significant interaction effect among Cohesion * Conflict * Expressiveness * Group was reported F (1, 14) = 8.763, p = .010, partial eta squared =.385). Thus, our hypothesis that CBFT will bring significant change in a family relationship with training given to parents of adolescents having behavioral problems is accepted. It can be concluded that compared to parents in the control group, those who received intervention training demonstrated improved quality of family relationships (cohesion, communication, and conflict resolution skills).

4. Discussions

The family environment in its different forms can deter each family member's identity, personality, behavior, and other qualities of human beings. Healthy family dynamics can produce healthy personality, behavior, life satisfaction, happiness, success in each family member; whereas an unhealthy family environment tends to produce a family member having different difficulties

including substance use and abuse, participating in different crime-related activities, conflicting with laws are only some of the repercussions of unhealthy family environment on the wellbeing of respective family members (Hirschi, 1969). As it was also shared by Steinberg (2002), though the family is not the only context that influences adolescents' behavior, the role families play in shaping adolescent children's behavior is tremendous. Family system theory is in tune with Steinberg's notion that the behavior of each family member is better understood in their family context rather than in isolation such that the desired behavioral change can be achieved through the focus on the patterns of dynamics within a person's family system.

To improve the family relationship among families living with adolescents having behavioral problems in the study area, Cognitive-Behavioral Family Therapy with Psycho-educational approach in focus was employed, and in tune with our 'expectation, the intervention made for about a week was found to be effective where statistically significant behavioral changes were observed among families that participated in the intervention session compared to those who were in the control group. The results of this study suggested that family interventions based on Cognitive-Behavioral Family Therapy with Psycho educational approach in focus play a vital role in bringing about change in parental skills (i.e., better communication, conflict resolution, and problem-solving skills, and better family cohesion) which could, in turn, improve adolescents' overall functioning and problem behavior. In support of the present findings, family intervention training made by utilizing CBFT by Sim *et al*. (2014) in Thailand asserted that the intervention improves positive parenting practices and caregiver-child interaction. They also show that the intervention reduced negative parenting practices, including some forms of harsh punishment, decreased children's behavioral problems, improved children's attention and resilience (Sim *et al*., 2014). Consistent with Sim *et al*. (2014) notion, Zarei and Roohafza (2018) and Dattilio (2012) urged that Cognitive-Behavioral Family Therapy is designed to help families with different challenges through the principles of behavioral modification, to change the interactional patterns of family members, and to restructure distorted beliefs and perceptions that develop as a result of faulty interaction. The mentioned notions were also echoed by Fagan (2013), where he stated that family intervention is far-reaching for improving family functioning (cohesion, communication, and conflict resolution). From this, it is easy to discern that family intervention employing CBFT is crucial for bringing about the desired and healthy family dynamics for a better life.

Another important point that needs to be taken into account based on indications in the result section of the present study is that among parents of adolescents with behavioral problems who participated in the present intervention, about 57% of them were female-headed households. This edifies a great message that children of single-parent families are more likely to develop behavioral problems like substance abuse and use, running away from home, conflicting with the laws and, incarcerated, to mention a few.

5. The Practical Implication of the Study

The present study has a practical contribution to practitioners, researchers, and parents of adolescents. From the present findings, they can understand that Cognitive-Behavioral Family Therapy can be momentous for addressing similar problems in the Ethiopian context. This study offers a lesson for the family practitioners working in Ethiopian context; especially on how to learn to focus on the root causes of problems over leaving aside the root causes of problems and lend their attention on the tangential factors which has been the commonly noticed challenge in the Ethiopian context. Similarly, the findings of the present study could help academicians and practitioners to understand that Cognitive-Behavioral Family Therapy is applicable beyond Western, individualist countries – at least concerning the Ethiopian context, and promises the safe application of the model in the Ethiopian milieu for the same purpose. Furthermore, because CBFT is appreciated for its cost and time effectiveness (Lan and Sher, 2019), the present intervention was made with only limited resources which truly pledge its applicability in the Ethiopian context where the challenges of scarcity of

resources are a long-standing headache for academicians and practitioners. Its demonstrated effectiveness in bringing about behavioral changes and improving family functioning across various families living with adolescents with behavioral problems, the safe materiality of CBFT in the Ethiopian context is not something put to doubt. The easy understanding and flexible nature of CBFT also lessens the practitioners' effort to apply the model in the Ethiopian context. Given its proven cross-cultural applicability by the previous researchers and proved effectiveness by the present intervention for family living with adolescents having behavioral problems, and as this model has been around and used in the Ethiopian context for counseling and intervention purpose for a long time, it is suitable to apply the model in the Ethiopian context. The findings of this study have also important implications for parents, in particular, to support the use of positive interaction and communication in their child-rearing practices and facilitate the conditions which are essential to foster their children's positive behavior. Finally, the findings and implications of the current study are critical for building previous research in the area, and fill a gap in empirical work since historically; studies in this area have mainly focused on Western countries.

6. Conclusions and Recommendations

6.1. Conclusions

It is an undeniable fact that the intervention has increased families' healthy relationships for families living with adolescents having behavioral problems. Change in the family relationship in turn will bring about the overall healthy relationship among family dynamics. The result also proved the effectiveness of Cognitive-Behavioral Family Therapy in the focus of the psycho-educational approach for bringing about healthy family relationships among families living with adolescents having behavioral problems in the Ethiopian context. Family-based intervention utilizing CBFT with Psycho educational approach in focus is the best practice to nurture and develop because it proved effective and workable in the Ethiopia context with only limited time and resources.

6.2. Recommendations

In the present study, the target of the intervention was parents of adolescents having behavioral problems, but it would have been better if adolescents with behavioral problems themselves were part of the intervention. Therefore, interested researchers and practitioners are advised to include the neglected group to see whether their participation as part of intervention would bring about better changes in relationships among family dynamics or not. Furthermore, how much changes in family relationship as a result of the CBFT intervention are impacting adolescents' maladaptive behaviors also need to be examined to see the impacts of the intervention because the ultimate purpose of the intervention is to improve adolescent behaviors.

7. References

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