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Comparison of the Effectiveness of Coping Power Intervention and Forehand and Long Parenting Program on Aggression in Students with Oppositional Defiant Disorder

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Article Info ABSTRACT Objective: The purpose of this research was to compare the effectiveness of the coping power training program and the Long and Forehand parenting program on the aggression of students

Research Article training program and the Long and Forehand parenting program on the aggression of students with oppositional defiant disorder.

Article history: Methods: A qualitative approach was employed in this study, utilizing the grounded theory

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method. The statistical population of first to third grade students with symptoms of oppositional defiant disorder and their mothers in two cities of Tehran in 2022. A total of 45 sample people were selected in a non-random, purposeful way and randomly arranged in one of three groups of 15 people, the coping power program, the Long and Forehand parenting program, and the control group, and they answered Shahim's aggression questionnaire.

Before the implementation of the training course, a pre-test was conducted for all three groups. The resulting data were analyzed using SPSS statistical software and the method of variance

Aggression,
Oppositional defiant disorder

Results: Based on the results of the effectiveness of both training programs, it has had a significant impact on aggression, and the effect of long and forehand parenting program

training on aggression has been greater than that of coping power program.

analysis with repeated measurements.

Conclusions: Therefore, it can be concluded that the coping power program and the Long and Forehand parenting program can be used as a suitable therapeutic intervention tool to reduce the aggression of students with oppositional defiant disorder.

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Introduction

Oppositional defiant disorder is delineated by a recurring pattern of irate/provocative temperament, argumentative/defiant conduct, and animosity towards figures of authority or adults (Ghosh et al., 2017). Oppositional defiant disorder is a condition observed in juveniles who fail to satisfy the complete criteria for conduct disorder (Riley et al., 2016).

Psychological oppositional defiant disorder manifests with an incidence ranging from 1 to 11% in preschool or early school-aged children and during the pre-adolescent phase (American Psychiatric Association, 2013)(Burke & Romano-Verthelyi, 2018). In Iran, one prevalent cause for the referral of children to psychological clinics is oppositional defiant disorder (Afzali et al., 2016). The principal attributes of this disorder encompass the existence of two classifications of emotional and behavioral symptoms such as sequences of antagonistic behavior, defiance, negativity, and disobedience, anxious disposition, disputes with adults, unconventional behaviors, refusal of adults' and parents' requests and regulations, impulsive actions resulting in harm to others, ascribing blame to others for personal errors or misconduct, irritability, oversensitivity, aggression, spitefulness, and bias, when a minimum of four symptoms persist for a duration of six months (Riley et al., 2016).

The estimated lifetime prevalence of oppositional defiant disorder is 10.2%. If left untreated, oppositional defiant disorder engenders social, emotional, or academic deficiencies in childhood that endure into adulthood (Helander et al., 2023).

Impairments in social functioning render children with oppositional defiant disorder susceptible to external (social environment) and internal (cognitive conflicts) stressors, leading to manifestations of aggression (Chao et al., 2015). An examination of studies indicates that children and adolescents exhibiting subpar social performance display heightened levels of aggression and other behavioral challenges, while educational schemes fostering individual and social competencies can effectively deter aggression and ameliorate the social functioning of these individuals (Stapley et al., 2021).

Aggression and conduct disorders are prevalent among children with oppositional defiant disorder, with retrospective and prospective studies demonstrating a high level of persistence over time, often spanning from childhood through adolescence and culminating in antisocial behavior

disorder in adulthood (Shaddock & Sadok, 2010). Aggression denotes a forceful act executed with the aim of overpowering or dominating others, characterized by unprovoked assaults or hostility culminating in physical attacks and damage, particularly following feelings of powerlessness and defeat (Fox et al., 2008).

Previous studies have indicated that family-focused interventions have been associated with a decrease in the clinical manifestations of oppositional defiant disorder in children (Afzali et al., 2016). The Coping Power Program has emerged as an effective intervention targeting cognitive functioning, psychological symptoms, and academic outcomes in children diagnosed with oppositional defiant disorder, tailored specifically for the parents of these children. Grounded on the social cognitive background model of childhood aggression, the Coping Power Program addresses both child-specific factors and contextual elements contributing to aggressive behaviors (Karimpour et al., 2019).

Muratori et al. (2021) have demonstrated through previous research that the Coping Power intervention led to behavioral enhancements, along with a notable reduction in internalizing issues and an increase in prosocial behaviors. Another valuable resource for enhancing parental mental well-being and alleviating symptoms of oppositional defiant disorder in children is the Disobedient Child Parenting Program developed by Long and Forehand. This particular program equips parents with strategies to eliminate negative and coercive parent-child exchanges, consequently leading to a decrease in disobedient and confrontational behaviors in children, while promoting positive behaviors (Haji Seyedrazi et al., 2012). Notably, this program involves educating parents on implementing effective instructions, ignoring inappropriate child behaviors, and utilizing appropriate reward systems (Pak Nejad et al., 2016). Similarly, Forehand et al. (2011)) have also recognized the efficacy of this program in mitigating problematic child behaviors and enhancing parenting skills.

Upon scrutinizing the existing literature, it becomes apparent that there is a dearth of studies comparing the efficacy of the Coping Power Program and the Long and Forehand parenting intervention. Furthermore, limited attention has been given to exploring the impact of these interventions on the aggression levels of students diagnosed with oppositional defiant disorder. Given the existing research gap in this area, the fundamental research question arises: Is there a

distinction in the effects of the Coping Power Program and the Long and Forehand parenting program on the aggression levels of students diagnosed with oppositional defiant disorder?

Materials and Methods

The current research methodology is semi-experimental, incorporating both pre-test, post-test and follow-up assessments, along with control group. The study's statistical population consists of first to third-grade students diagnosed with oppositional defiant disorder and their mothers residing in Tehran during the year 2022. A non-random sampling method was used to select a total of 45 participants, who were then randomly allocated to one of three groups: the coping power program, the Forehand and Long parenting program, or the control group. Subsequently, participants completed the aggression questionnaire for children. Inclusion criteria involved possessing at least an elementary level of education, mothers being between 30 and 50 years old, and students scoring a minimum of 5 on the oppositional defiant disorder questionnaire. Exclusion criteria encompassed involvement in other concurrent treatments and missing more than two training sessions. Prior to the study, parents of participating students provided informed consent.

Following the delivery of the training program over 10 sessions, all three groups responded to the questionnaire a second time immediately after the sessions and a third time two months later. The collected data underwent analysis using SPSS-25 software through the application of the repeated measures variance analysis approach.

Instruments

Children's aggression questionnaire: This questionnaire has 21 items in the field of aggression of primary school children with four options rarely (1) once a month (2), once a week (3), most days (4) which was created by Shahim (2006). This questionnaire is completed by the teacher and the questions are arranged in such a way that they contain different degrees of intensity of aggression and are graded based on the level of occurrence of the behavior. This questionnaire has three subscales: physical aggression (7 items), reactive and hyperactive verbal aggression (6 items), and relational aggression (8 items). The cutoff point for diagnosing an aggressive child in each subscale is one standard deviation above the mean. Cronbach's alpha coefficient for the whole questionnaire is 0.91 and very favorable. Cronbach's alpha coefficient for physical, relational and verbal

aggression is 0.85, 0.89, and 0.83 respectively. In the present study, Cronbach's alpha coefficient was 0.81.

Summary of parenting program of Long and Forehand (2002) in 10 sessions

- 1 .Acquaintance and explanation of the program, pointing to the positive aspects of disobedient children's behavior, explaining the problem of disobedience and how different causes interact in its occurrence and severity.
- 2 .Teaching the skill of "paying attention to the child's positive behavior", presenting the assignment.
- 3 .Teaching the skill of "rewarding" and explaining its types, presenting assignments.
- 4 .Teaching the necessity, methods and effects of creating a positive atmosphere at home (with an emphasis on the role of the father) by having fun and joint activities with the child, providing homework.
- 5 .Skill training session "Ignoring child's bad behavior", explaining the effects of developing communication skills in reducing family problems, presenting the assignment.
- 6 .Training session on the skill of "presenting effective commands" and describing its effects on child obedience, presentation of assignments
- 7 .Guidance on ways to increase parents' patience when communicating with children by changing negative thoughts and using stress management strategies, presentation of homework.
- 8 .The training session for the skill of "quiet time" emphasizing its dos and don'ts, explaining the importance and methods of increasing self-esteem in children, presenting assignments
- 9 .Meeting to explain the necessity of combining the five mentioned skills, in order to manage the behavior of disobedient children
- 10 .How to analyze and deal with traumatic situations such as: the problem of babbling, aggressiveness, difficulty in dressing and eating, and the child's lying; Final summary.

Summary of cognitive behavioral therapy sessions for parents in 10 sessions

- 1 .Welcome, study help at home. How to establish a proper homework system at home, help with homework at home.
- 2 .Stress management, causes and definition of stress, parenting stress, time management, active relaxation training.

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- 3 .Promoting the parent-child relationship, positive consequences for good behavior, praise, child behavior inventory, special child-parent time.
- 4 .Ignoring minor destructive behaviors, praising and ignoring, homework and following up and ignoring the child's behavior.
- 5 .Providing effective training to the child, ineffective instructions, effective instructions, assignments.
- 6 .Creating rules and expectations, behavioral rules and expectations, homework, follow-up form for behavioral rules.
- 7 .Training and punishment, doing difficult work, cutting off all rewards and privileges, homework, difficult work sheets
- 8 .Preparing for vacations, home schooling, daily structure, community-based activities and events, coping with increased stress levels.
- 9 .Creating family solidarity, solving family problems, family problem solving steps, problem solving sheet.
- 10 .Family communication and summing up, creating family meetings with invitations, planning for the long term.

Results

Table 1 shows the mean and standard deviation of the pre-test, post-test and follow-up aggression scores in the three control groups, coping power program and Long and Forehand parenting program.

Table 1. The mean and standard deviation of the pre-test, post-test and follow-up scores of the research variable

Variable	Phase	Control		Coping power	Coping power parenting		Forehand and Long parenting		
		Mean	SD	Mean	SD	Mean	SD		
Aggression	Pretest	54.40	4.74	51.78	2.29	52.93	4.33		
	Posttest	54.93	3.93	45.47	3.31	42.60	3.86		
	Follow up	55.33	4.88	43.80	4.03	40.47	3.27		

Assumptions of analysis of variance test with repeated measures

Table 2 Kolmogorov-Smirnov test to check the normality of the distribution of the research variable.

Table 2. Kolmogorov-Smirnov normality test

Variable	Phase	Control		Coping pow	er parenting	Forehand and Long parenting		
		K-S	P	K-S	P	K-S	P	
Aggression	Pretest	0.16	0.72	0.21	0.43	0.16	0.77	
	Posttest	0.12	0.94	0.14	0.86	0.14	0.84	
	Follow up	0.19	0.57	0.21	0.42	0.17	0.67	

According to Table 2, since the obtained significance levels are greater than the error level of the test (0.05), then the claim of the normal distribution of the variables is accepted.

Homogeneity of covariances test result was presented in table 3.

Table 3. M-Box test for homogeneity of covariance

	Variable	Coping power p	parenting	Forehand and Long parenting		
		Box's M	P	Box's M	P	
	Aggression	13.99	0.055	9.46	0.21	

According to Table 3, because the results of the M-Box test are not significant (the significance levels obtained are greater than (0.05)), the condition of homogeneity of covariances has been correctly met. Equality of variances test checked by Levene's test (table 4).

Table 4. Levene's test to check the equality of variances

Variable	Phase	Coping power	r parenting	Forehand and Long parenting		
		F	P	F	P	
Aggression	Pretest	3.047	0.09	0.22	0.64	
	Posttest	0.09	0.76	0.12	0.73	
	Follow up	0.08	0.76	1.56	0.22	

According to Table 4, the values of the significance level are greater than the error level of the test (0.05), as a result, the assumption of equality of variances has been met.

Table 5. Summary of the results of repeated measures analysis of variance of the effect of the coping power training

program on aggression

Source	SS	DF	MS	F	P	Effect size
Phase	217.26	1.38	156.98	21.26	0.001	0.43
Group * Phase	333.35	1.38	240.85	32.63	0.001	0.53
Group	1384.54	1	1384.54	35.84	0.001	0.56

According to table 5, the level of significance related to the stage for aggression is less than 0.05. As a result, it can be accepted that there is a significant difference between the average scores of this variable in the pre-test, post-test and follow-up stages, and therefore, it can be concluded that the training of coping power program has been effective on students' aggression and according to the difference in the averages, it has reduced aggression. According to the eta square value, 53.8% of the changes in the aggression scores during the pre-test, post-test and follow-up stages were caused by the training of coping power program.

Table 6. Summary of the results of repeated measures analysis of variance of the effect of the effect of long and

Source	SS	DF	rogram training o MS	F	P	Effect size
Phase	580.15	1.66	347.96	41.40	0.001	0.59
Group * Phase	760.15	1.66	455.62	54.24	0.001	0.66
Group	2054.44	1	2054.44	52.49	0.001	0.65

According to Table 6, the level of significance related to the stage for aggression is less than 0.05. As a result, it can be accepted that there is a significant difference between the average scores of this variable in the pre-test, post-test and follow-up stages, and also considering the significance of the interaction effect of the stage * group and the significance of the group effect, it is concluded that the amount of changes of this variable during the pre-test, post-test and follow-up phases was significant, so it can be concluded that the training of the Long and Forehand parenting program was effective on aggression in students and according to the difference in averages, it has reduced aggression. According to the eta squared value, 66% of the changes in aggression scores during the pre-test, post-test and follow-up phases were caused by Long and Forehand parenting program training.

Table 7. LSD test to compare the effect of teaching coping power program and Long and Forehand parenting program on aggression

	program on aggression			
Variable	Groups	Mean difference	Error	P
Aggression	Coping power - Control	9.47	1.35	0.001
	Forehand and Long parenting - Control	12.33	1.35	0.001
	50 mg pa 11 mg pa 12	1.35	0.041	

In Table 7, according to the significance of the difference in means, it can be said that both the training of coping power program and Long and Forehand parenting program had a significant effect on aggression. Also, comparing the effect of training on coping power program and Long

and Forehand parenting program on aggression, considering the significance of the mean difference, it can be said that the effect of Long and Forehand parenting program training on aggression was greater than the coping power program.

Discussion

The outcomes of this study indicated that the implementation of the coping power program had a positive impact on the levels of aggression among students, resulting in a decrease in aggressive behaviors. This outcome is consistent with the research findings of Nystrand et al. (2021), Helander et al. (2023) and Saadati et al. (2020). The findings from the study conducted by Nystrand et al. (2021) demonstrated the effectiveness of Parent management training (PMT) and child cognitive behavioral therapy approaches for treatment of oppositional defiant disorder in children. To elucidate this discovery, it can be argued that within the coping power program, parents are instructed to modify the child's approach to seeking attention by reinforcing positive behaviors instead of negative ones. A child who exhibits disobedient behaviors has likely learned that engaging in undesirable actions garners attention from parents, inadvertently reinforcing such behavior. By promoting positive behaviors, a child is encouraged to exhibit appropriate conduct, thereby diminishing undesirable behaviors. By praising and acknowledging a child's positive actions, the child learns that negative behaviors are unnecessary to gain attention (Nystrand et al., 2021).

Alternate strategies for discipline, such as techniques for reducing undesirable behaviors (e.g., ignoring, employing quiet time, and implementing temporary privileges), assist parents in responding effectively to their child's negative behaviors without escalating aggression or tension. By identifying the child's needs and fostering a harmonious atmosphere to avert conflicts, establishing reasonable expectations, and refraining from labeling negative behaviors, this program can mitigate aggressive conduct and defiance towards parental directives (Muratori et al., 2012). Through the encouragement of mothers to enforce regulations and a structured environment, utilize behavior modification strategies, and implement behavioral management techniques with timely and appropriate reinforcement and consequences, the coping empowerment program has successfully mitigated behavioral issues, including aggression, in children.

Correspondingly, the outcomes of the study demonstrated that the Long and Forehand parenting interventions proved to be efficacious in addressing students' aggression and diminishing their aggressive tendencies. This outcome aligns with the research findings of <u>Walwanis and Ponto</u> (2019), <u>Pak Nejad et al.</u> (2016) as well as <u>Forehand et al.</u> (2011). <u>Forehand et al.</u> (2011) indicated that a group curriculum for parents is effective on young children symptoms with disruptive behavior.

To elucidate this discovery, it can be posited that this educational curriculum places significant emphasis on fostering child compliance by altering the methods of parental commands. Through the program sessions, parents are guided on enhancing positive parenting techniques through attention, reinforcement, issuing directives, establishing regulations, and communicating requests effectively to the child. Moreover, the sessions underscore the repercussions of a child's defiance, emphasizing the mother's need for assertiveness devoid of anger or emotional reactions (Haji Seyedrazi et al., 2012).

Research findings have indicated that parental aggression towards children correlates with hostile attitudes in children, and such attitudes, in turn, impact the children's aggression levels. Children exhibiting high levels of aggression towards their parents at home tend to display similar aggression towards teachers at school. Thus, the crucial role of the family environment in perpetuating aggressive behaviors during childhood and adolescence becomes evident (Chao et al., 2015).

The Long and Forehand parenting program facilitates the cultivation of healthier parent-child relationships. When parents encounter stressful situations and lack knowledge about effective problem-solving strategies, they may inadvertently foster confrontational behaviors in their children, leading to conflicts. The Forehand and Long approach aims to equip parents with improved communication skills and problem-solving techniques (Pak Nejad et al., 2016). This program imparts to parents' specific behavior management competencies aimed at eliminating negative, coercive interactions between parents and children. By doing so, disobedient behaviors in children are mitigated, positive behaviors are reinforced, and consequently, aggressive and behavioral issues among children are reduced.

In addition, the outcomes of the study revealed that both the Coping Power Program training and the Long and Forehand Parenting Program significantly influenced student aggression. When comparing the impact of these two programs' training, it was evident that the Long and Forehand parenting program had a more pronounced effect on aggression than the Counter Strength Program. To clarify this discovery, it can be posited that both training initiatives impart specific parental skills aimed at reducing negative and coercive parent-child interactions. However, regarding the heightened influence of the Long and Forehand parenting program on aggression, it can be argued that this program places considerable emphasis on fostering child compliance by modifying the way commands are issued to parents and providing efficient directives. Moreover, it tactfully addresses parents' encounters with distressing scenarios such as children's shouting and aggressiveness, which could impact the outcomes.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by ethics committee of Islamic Azad University. The patients/participants provided their written informed consent to participate in this study.

Author contributions

All authors contributed to the study conception and design, material preparation, data collection and analysis. The author contributed to the article and approved the submitted version.

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