



The Effect of Problem- Solving Skills Training Program on Behavioral Problems among Children With Conduct Disorder

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Abstract

Objectives: To evaluate the effectiveness of problem solving skills training program on behavioral problems among children with conduct disorder. **Methodology:** A quasi-experimental research design "pre and post-test design" was utilized. A convenient sample of 30 children diagnosed with conduct disorder was selected. Three tools were used to conduct the current study, Socio-demographic data sheet, Problem Solving Skills Questionnaire and Conduct Disorder and Behavioral Problems Scale. **Results:** the study results revealed that statistical significant differences were found regarding problem solving skills and behavioral problems after intervention program than pre. **Conclusion:** The study concluded that, problem solving skills training program is effective in improving behavioral problems among children with conduct disorder. **Recommendation:** This study recommended that, problem-solving skills training program should be implemented in different child and adolescents health care settings to support the healthy psychosocial development of the child.

Key words: *Behavioral Problems, Conduct Disorder, Problem Solving Skills Training*

Introduction

Conduct disorder (CD) refers to a clinical problem among children and adolescents that emphasis aggressive acts, theft, vandalism, fire setting, running away, truancy, defying authority, and other behaviors referred to as 'antisocial'. They violate major social rules expectations; many of them also reflect actions against environment including both persons and property". Children and youth with CD are characterized by lacking empathy, being cruel, egocentric, and not compliant with rules (**Gatti, Grattagliano, Rocca., 2018**).



Problem solving is one of the most important skills that can preserve and enhance children's mental health in the face of present and future problems. Problem solving is defined as behavioral process that offers challenges, opportunities, and movement towards more desirable outcomes. Problem solving involves a process of searching for and collecting information, defining the particulars of a situation, and finally making a decision (Franestian, Suyanta, & Wiyono., 2020).

Teaching problem-solving skills helps children and adolescents negotiate personal, interpersonal, and group life stressors through identifying and defining problems, forming alternative solutions, choosing and executing a solution, and evaluating the outcomes. So, teaching these skills to the child improves effective interaction and communication and interpersonal relationships, enhance cooperation and responsibility (Larson, 2021).

Significance of the study

Conduct disorder is a matter of familial and societal concern because of the significant burden for the patient, family and environment and strongly associated with school failure, disrupted peer and family relationships, family burnout, severe depression, excessive risk-taking and addictive behaviors, poor social skills and difficulties in interpersonal functioning, low self-esteem, occupational malfunctioning, incarceration, noncompliance with instructions, emotional volatility, increased rate of adult psychiatric disorders. This is why early diagnosis and treatment are critical (Fairchild, & De Brito, 2019).

Aim of the Study

The study aims to evaluate the effect of a problem solving skills training program on behavioral problems among children with conduct disorder.

Research Design

A quasi-experimental research design "pre and post-test design" was utilized in the current study.

Research Setting

The study was conducted at Beit El-Shams child psychiatric clinics at El-Abbassia Mental Health Hospital that affiliated to General Secretary of Mental Health.



Research Subject

A convenient sample of 30 children aged between 8-12 years old were selected.

Tools for data collection

Data collection was conducted using the following tools:

A. socio-demographic and personal data questionnaire

The questionnaire was developed by the researcher and includes child data such as age, sex, residence, number of siblings, birth order and parent data as father age, father education, father job, mother age, mother education, mother job.

B. Problem Solving Skills Questionnaire(PSSQ)

PPSQ was developed by **Mekdady & Abu ziton, (2010)** and used to measure children's problem solving skills. It composed of 40-items that measure problem solving steps in children which divided into 5 steps involving first step about general direction about concept of a problem, second step defining the problem, third step generating alternative solutions, fourth step making a decision and finally evaluating the decision. Problem solving skills questionnaire has a likert response format with a 3- point scale ranging from "never" given a score 1, "sometimes" given score 2, and "always" given score 3.

C. Conduct Disorder and Behavioral Problems Scale (CD&BPS)

It is a 37-items questionnaire developed by **Mohamed (2011)** and used to measure children's behavior for the past 12 months by their parents in pre and post intervention. It measures 4 aspects of children's behavior including aggression toward people or animals, destruction to property, deceitfulness or theft, and serious violation of rules. Parents answer each item on a 3 point likert scale depending on how many times the behavior is repeated ranging from seldom given a score 1, "sometimes" given score 2, and "always" given score 3. The higher the score is, the greater the repetition of the behavior.

Ethical consideration:

The ethical research considerations in this study include the following:-

- Written initial approval was obtained from the research ethical committee at the Faculty of Nursing, Helwan University.
- Written consent was obtained from each parent of participating children after explaining the nature and benefits of the study. Anonymity and confidentiality were also assured.

- The researcher cleared the objectives and aim of the study to participating children and their parents.
- Participating children and parents were allowed to choose to participate or not in the study, and given the right to withdraw at any time from the study.

Field Work

The data collection and implementation of the program consumed 6 weeks that carried out during the period from the first of August 2021 till the mid of September 2021 after obtaining the ethical approval from the Manger of El-Abbassia Mental Health Hospital.

The program sessions were designed to be 6 sessions and held once a week divided into three phases, one session (the first session) was for assessment, 4 sessions for program implementation and the final session (No., 6) for program termination and evaluation.

Phases of program implementation include the following:-

A- Preparation of the content:

A review of the current, past, local, and international related literature was done for preparation of the intervention program. The planning phase includes the program strategy (timetable, teaching methods, and participant assignments based on each skill).

B- Implementation phase:

This phase included the application of problem solving skills training program in outpatient clinics once a week. The children were divided into small groups. Each sub group was composed of 10 children. The program was implemented in the form of group discussion; each session lasted about to 60-90 minutes. Suitable teaching aids prepared specially for the program were: booklet, photos, and videos. Parents of children with conduct disorder were attended regularly all sessions of the program to follow their children at home. Also to help them in practicing what was done at home and complete the homework their children will asked.

At the beginning of each session, the researcher revised the homework and gave a summary about what was given through the previous session for 15 minutes. Then

the researcher taught the participants about the predetermined topic for (30-45) minutes and the remaining 30 minutes for conclusion of the session and discussing the homework for parents and children related to the current session to be discussed in the next session. The training program has had a pre-determined schedule, which every participating child and his parent notified about, one week before the actual meeting date. To make sure exposure of all subjects to the same learning experience, all children received the same program content using the same teaching methods.

C- Evaluation phase:

After conducting the program and thanking children and their parents for their participation, making summarize to the program and its objectives and asking them to fill the post-program data collection tools by using the same format of the pretest to evaluate the effectiveness of the implemented program; this was done immediately after the intervention.

Results

Part 1: This part illustrates Socio-demographic characteristics of participated children and their parents.

Table (1): Socio-demographic characteristics among children with conduct disorder (n=30)

Socio-Demographic characteristics	No.	%
Sex		
Male	20	66.7
Female	10	33.3
Age		
8<10	19	63.3
10-12	11	36.7
Mean age = 9.9 ± 2.1		
Residence		
Urban	6	20.0
Rural	24	80.0
Number of siblings		
1-2	9	30.0
3-4	17	56.7
5-6	4	13.3
Birth Order		
1	13	43.3

2	9	30.0
3	7	23.3
4	1	3.3

Table (1) reveals that the children's age ranged between 8 to 12 years with a mean 9.9 ± 2.1 and 63.3% of them were between ages of 8 to 10 years. The table also shows that two third of the studied children were male, 80% of the studied children lives at rural areas, 56,7% had 3-4 siblings and their birth order was the first.

Table (2): Socio-demographic characteristics among parents of children with conduct disorder (n=30).

Demographic data	No	%
Father age		
25-<30	9	30.0
30-<35	9	30.0
35-<40	7	23.3
40+	5	16.7
Mean age = 34.1 ± 5.5		
Father job		
Free work	18	60.0
Governmental	5	16.7
No work	7	23.3
Mother age		
25-<30	11	36.7
30-<35	10	33.3
35-<40	9	30.0
Mean age = 32.4 ± 4.3		
Mother job		
Work	11	36.7
House wife	19	63.3

Table (2) reveals that the father age ranged between 25 to 40 years with a mean age= 34.1 ± 5.5 , 16% of fathers had governmental jobs and 60% of them had

free work. As regards mother age, their age ranged between 25 to less than 40 years with a mean age = 32.4 ± 4.3 and 63.7 of them house wife.

Table (3): Comparison between mean scores of behavioral problems, and problem solving skills among children with conduct disorder at pre and post problem solving skills training program.

Items	Pre Mean± SD	Post Mean± SD	Paired test	p-value
Problem solving	71.00±3.73	73.17±3.31	-2.562	0.016*
Behavioral problems	66.9±12.4	50.3±4.8	7.19	0.0 001*

*significant at p-value<0.05

Table (3) reveals that highly statistically significant differences were found between pre and post intervention training program as regards total mean scores of behavioral problems and problem solving skills where $t=7.19, -2.562$ at $p= 0.0 001, 0.016$ respectively.

Discussion

The current study result shows that male is predominance than female regarding conduct behaviors among studied children. This may be due to boys may exhibit externalizing behavior problems unlike female who more common commit covert offenses or internalized behaviors

In the same vein, (Shen et al.,2018; Amin et al., 2021; Amiri et al., 2019) reported that boys are more common to have externalized disorders as hyperactivity, ADHD and conduct problems whereas girls are more common to have internalized problems as anxiety disorders as separation anxiety, social phobia, agora phobia and specific phobia.

The current study result reveals that the age of the studied children ranged between eight to twelve years. This result clarifies that conduct problems may occur at early childhood stage of life which indicates early occurrence of inappropriate behaviors that may be due to surrounded environmental and familial factors as parental neglect, inconsistent child- rearing practices, harsh discipline, physical abuse,



lack of supervision, frequent changes of caregivers or large family size. These factors may lead to maladaptive behaviors of their children.

This result is supported by **Goodnight et al. (2016)** who stated that maladaptive behaviors that are developed in infancy and childhood because the discord between parent and child will remain constant throughout ones lifespan. In agreement with **(Hamed et al., 2020)**, rates of CD were significant among participated children with a history of both sexual and physical abuse.

As regard to number of siblings, the current study result reveals that more than half of the sample has three to four siblings. This finding is in line with findings of studies conducted by **Vermaes, van Susante, & van Bakel, (2012)** that showed that when one person in the family has child with conduct disorder, it can affect how satisfied parents, siblings, and others in the family feel with their everyday life.

The current study result shows that forty percent of studied children are ordered as first child then second child was found to have thirty percent whereas the last child has the lower score. The current study result agrees with **Marleau, Saucier & Allaire, (2006)** who conducted a study about behavioral problems and dimensions of the mother-child relationship the sample included 1196 children aged 4 to 11 years using National Longitudinal Survey of Children and Youth and analyses showed that first-born children in a single-child families, have more internalized behavioral symptoms as he feel loneliness, boredom and inferiority even a sibling is born he feels jealousy and being dethroned increased risk of emotional disturbance in first-born children than second-born children while second-born children also have more positive interactions with their mothers than first-born children.

The current study result shows that the mean age of fathers was thirty four and the mother's mean age was thirty two. This result may explain as the parents' age may affect positive or negative in their child behavior. With increased parental age both positively and negatively related to child problem behavior. In the same vein, there may be a quadratic effect and if there is, increased child problem behavior may be present at high and low parental age.

In relation to parents' level of education, the current study result shows that the highest percentage of studied fathers and mothers are secondary education and the lowest percentages of their education are university studies. In accordance to **Hsu et**



al., (2022), regarding parental factors, higher paternal education level is protective, whereas maternal age younger than 20 at childbirth increases the risk of externalizing behaviors; however, such an association is not noted with regard to severe internalizing behaviors.

As regard father and mother job, the current study result shows that the highest percentages of the studied fathers are free work and the lowest percentages are employee where as two third of studied mothers are house wives. This result indicates that several social factors have been associated with the development of conduct disorders, including unemployment, poverty, lack of structure, and dysfunctional family environment.

The current study result reveals that statistical significant differences were found regarding problem solving skills at post problem solving skills training program. This results may be due to child training programs has been shown to be effective for solving problems in an acceptable and systematic way expecting a satisfied and acceptable outcomes. Training program teaches children to identify and detect the problem, searching for the main causes, thinking in a positive way in different suitable solution, practice the most appropriate solution and finally evaluate the outcomes for success.

According to **Ugueto, Santucci, Krumholz, & Weisz, (2014)**, problem solving skills training consists of learning and applying five, sequential steps: identifying a problem, generating a list of possible solutions, evaluating the strengths and weaknesses of each possible solution, choosing a solution to implement, and finally, implementing the solution and determining if the problem was solved, or if another solution is needed to solve the problem. The five steps of problem solving can be used by children and adolescents to solve a variety of problems and stressors.

Results of the current study reveal that statistical significant differences were found regarding conduct disorder and behavioral problems at post intervention than pre. These results may be due to children are learned to appropriately interpret social cues, communicate effectively with others, make appropriate choices, generate more positive reactions, cope successfully, increase self- esteem and empowerment and avoid applying a hostile retribution bias that help them demonstrate social and problem solving skills and reduce aggressive and antisocial behaviors.



Contrary to expectations, the study findings by **Lali et al. (2012)** showed that problem solving skills training had no effect on reduction of child conduct disorder symptoms in isolation. Perhaps one of their reasons why problem solving skill training is not as effective as the other two interventions is that the older children (from around 12) can sufficiently think abstractly. They can be taught the problem-solving process directly, by using real-life examples and live applications' to illustrate the process, but younger children will learn best by having the process demonstrated repeatedly by adults to help them solve their day-to-day social and other problems.

Conclusion

Based on the findings of the current study, it was concluded that:

Children with conduct disorder had many behavioral problems that need to be managed early to avoid later social, emotional and school problems. The training program was used to lessen these behavioral problems among children with conduct disorder. As a result, the study hypothesis was accepted stating that the problem-solving skills training program has a positive effect on behavioral problems among children with conduct disorder.

Recommendations

- Further research should be conducted using multiple methods of gathering data about problem solving skills to compensate for the weakness of individual methods with combining their benefits.
- A wide range of training services, resources and policies should be available and accessible to parents.
- Programs or workshops must be conducted for parents and teachers which help them for early detection of students with conduct disorder, especially in primary schools.



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