Cognitive behavioral intervention in dealing with school violence among Arab Palestinian adolescents in Israel

Agbaria Qutaiba a,*

*Al Qasmi-College, Baqa el garbia, Israel

Received January 9, 2010; revised February 16, 2010; accepted March 11, 2010

Abstract

The current study examined the implementation of cognitive behavioral intervention, in dealing with school violence among Arab Palestinian adolescents. The sample consisted of 100 students, who devided to test and control groups. The test group had 12 weekly group sessions of 90 minutes each. The findings indicated the effectiveness of cognitive behavioral intervention in dealing with violent behavior, with an improvement in most areas tested in the test group, compared to the control group. These findings correspond with findings of previous studies on the subject, which indicated the effectiveness of the cognitive-behavioral approach in dealing with school violence.

Keywords: Cognitive-behavioral intervention, school aggression, Arab Palestinian adolescence in Israel.

1. Introduction

Violence is a common phenomenon, present almost in every aspect of our life: In the life of family and society, work and studies, among neighbors, drivers on the road, places of recreation and sports facilities. Recently there has been a serious increase in violence among children and adolescents in schools. Such violence affects everyone and everything: The assaulting and assaulted adolescents, together with their social environment. It also affects personal safety of both children and teachers, and more than once children are experiencing anxiety, in the face of violence and threats, directed at them.

1.1. Purposes of the Study

The present study examines the effectiveness of cognitive-behavioral intervention in reducing school violence among Arab adolescents, attempting to equip both teachers and the system as a whole with an applicable model of dealing with violence, a model that can be adapted to the Arab society.
1.2. Violence

Several definitions have been proposed to the term “violence”, differing by the theoretical background they originated from. One of the most common definitions today, relates also to the intentions and purposes of the abusive person, as well as the victim’s position. According to this definition, aggression is described as behavior directed at another individual, with the intention of causing damage or injury (Anderson & Bushman, 2002a; Joirmann, Anderson & Strathman, 2003).

Numerous explanations have been suggested for violent behavior, differing in their emphasis on different components of the term. Some of them regarded violence as an innate instinct embedded in man (Freud, 1924; Lorenz, 1966). Another explanation emphasized the environmental aspect, regarding frustration as a prerequisite for violent behavior (Dollard, Doob, Miller, Mower & Sears, 1939).

The theory of social learning, considered as one of the main theories in the research of violent behavior, combined behavioral and cognitive aspects, thus regarding aggressive behavior as social behavior acquired through a process of learning by conditioning or imitation (Bandura, 1973). The model of social information processing gives an integrative framework for the two above mentioned theories, by describing the process of decision making as a circular process ending in social behavior. The process starts with information about a social situation, continues with processing, and ends with action taken to tackle the situation. The process consists of six steps: Coding of internal and social clues, interpretation of these clues, searching for different alternative responses, assessment of potential responses, decision making and action (Crick & Dodge, 1996).

1.3. Models of Dealing with School Violence

Studies focusing on researching this phenomenon in the Arab educational system present a rather bleak picture of its scope and a system unable to deal with it (Majadla, 2007; Tarbiya, 2000). A large number of models can be found in literature, models based on different psychological theories, the successful application thereof depending on the rate of its suitability to the social-cultural environment in which it is implemented. Impressive success is reported of this therapeutic model in one environment, at the same time with failures in others (Swan, 2002).

Among the proposed models we can find the model of focused intervention to create school ambience (Stephens, 1994). Here the school team works together with the students, initiating interesting daily activities for after-school hours. Another approach proposes dealing with violent children by behavioral-cognitive methods intended originally for parents (Patterson & Chamberlain, 1994). A third approach proposes integrative intervention, combining parent and child therapy (Miller & Prinz, 1990), emphasizing the bettering of negative familial interaction and imparting skills to parents and children as a therapy method. Dynamic and humanistic approaches were also developed to deal with violent children, focusing on internal and inter-personal processes experienced by individuals during the therapeutic process (Limniou & Whitehead, 2010; Schechtman, 1998).

The present study made use of the behavioral-cognitive model with adolescents defined as children of violent behavior. We chose this model due to its cultural suitability to the Arab sector. This model contains a psycho-educational approach emphasizing clear limits, rules of conditioning, alternative thinking – all elements corresponding with common elements of the Arab-Islamic tradition, as suggested by numerous popular proverbs and Koran verses, emphasizing these elements. In addition, there is an economic advantage related to the model, regarding the number of proposed sessions. The cognitive-behavioral approach in therapy assumes that violent behavior, just like any other one, is acquired by environmental reinforcements, in addition to being a result of cognitive distortions and lack of social skills required for effective social communication, problem solving techniques and self-control (Mayers, 1991).

1.4. Cognitive-behavioral Intervention

The proposed model, as mentioned above, is based on applying the principles of the cognitive-behavioral approach in therapy. Many studies indicated the effectiveness of this approach in dealing with school violence. A study conducted among adolescents indicated the effectiveness of cognitive-behavioral therapy in significantly reducing the levels of hyperactivity, impulsivity and aggression, as compared to the control group (Robinson, Miller & Brownell, 1999). Intervention programs, based on applying cognitive and behavioral strategies in order to increase the level of self control, problem solving, social skills and anger management, indicated positive effect in

In the present study we have emphasized the implementation of the following elements: Functional analysis of behavior – intended to establish the early stimuli and the results of such behavior – in order to assist the participants in determining the environmental conditions in which behaviors occur and which environmental reinforcements strengthen and preserve them. Based on this analysis we can suggest further alternative behaviors (La Vigna & Donnella, 1986; Mayer, 2002; Koegel et al., 1996; Sulzer et al., 1994).

With regard to cognitive techniques, several cognitive skills were used with considerable success in practical application. Among them was the identification of charged automatic thoughts, which could lead to violence, as well as development of ways for alternative thinking. These skills are considered to be the cornerstone of every cognitive-behavioral intervention in school violence (Cirillo et al., 1998). A study attempting to examine the effectiveness of rational emotive behavioral therapy (REBT) in dealing with disciplinary problems among adolescents and children, indicated impressive success in a model based on creating awareness to automatic thoughts and developing alternative thoughts (Shwery, 2004).

There was also an emphasis on applying the method of problem solving (Bloomquist, 1996; Braswell & Bloomquist, 1991; Kendell & Braswel, 1993; Weisbrod, 2007; Kazdin et al., 1989).

This method is based on ramifying thinking, thinking about results, understanding the link between means and target, planning the performance of solutions and the ability to see things from another child’s point of view. Several studies pointed out a significant effect of the problem solving method in reducing school violence (Dwyer & Osher, 2000; D’Zurilla & Nezu, 1999; Jarvinen, 2000; Larson, Smith & Furlong, 2003).

Other emphasized skills were related to anger control and self-control in dealing with aggression (Bloomquist, 1996, 1992; Feindler, 1990; Lochman et al., 1991; Ronen, 2004, 2005; Ronen & Rosenbaum, 2009).

According to this method the focus is more on command and control of emotional excitement, caused by events perceived as provocative. The method is based on the idea that regulation and control of emotional-physiological excitement levels will prevent escalation and extreme emotional, behavioral reactions.

In literature there are reports of effective use of cognitive-behavioral techniques for anger management in violent students and focusing on developing skills of anger control (Novaco, Ramm & Black, 2001), in addition to developing alternative strategies of managing and expressing anger, at the same time using relaxation exercise, various social skills, preserving schemes, anger and cognitive structuring (Howells, 1998; Novaco et al., 2001). Cognitive-behavioral therapy has proved to be effective in reducing anger levels in adolescents with conduct disorders (CD) (Dykeman, 2000) and in reducing anger levels in violent adolescents (Larson & Lochman, 2005). It should be noted that the proposed model is rather pioneering in dealing with school violence in the Arab sector, since it combines cognitive and behavioral techniques. Reading the new literature about intervention programs in school violence (Bierman, 2007; Wilson, Lipsey & Derzon, 2003) one can see that effective interventions in this area are supposed to focus on developing social and cognitive skills of self-control - including anger control skills, alternative thinking and distraction – for anger and aggression management.

1.5. Hypotheses

- There are statistically significant differences between the two groups regarding the colleagues’ assessment, in favor of the control group, which is more violent.
- There are statistically significant differences between the two groups, regarding self-report – in favor of the control group, which will be more violent.
- There are statistically significant differences between the two groups, regarding the teachers’ assessment – in favor of the control group, which will be more violent.

2. Method

2.1. Participants

The study population was chosen from 7th – 9th grade students in five schools in the North of Israel, by the Achenbach questionnaire (1991). After initial screening, 100 students were located and defined as violent children (with high grades in the questionnaire). Twenty students were chosen from each school and divided randomly into experiment and control groups – ten for experiment and another ten for control. The choice of small groups resulted
from the argument that effective intervention should be done in small groups, so as to nurture and develop social
skills (Bierman, 2007; Eppel, 2007). Third year Education students, specializing in special education, were chosen
to carry out the program, after having had a training course on cognitive-behavioral dealing with violence.

Table 1: Students’ distribution by demographic variables

<table>
<thead>
<tr>
<th>Group</th>
<th>Variable</th>
<th>Categories</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gender</td>
<td>Male</td>
<td>40</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Control Group</td>
<td>Grade</td>
<td>Grade 7</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grade 8</td>
<td>17</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grade 9</td>
<td>19</td>
<td>38</td>
</tr>
<tr>
<td>Experimental Group</td>
<td>Gender</td>
<td>Male</td>
<td>45</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Grade</td>
<td>Grade 7</td>
<td>19</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grade 8</td>
<td>16</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grade 9</td>
<td>15</td>
<td>30</td>
</tr>
</tbody>
</table>

2.2. Tools of the study

2.2.1. Aggressive behavior – colleagues’ assessment:

This tool is based on assessments given by all students to every one of their classmates. It is a rather common
method to assess aggression (Schechtman, 1997). The study used ten aggressive behaviors – both physical and
verbal (Schechtman, 1998), with the participants noting the name of the children matching each such behavior:
Hitting others when hurt, frequently initiating fights, pushing others standing in their way, taking things from others
by force, cruelty to animals, insulting and teasing, destroying other children’s things, bursting out in anger and
acting thoughtlessly, often threatening others, fighting frequently with other children. Each individual’s mark is
based on the number of times their name is mentioned or chosen by their colleagues in various categories. The
questionnaire was handed out to students, both of the experiment group and the control group, before and after
intervention. The present study calculated the internal consistency index, which proved to be high and significant
(Cronbach Alfa) (r = 0.78).

2.2.2. Assessing the aggression level by CBCL

We used a self report questionnaire for children about their behavioral problems, intended for children aged 4-18
(Achenbach & Adelbrock, 1991). It consists of a scale of social skills (46 items), plus 113 items relating to
behavioral problems. The components of the questionnaire relating to problems of behavior are divided into eight
scales (the level of reliability as per Schechtman (1997) is noted: Introversion 0.44, somatic problems 0.63,
anxiety/depression 0.69, social problems 0.68, thinking problems 0.71, delinquency 0.47, concentration/attention
0.73, and aggressive behavior 0.84). For the present study the internal consistency index (Cronbach Alfa) was
calculated and proved to be both high and significant
(r = 0.75). The answers were given on a scale of 0-2, with (0) = ‘untrue’, (1) = true sometime or somewhat, and (2)
= very true or often true. We made use only of the part comprising of 113 questions relating to behavior problems.

2.2.3. Assessing the aggression level by Teacher’s Report Form (TRF):

A questionnaire about behavioral problems of children, as identified by teachers, for children aged 4-18
(Achenbach, 1991) consisting of a scale of social skills (46 items) plus 108 items relating to behavior problems. The
components of the questionnaire relating to behavior problems are divided into eight scales, identical to those in the
self-reported children’s questionnaire. Internal reliability was high (r = .97), and the internal consistency index was
high and significant (Cronbach Alfa) (r = 0.81; p<0.01). The answers were given on a scale of 0 – 2, as in the
previous questionnaire, and we made use only of the part consisting of 108 questions relating to behavior problems.
2.2.4. Procedure

Ten 3rd year students, majoring in special education, conducted the sessions with the different groups of students. They have, all, completed a 56 hours training course – of weekly sessions, including experiencing with real cases - about cognitive-behavioral therapy for behavior problems, learning about the basics of cognitive-behavioral intervention, making an intervention program, teaching self control, problem solving, anger management and alternative thinking. They were randomly divided into five experiment groups, two students for each. Prior to the sessions they had a meeting with the parents, obtaining their consent for the children’s participation in the program. Regarding the control group – these students remained in their classes with no intervention, except filling out the relevant questionnaires, before and after the intervention.

Before the beginning of the sessions, all the students were asked to fill out the following questionnaires: Aggressive behavior – assessment by colleagues and self-report (Achenbach).

The home class teachers, as mentioned above, were asked to fill out the teachers’ Achenbach questionnaire for all the students in both groups - experiment and control. The marks of these questionnaires – which were filled out again at the end of the program - served as pretests. In addition, the following indexes were examined: Percentage of attendance in the sessions and performing homework of the experiment group. The program consisted of 15 sessions, of 90 minutes each, with each session starting with revision of the previous session’s homework, followed by new issues, and ending with homework for the next week.

3. Findings and Discussion

Results for the first assumption: There are statistically significant differences between the two groups, regarding colleagues’ assessment – in favor of the experiment group. Ancova variance analysis was done, indicating statistically significant differences between the two groups, in favor of the control group (F=9.21; p<0.01). The experiment group (M=7.87; SD=2.11) and the control group (M=14.67; SD=5.32), i.e. there was an improvement in colleague’s assessment of violent behavior of others. These findings match the findings of previous studies pointing at reduced violence in the experiment group following cognitive-behavioral therapy (Dwyer & Osher, 2000; Dwyer & Jimerson, 2002; D’Zurilla & Nezu, 1999; Jarvinen, 2000; Larson, Smith & Furlong, 2003).

Results for the second assumption: There are statistically significant differences between the two groups, with regard to students’ self report – in favor of the experiment group. Ancova variance analysis indicated statistically significant differences between the two groups in most categories, in favor of the experiment group, and no statistically significant differences in categories examining somatic and introversion problems (Table 2). These findings match previous studies’ findings indicating substantial improvement in the level of violence of the experiment group following cognitive-behavioral therapy (Dwyer & Osher, 2000; Dwyer & Jimerson, 2002; D’Zurilla & Nezu, 1999; Larson, Smith & Furlong, 2003; Novaco, Ramm & Black, 2001; Ronen & Rosenbaum, 2009; Shwery, 2004).

Results for the third assumption: There are statistically significant differences between the two groups with regard to teachers’ assessment – in favor of the experiment group. Ancova variance analysis indicated statistically significant differences between the two groups in most categories, in favor of the experiment group, and no statistically significant differences in categories examining thinking problems, introversion and concentration and attention problems (Table 3).

These findings match those of previous studies indicating significant improvement in the level of violence in the experiment group, following cognitive-behavioral therapy (Bloomquist, 1996; Dykeman, 2000; D’Zurilla & Nezu, 1999; Jarvinen, 2000; Kazdin et al., 1989; Larson & Lochman, 2005; Ronen & Rosenbaum, 2009; Shwery, 2004).

### Table 2: Variance Analysis for Teachers’ Assessment of Different Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Group</th>
<th>Mean</th>
<th>S.D</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introvert</td>
<td>Experiment</td>
<td>1.02</td>
<td>0.43</td>
<td>1.13</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>1.08</td>
<td>0.54</td>
<td></td>
</tr>
<tr>
<td>Somatic problems</td>
<td>Experiment</td>
<td>1.26</td>
<td>0.68</td>
<td>0.98</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>1.31</td>
<td>0.87</td>
<td></td>
</tr>
<tr>
<td>Anxiety/Depression</td>
<td>Experiment</td>
<td>0.82</td>
<td>0.31</td>
<td><strong>10.90</strong></td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>1.41</td>
<td>0.56</td>
<td></td>
</tr>
<tr>
<td>Social problems</td>
<td>Experiment</td>
<td>0.89</td>
<td>0.41</td>
<td><strong>8.92</strong></td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>1.32</td>
<td>0.71</td>
<td></td>
</tr>
</tbody>
</table>
Calculation of means for attendance in sessions and homework was done for the experiment group, to reveal an attendance rate of 11.78 and means of homework completion of 10.87. These findings may indicate the willingness of the experiment group and its motivation during intervention to attend the sessions and learn new things, as well as doing their homework.

### Table 3: Variance Analysis for Teachers’ Assessment of Different Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Group</th>
<th>Mean</th>
<th>S.D</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introvert</td>
<td>Experiment</td>
<td>1.31</td>
<td>0.63</td>
<td>1.03</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>1.14</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td>Somatic problems</td>
<td>Experiment</td>
<td>0.90</td>
<td>0.63</td>
<td>*5.12</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>1.31</td>
<td>0.77</td>
<td></td>
</tr>
<tr>
<td>Anxiety/Depression</td>
<td>Experiment</td>
<td>0.98</td>
<td>0.61</td>
<td>*4.32</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>1.21</td>
<td>0.86</td>
<td></td>
</tr>
<tr>
<td>Social problems</td>
<td>Experiment</td>
<td>0.94</td>
<td>0.51</td>
<td>**8.41</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>1.51</td>
<td>0.79</td>
<td></td>
</tr>
<tr>
<td>Thinking problems</td>
<td>Experiment</td>
<td>1.42</td>
<td>0.51</td>
<td>1.24</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>1.53</td>
<td>0.67</td>
<td></td>
</tr>
<tr>
<td>Criminality</td>
<td>Experiment</td>
<td>0.78</td>
<td>0.56</td>
<td>**8.56</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>1.31</td>
<td>0.88</td>
<td></td>
</tr>
<tr>
<td>Attention</td>
<td>Experiment</td>
<td>1.24</td>
<td>0.73</td>
<td>0.98</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>1.36</td>
<td>0.91</td>
<td></td>
</tr>
<tr>
<td>Aggressive behaviour</td>
<td>Experiment</td>
<td>0.81</td>
<td>0.67</td>
<td>**9.89</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>1.37</td>
<td>0.97</td>
<td></td>
</tr>
</tbody>
</table>

### 5. Discussion

In the present study, we chose to deal with 7th – 9th grade adolescents, selected by means of Achenbach questionnaire, as children with high levels of violence. These adolescents were at risk of developing delinquent behavior and other risky behaviors (Tremblay & Nagin, 2005).

Our findings supported the study assumptions, which predicted the success of cognitive-behavioral intervention in improving social and cognitive skills of self control, anger management and alternative thinking. Training of these adolescents in small groups helped them learn new skills, which in turn resulted in self restraint and reduced violence, according to self reports, colleagues’ assessment and teachers’ reports. After studying all these parameters of violent conduct, we can confirm the reduced level of violence in the experiment group, as compared to the control group.

According to colleagues’ assessment and self reports, violence was reduced significantly – a finding matching previous findings indicating the effectiveness of cognitive-behavioral approach in reducing levels of violence.

As per teachers’ reports, violence has been reduced in several categories – mainly those directly observed, such as aggressive behavior, delinquency and social problems – and less in categories examining less evident behavior. These results can be explained by the fact that teachers, in filling out the questionnaire, apparently focused on directly observable, salient behaviors, and less on invisible conducts, which, requiring proximity and close contact with students, cannot be noticed by every teacher. It is also corroborated by students’ reports during sessions, about bad, charged relations with teachers. No wonder, then, that the teachers did not notice the changes in all categories.
In addition - the unawareness of some of the teachers to psychological therapy and the gradualness of such therapy created high expectations for instant changes in all categories.

The findings of the present intervention program match previous ones, which focused on developing cognitive-behavioral skills (Goldstein & Glick, 1987; Lochman & Wells, 2004; Robinson et al., 1999; Ronen & Rosenbaum, 2009).

It is important to note that the program was based on group intervention, so the students managed to apply instantly the methods studied in the group with violent colleagues. In spite of difficulties in applying group intervention on this subject, there is some added value in group intervention to deal with adolescents’ aggression in order to develop their positive behavioral repertoire through group application of new skills (Martsch, 2005).

The findings also emphasize the importance of developing cognitive, behavioral, and social skills of self control, anger management and alternative thinking, whilst coping with internal and social stimuli which may lead to violent conduct. These findings make yet other evidence - that violent behavior can be dealt with by cognitive change and learning of alternative behavior, before we start looking for ways of enforcement and punishment.

The conclusion reached here corroborates previous assumptions on the issue that violent children are children who have not acquired cognitive and behavioral skills due to a variety of reasons. By training these children in alternative skills, their violent behavior may be reduced and at the same time they can develop adaptive behavior to help them in their social integration.

As mentioned above, the findings of this study indicated the effectiveness of the intervention model studied here, in reducing violent behavior among Arab adolescents. These findings can present an appropriate alternative to deal with violent behavior at school, together with adopting the model, the development there of, and the examination of its applicability to larger groups.

In spite of the substantial improvement in most categories studied – which may indicate the effectiveness of intervention – we should point out several points which might have affected the effectiveness of intervention.

Some serious difficulties were observed in recruiting contact persons at school to take care of the students’ attendance in sessions, in addition to only partial cooperation on their teachers’ side, regarding their role. Another problem was the fact that the participants had to stay behind after school hours, while all their colleagues left for home.

Another important point of this context was that the program was executed by students, and not by qualified teachers. It was their first experience in practical therapy program, which caused some problems, in spite of continuous guidance.

Another issue, brought up during the sessions with students, was the distinctive need for more comprehensive work, which will include teachers, as well as parents.

In addition to the above mentioned points, the participants brought up the need for more than 15 sessions. The initial choice of this number resulted from the fear of partial cooperation on both the educational system’s and students’ side. Yet, maybe there is room for further sessions and a broader expansion of sessions to assure more thorough and meaningful changes, together with proper practice of the skills taught in them.

It is important to point out that the study was done for a population of adolescents, who are going through accelerated processes of change, characterized by significant fluctuations of psychological elements from time to time, which may explain some of the results received.

Another methodological limitation was the study being typical of quantitative studies based on self report, using self reporting questionnaires for both teachers and students.

This study is a pioneer in the subject of research of this population, and the lack of similar previous studies made it difficult for the researcher to compare to standards used by other studies. Thus the need arises for further future studies to follow up the changes in students behavior, in the short and long term, and examine the extent to which these findings may be applied for different populations.

This program does not replace other programs emphasizing the development of school climate of limits, and enforcement of rules. It comes in addition to existing programs, yet with an emphasis on the importance of developing different cognitive-behavioral skills for students.

To sum up, the findings of the study supported in general the assumptions predicting the effectiveness of the cognitive-behavioral approach for developing violence among Arab adolescents. Most of the findings matched previous findings on the issue. Yet, there is a need for further studies, able to test this model in this population and examine the rate of its suitability in the short and long term.
References


