Turini Bolsoni-Silva, Alessandra; Marturano, Edna Maria
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Evaluation of Group Intervention for Mothers/Caretakers of Kindergarten Children with Externalizing Behavioral Problems

Alessandra Turini Bolsoni-Silva
Paulista State University, Bauru, Brazil

Edna Maria Marturano
University of São Paulo, Ribeirão Preto, Brazil

Abstract

Negative parental practices may influence the onset and maintenance of externalizing behavior problems, and positive parenting seem to improve children’s social skills and reduce behavior problems. The objective of the present study was to describe the effects of an intervention designed to foster parents’ social skills related to upbringing practices in order to reduce externalizing problems in children aged 4 to 6 years. Thirteen mothers and two caretaker grandmothers took part in the study with an average of four participants per group. To assess intervention effects, we used a repeated measure design with control, pre, and post intervention assessments. Instruments used were: (a) An interview schedule that evaluates the social interactions between parents and children functionally, considering each pair of child’s and parent’s behaviors as context for one another; (b) A Social Skills Inventory; (c) Child Behavior Checklist – CBCL. Intervention was effective in improving parent general social skills, decreasing negative parental practices and decreasing child behavior problems.

Keywords: Parenting; Behavior problems; Prevention; Child development.

Several intervention programs have been developed to help parents improve their relationship with their children and overcome difficulties bringing them up (e.g. Brestan, Jacobs, Rayfield, & Eyberg, 1999; Ruma, Burke, & Thompson, 1996; Webster-Stratton, 1994). Such difficulties are usually related to child behavior problems such as aggressiveness and noncompliance (Patterson et al., 2002). Behavior problems seem to be multi-determined, that is, they hardly occur because of only one variable and they tend to occur more often when there are more risk factors combined and/or accumulated (Patterson et al., 2002).

Parental practices are among the variables that may influence the onset or maintenance of externalizing behavior problems. Parental inconsistent discipline, little positive interaction, little monitoring and insufficient supervision of children’s activities have been found to strengthen children’s behavior problems (Patterson et al., 2002). On the other hand, positive parenting practices in communication, expression of feelings and coping, and limit setting, seem to improve children’s social skills and reduce behavior problems (Webster-
On the same grounds, recent studies have demonstrated relationships between parents' social skills and their children's behavior (Bolsoni-Silva & Marturano, 2007; Brestan et al., 1999; Jouriles et al., 2001; Sanders, Markie-Dadds, Tully, & Bor, 2000).

So, it seems that skills put into action to set limits (for example saying no, establishing rules, requesting behavior change, etc) are important to assess the onset and/or maintenance of behavior problems; on the other hand, there are other skills that seem relevant too, such as, adequately expressing feelings and opinions (Sanders et al., 2000), asking questions (Webster-Stratton, 1994), consistency in positive parental practice and agreement between parents (Lundahl, Risser, & Lovejoy, 2006) regarding the form of bringing up their children. Therefore, we propose that intervention programs aiming at reducing children's behavior problems by means of helping parents and caretakers with their upbringing practices should focus on training them use those skills.

Kindergarten children with externalizing behavior problems are the target population of the present study. There is wide literature regarding the assessment of the efficiency of intervention procedures with that population (e.g. Brestan et al., 1999; Cobham, Dadds, & Spence, 1998; Peterson, Tremblay, Ewigman, & Saldana, 2003; Ruma et al., 1996; Sanders et al., 2000; Taylor, Schmidt, Pepler, & Hodgins, 1998; Webster-Stratton, 1994). Skills that have been the focus of parent training include communication (Jouriles et al., 2001; Ruma et al., 1996; Sanders et al., 2000; Webster-Stratton, 1994), expression of feelings and coping (Cobham et al., 1998; Jouriles et al., 2001; Ruma et al., 1996; Sanders et al., 2000; Taylor et al., 1998; Webster-Stratton, 1994) and limit setting (Jouriles et al., 2001; Lundahl et al., 2006; Ruma et al., 1996; Sanders et al., 2000; Serketich & Dumas, 1996; Webster-Stratton, 1994).

The programs assessed in these studies succeeded in: (a) improving positive parent practices, concurrent with a reduction of children's externalizing behavior problems (Peterson et al., 2003; Ruma et al., 1996; Webster-Stratton, 1994); (b) reducing inadequate limit setting, concurrent with a reduction of externalizing problems (Marinho, 1999; McMahon, 1996; Sanders et al., 2000).

To date, there are many reviews concerning parent interventions to overcome child behavior problems. We conducted a review of empirical research between 1986 and 2006 and have: (a) parental behavioral training, specially based in behavior change techniques (Chronis, Chacko, Fabiano, Wymbs, & Pelham, 2004; Lundahl et al., 2006; Maughan, Chris-tiansen, Jenson, Olympia, & Clark, 2005; Morawska & Sanders, 2005; Serketich & Dumas, 1996); (b) treatments for attention-deficit hyperactivity disorder (Farmer, Compton, Burns, & Robertson, 2002; McGoe, Kara, Eckert, & DuPaul, 2002; Purdie, Hattie, & Carroll, 2002; Serketich & Dumas, 1996). Additionally, there are reviews with a focus on therapeutic adhesion (Reyno & McGrath, 2006), on the role of the father in intervention procedures (Tiano & McNeil, 2005), or on the correspondence between verbal and nonverbal behaviors of parents who participated in intervention procedures (Paniagua, 2004). Some reviewed articles techniques: behavioral x non-behavioral (Lundahl et al., 2006), behavioral x cognitive x social (Purdie et al., 2002), pharmacological x parents training x behavior change (Beaudin, Dumas, & Verlaan, 1995; McGoe et al., 2002; Page, Poertner, & Lindbloom, 1995). However, authors found few studies focused on the prevention of externalizing problems using both parent training and interpersonal skills training (Allen, Aber, & Leadbeater, 1990; Taylor, Eddy, & Biglan, 1999).

Based on these considerations, the present article aimed at describing the effects on parents' and children's behavior of an intervention designed to foster parents' positive practices as well as reduce inadequate parenting practices.

**Method**

**Design**

We evaluated the effects of the intervention by means of a repeated measure design (Cozby, 2003) with control, pre, and post test comparisons. The control measure was used in an attempt to control variables such as time elapsed and application of instruments. As the intervention extended through two months, the control evaluation occurred two months before the beginning of the pretest evaluation, which in turn occurred in the week that preceded the intervention. The post test evaluation took place in the week that followed the intervention.

**Participants**

Thirteen mothers and 2 caretaker grandmothers of children four- to six- year old took part in the study. The children attended kindergarten in two public schools located in a Brazilian southwest city. All of them had a CBCL classification of externalizing problems in clinical or borderline level ok, present in at least one of two assessments performed, either in control evaluation or pretest evaluation. In this project, 15 children were involved – ten boys and five girls.

Participants’ age ranged from 20 to over 50 (mean = 45 years old). Schooling ranged from incomplete elementary school to college degree (mean = 5 years). Most participants were married (n = 12). Nine reported they were “housewives” as occupation, three were employed, and three were unemployed. Family income
was low for the majority of the sample (mean = 522,00 dollars).

Instruments

For control, pre, and post intervention measures, we used: (a) An interview schedule that evaluates the social interactions established between parents and children functionally, considering each pair of child’s and parent’s behaviors as context for one another (Bolsoni-Silva, 2008), by means of 70 questions. Questions are organized into 12 modules, in such a way that the answer to the first question determines the next question as in a decision tree. For instance, the mother is asked if there are limits to her child. When she answers yes, then, the behavior frequency is investigated. After that, the mother answers this question: “How do you set limits to your child?”, in other words, which behaviors do you use to get this goal? She can answer: I talk, I beat, I shout, I ground, etc. In the same module, the mother is asked how she feels about setting limits those ways and how her child behaves in those times. The replies to this last question may be – he/she obeys, becomes shy or aggressive, exposes his/her own viewpoint, explain himself/herself.

Each module provides information about five variables related to parent-child interactions: positive parenting practices, negative parenting practices, child behavior problems, child social skills, and context variables. Answers to parent practices questions are quoted as positive or negative; answers to child behavior questions are quoted as problem behavior or social skill. Bolsoni-Silva and Marturano (2007) report high internal consistency for the instrument (Chronbach’s alpha = 0.83) as well as sensitivity to discriminate between parents who search for psychological help for their children in clinical settings and parents from community samples. (b) Inventory of Social Skills (ISS), Del Prette & Del Prette, 2001) which investigates adult general social skills. The instrument was validated for undergraduates. (c) CBCL (Child Behavior Checklist) for parents of children and adolescents (4 to 18 years), which assesses child behavior problems in three scales: internalizing, externalizing, and total problems (Achenbach & Rescorla, 2001). By means of the ASEBA software, raw scores are converted into T scores which allow classifying the child’s behavior problems as clinical, borderline, or normal.

Procedures for Data Collection

The first author explained the research to parents during meetings at the schools. This way of displaying information assured the ethical requirements for the study.

After approval from the Education Secretariat of the City, researchers visited three schools for recruitment of participants. The school principals called parents or caretakers for one meeting, scheduled in two time periods, morning and afternoon. The first author conducted the meetings, in which occasion she invited parents to take part in the study. The parents who agreed signed the informed consent according to the Resolution of the National Health Council # 196/96.

The parents who signed the informed consent answered all the instruments twice before intervention, two months apart. From the 18 parents who agreed to participate, fifteen met the criterion of a clinical or borderline classification of child’s behavior in the CBCL Externalizing Scale, at least in one out of the two assessments. These parents went on with the research procedures, while the other three were excluded and followed the intervention in separate occasions.

After intervention, the participants answered the assessment instruments again.

Characterization of Intervention

Mothers and caretakers followed the intervention in small groups with three participants on average. Each group received fourteen intervention sessions, which occurred twice a week, lasting from one hour and a half to two hours each. The first author conducted the intervention program.

Based on the assessments done before intervention, we settled individualized intervention objectives that guided the intervention on a session-by-session basis. Participants received an informative handout (Bolsoni-Silva, Marturano, & Silveira, 2006) that was used during intervention; these contents were paraphrased to enable full comprehension.

Table 1 shows the main themes focused during each intervention session. Each theme was treated mainly, but not exclusively, during the corresponding session. In practice, the same themes were inevitably worked in several sessions, because they were pre-requirements for more complex skills. For example, when we discussed on how to set limits, almost all issues dealt with up to that moment were resumed. We must remember that all issues were treated together with the difficulties found by participants in their everyday life.

Treatment Procedures and Data Analysis

Treatment and data analysis had as a final goal to compare control, pre and post intervention assessments for each of the used instruments. For that aim, we organized the data derived from the open questions of the Interview of Social Skills Related to Parenting Practices into six categories: (a) social skills related to positive parental practices – parent behaviors that start and/or maintain communication, expression of feelings and opinions, limit setting, and problem solving; (b) negative parental practices – coercive and/or permissive
Table 1
Description of Sessions and Themes Discussed

<table>
<thead>
<tr>
<th>Sessions</th>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session 1</td>
<td>Communication: Start and keep conversations</td>
</tr>
<tr>
<td>Session 2</td>
<td>Communication: Ask and answering questions</td>
</tr>
<tr>
<td>Session 3</td>
<td>Expressing positive feelings, paying compliments, giving and receiving positive feedback, thanking</td>
</tr>
<tr>
<td>Session 4</td>
<td>Knowing basic human rights</td>
</tr>
<tr>
<td>Session 5</td>
<td>Expressing opinions (agreeing, disagreeing), listening to opinions (agreeing, disagreeing)</td>
</tr>
<tr>
<td>Session 6</td>
<td>Knowing the difference between prosocial and antisocial active behavior and passive antisocial behavior</td>
</tr>
<tr>
<td>Session 7</td>
<td>Expressing negative feelings, giving and receiving negative feedback</td>
</tr>
<tr>
<td>Session 8</td>
<td>Making and refusing requests</td>
</tr>
<tr>
<td>Session 9</td>
<td>Dealing with critics (criticizing and being criticized), admitting their own mistakes, apologizing</td>
</tr>
<tr>
<td>Session 10</td>
<td>Setting limits: Consistency in the way fathers and mothers interact with children</td>
</tr>
<tr>
<td>Session 11</td>
<td>Setting limits: Parents’ attitudes hindering setting limits to children</td>
</tr>
<tr>
<td>Session 12</td>
<td>Setting limits: Setting limits: ignoring problem behaviors; give benefits to prosocial behaviors, giving attention; showing affection</td>
</tr>
<tr>
<td>Session 13</td>
<td>Setting limits: requesting behavior change, set rules, give consequences to rules, negotiating</td>
</tr>
<tr>
<td>Session 14 (*)</td>
<td>Free theme: for example “The influence of marital relationship in the interaction with children”</td>
</tr>
</tbody>
</table>

Note. (*) Session 14 was used to work with a theme that was interesting for the group or to discuss further/complement themes dealt with in other meetings.

parent behaviors in limit setting; (c) child social skills – child’s adequate communication, expression of feelings and opinions, and problem solving behaviors during parent-child interactions; (d) child internalizing behaviors – withdrawn, depressed mood, anxiety, and somatic complaints (Achenbach & Edelbrock, 1979); (d) child externalizing behaviors – child’s impulsive, aggressive, hyperactive, defiant and anti-social behaviors (Achenbach & Edelbrock, 1979); (e) context variables – variables related to the occasions in which parent’s and child’s behaviors take place.

For statistical analysis, we converted the CBCL scores into T scores. We also computed raw frequencies of parent and child behaviors in each of the four categories derived from the content analysis of the reports of the Interview of Social Skills Related to Parenting Practices. We compared measures in pairs: control x pre-intervention and pre x post-intervention, by means of Wilcoxon matched-pairs signed-ranks test. Analyses were processed in the SPSS v. 12.0 software.

Results

Table 2 presents the means of scores from the three instruments in control, pre-, and post-intervention assessments. The Wilcoxon test detected no variation between control and pre-intervention assessments, except for child social skills and behavior problems assessed by the interview. The comparisons between pre- and post-intervention assessments showed some variations in the expected direction.

Table 2
Means of Child and Parent Variables in Control, Pre-Intervention and Post-Intervention Assessments

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child – CBCL Internalizing behavior</td>
<td>56.87</td>
<td>55.80</td>
<td>52.60</td>
</tr>
<tr>
<td>Child – CBCL Externalizing behavior</td>
<td>53.53</td>
<td>47.20</td>
<td>32.22</td>
</tr>
<tr>
<td>Child – CBCL Total problem</td>
<td>63.73</td>
<td>61.33</td>
<td>53.60</td>
</tr>
<tr>
<td>Child – Interview Social Skills</td>
<td>6.33</td>
<td>4.53</td>
<td>5.60</td>
</tr>
<tr>
<td>Child – Interview Behavior Problems</td>
<td>3.40</td>
<td>3.47</td>
<td>1.27</td>
</tr>
<tr>
<td>Parent – Interview Negative Parental Practices</td>
<td>2.20</td>
<td>1.87</td>
<td>0.73</td>
</tr>
<tr>
<td>Parent – ISS Social Skills</td>
<td>80.13</td>
<td>77.60</td>
<td>88.40</td>
</tr>
</tbody>
</table>

Note. Means with different subscripts differ significantly at p < .05 by the Wilcoxon matched-pairs signed-ranks test.
After the intervention, child behavior problems dropped (CBCL externalizing, CBCL total, and interview), as well as negative parental practices; parent social skills improved. There was no variation in the measures of child internalizing behaviors and positive parenting practices. With respect to parenting practices, it is important to note that in all of the three evaluations, the averages of positive parenting practices are much higher than those of negative practices.

Table 3 shows the CBCL clinical classification of children in the three assessments. The number of children with a borderline/clinical status declined from the pre-test to the post-test, mainly in the externalizing and in the total problem scale.

### Table 3

<table>
<thead>
<tr>
<th>CBCL Scale</th>
<th>Control</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borderline / clinical status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internalizing</td>
<td>7</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Externalizing</td>
<td>13</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Total problem</td>
<td>10</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Clinical status improves from borderline / clinical to normal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internalizing</td>
<td></td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Externalizing</td>
<td></td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Total problem</td>
<td></td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Clinical status worsens from normal to borderline / clinical</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internalizing</td>
<td></td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Externalizing</td>
<td></td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Total problem</td>
<td></td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Although one child worsened from pre- to post-test in the internalizing scale, individual results showed that all 15 children improved their classification in the post-test, at least in one of the three scales.

Discussion

This study aimed at describing the effects on parents’ and children’s behavior of an intervention designed to foster parents’ positive practices as well as reduce inadequate practices. Having a 4 to 6 years old child with a borderline or clinical classification in the externalizing CBCL scale, in at least one out of two successive assessments, was the main criterion to participate in the study. The ultimate goal of the intervention was to reduce children’s externalizing problems. The results showed that it was effective in decreasing child externalizing behavior problems, reducing negative parental practices, and increasing parents’ general social skills.

On the other hand, positive practices did not improve. The data suggest that the caretakers had already a repertoire of positive practices before the intervention, as the averages found in the control and the pre-intervention tests were similar to those obtained from samples of mothers of kindergarteners without behavior problems (Bolsoni-Silva, Salina-Brandão, Versuti-Stoque, & Rosin-Pinola, 2008). These results indicate that the participant had positives repertoires (Kanfer & Saslow, 1969) but probably they were not adjusting their practices to children’s behavior in an optimal functional way.

After the intervention, the negative practices dropped significantly, thus suggesting that the intervention prompted the mothers to act more functionally with respect to children’s bad behavior. As the mothers had already a repertoire of positive practices, it is possible that they began to apply such practices to set limits appropriately, thus reducing coercive ways to do that. The intervention program strongly stimulated the participants to substitute positive practices for coercive ones in limit setting.

The significant dropping of both negative parent practices and child externalizing behaviors suggest a breakdown of coercive cycles (Patterson et al., 2002). Improved caretakers’ behaviors could help reducing externalizing behavioral problems in children, such as noncompliance and aggressiveness, which is in agreement with the field literature (Webster-Stratton, 1994). Outcomes are in agreement with those from Patterson et al. (2002) who pointed out that behavioral problems occur due to lack of monitoring, limits, consistency, and effective consequences for both good and bad behaviors. Outcomes obtained are in agreement with those from previous studies indicating that parents of socially skilled preschoolers referred more frequently positive parenting
practices while communicating with their children, limit setting, and expressing feelings, when compared with parents of less skilled children who displayed problem behaviors at school (Bolsoni-Silva & Del Prete, 2002; Bolsoni-Silva & Marturano, 2007; Bolsoni-Silva et al., 2006; Cia, Pamplin, & Del Prete, 2006).

In the literature, some authors also mention the need for fostering positive relationship and social competence of children – quality time, talking with children, physical affection (Jouriles et al., 2001; Sanders et al., 2000), as well as listening carefully to them (Brestan et al., 1999). Webster-Stratton (1994) states that there are few studies concerned with fostering social competence in children and relatives.

The improvement of child behaviors was specific for externalizing problems. Children did not change internalizing problems after intervention, which was not expected, as the intervention was designed to help parents deal with externalizing behaviors. That is, the intervention was effective in relation to the aims it was designed for.

The study has some limitations. First, it used reports to measure parent and child behaviors, which may not correspond to what participants and their children really do; future studies including observation may minimize this limitation. Second, only some variables have been controlled referring to behavioral problems, social economic level of participants, class of behavior problem, and age of children; further studies could attempt to control a greater number of variables. Finally, it is important to mention the difficulties in obtaining the sample. One reason for that may be because we searched for participants among people who had not looked for care before, even though they presented interpersonal difficulties. As we worked with a small sample, results must be seen as only tentative.

On the other hand, the study has as strong points: (a) assessment with multiple evaluation instruments, which enables investigating different and complementary aspects; such a procedure favors more precise diagnoses and the definition of individual treatment goals as well as those for the group; (b) the use of control, pre, and post test evaluations, whose design is rare; some authors compared different control and experimental groups (Dishion & Andrews, 1995; Jouriles et al., 2001; Peterson et al., 2003; Sanders et al., 2000); (c) a focus on fostering prosocial behaviors rather than eliminating problems, which is a recommended procedure (Cobham et al., 1998; Jouriles et al., 2001; Sanders et al., 2000; Taylor et al., 1998; Webster-Stratton, 1994).

It is important to verify the maintenance of the intervention effects, by means of follow-up designs with greater samples. It would be desirable also to explore, by means of in-depth case studies, the characteristics of cases in which behavior problems persist in a clinical level, contrasting with those which show a clinically significant improvement after intervention. A related question is if the intervention effectiveness could be heightened with variations in procedures, such as adding a series of post-intervention booster sessions, or combining family and school intervention.

References


EVALUATION OF GROUP INTERVENTION FOR MOTHERS/CARETAKERS OF KINDERGARTEN CHILDREN


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Alessandra Turini Bolsoni-Silva. Paulista State University, Bauru, Brazil.

Edna Maria Marturano. University of São Paulo, Ribeirão Preto, Brazil.