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ABSTRACT

Secondary prevention programs for aggressive children should be based on research about processes which mediate children's expression of aggressive behavior. The relative importance of perceived competence, self-esteem, and social problem solving processes was investigated in 20 aggressive and 18 non-aggressive fourth and fifth grade boys. Teacher ratings on the Aggression subscale of the Missouri Children's Behavior Checklist and blind ratings made by independent observers of the boys' classroom behavior revealed significant behavioral differences between the two groups. The boys completed the Perceived Competence Scale for Children (PCSC) and the Problem Solving Measure for Conflict (PSM-C). The PSM-C assessed specific problem solutions that the boys considered in conflict situations with peers, teachers, and parents, and during conflicts of mild and hostile frustration. Univariate analyses indicated that, in comparison to non-aggressive boys, aggressive boys had significantly lower PCSC self-esteem, fewer verbal assertion solutions with peers, fewer verbal assertion solutions in hostile conflicts, more direct action solutions with teachers, and more direct action solutions in hostile conflicts. Discriminant analyses significantly differentiated the two groups. Problem solving interventions for aggressive boys can use these results to focus specifically on children's rates of verbal assertion and direct action solutions with different persons, on their perceived social competence, and on their self-esteem. (NRB)

Social Problem-Solving Skills and Self Esteem of Aggressive Boys

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Abstract

This study was designed to assess specific social problem-solving, perceived competence and self esteem characteristics of 20 aggressive and 18 nonaggressive boys. Significant behavioral differences existed between the groups. The new problem-solving measure provided for qualitative assessment of specific problem solutions that children consider, varying according to the content of conflict situations with peers, teachers and parents and to the level of conflict of provocation (mild and hostile frustration). In univariate analyses, aggressive children had poorer self esteem, generated fewer verbal assertion solutions in peer conflicts, and during hostile frustration, and more direct action solutions with teachers and during hostile frustration. Discriminant analyses significantly differentiated the two groups.

Social Problem-Solving skills and

Self Esteem of Aggressive Boys

Aggressive children not only create difficulties for the recipients of their aggression in their current environments, aggressive children are also at risk for emitting future aggressive behavior of greater magnitude, and are at risk for such other later difficulties as drug abuse, alcohol abuse and mental health difficulties (Achenbach, 1982; Olweus, 1979). Thus, aggressive children are in need of secondary prevention programs to reduce their aggressive reactions and their risk status. To be maximally effective, such prevention programs should be based on research about processes which mediate children's expression of aggressive behavior, including cognitive and emotional processes (Lochman, Nelson & Sims, 1981).

Prior research has indicated that aggressive children have poorer self esteem (Deluty, 1981a) and deficits in their interpersonal cognitive problem solving skills (Deluty, 1981b; Richard & Dodge, 1982). When the content of choices have been examined, aggressive children have produced more aggressive and fewer assertive alternative solutions than do nonaggressive children, although findings about the overall rates of total alternative solutions generated have been mixed (Deluty, 1981b; Richard & Dodge, 1982). However, the kinds of content categories investigated in these studies has been limited. The relative importance of perceived competence, self esteem and social problem-solving processes for aggressive children has not been investigaged. The current study will examine the latter issue, and will determine if

aggressive children have deficits in other kinds of problem-solving choices and if the deficits are primarily apparent in only certain settings, such as in conflict interactions with peers, teachers or parents, or at certain levels of conflict.

Method

Twenty aggressive boys and 18 nonaggressive boys were selected from the fourth and fifth grades at four elementary schools. The Aggressive group consisted of boys identified by their teachers as the most aggressive and disruptive boys in their clasees, with four to six boys identified at each school. The Nonaggressive group consisted of boys who were identified by teachers as not displaying aggressive difficulties. The Aggressive group had an average age of 10 years 3 months, a Verbal I.Q. of 103, and 50 percent of the subjects in this group were Black. The Nonaggressive group had an average age of 10 years 6 months, a Verbal I.Q. of 112, and 22 percent of this group was Black. Although the Nonaggressive group had a higher percentage of white children and tended to have higher Verbal I.Q. scores on the Cognitive Abilities Test, these differences were not statistically significant.

To verify that behavioral differences existed between these two groups of boys, teachers completed the Aggression subscale of the Missouri Children's Behavior Checklist (MMBC: Sines, Pauker, Sines & Owen, 1969) on the groups, and independent observers made blind ratings of the boys' classroom behavior, using the Behavior Observation Schedule for Pupils and Teachers (BOSPT;Breyer & Calchera, 1971). The BOSPT provided time-sampled ratings during two 30-minute observations of each subject, and yielded three subscores. Interrater agreement on the BOSPT was 93%. In comparison to the Nonaggressive group, the Aggressive subjects had significantly higher MCBS Aggression scores (mean of

9.1 to 0.3), $F(1, 36) = 93.66$, $p < .001$, higher rates of BOSPT Disruptive-Aggressive Off Task behavior (5.9% to 2.3%), $F(1, 36) = 5.94$, $p < .02$, higher rates of BOSPT Passive Off Task behavior (25.4% to 4.8%), $F(1, 36) = 23.25$, $p < .001$, and lower rates of BOSPT On Task behavior (68.7% to 92.9%), $F(1, 36) = 22,30$, $p < .001$. Thus, the two groups were significantly different behaviorally.

The two dependent measures consisted of the Perceived Competence Scale for Children (PCSC; Harter, 1982), and the Problem Solving Measure for Conflict (PSM-C), which was a revision of an earlier measure (Lochman, Lampron, Burch & Curry, in press). The PCSC was a self-report measure with four subscales for Cognitive Competence, Social Competence, Physical Competence and General Self Esteem. The PSM-C had six means-ends stories to which the child gave an initial solution and then provided any additional solutions he/she could. These PSM-C scores assessed the total number of alternative Solutions, number of Verbal Assertion solutions and number of Direct Action solutions. The latter two variables were part of eight content categories for solutions, but the other content categories were provided at a very low rate and could not be analyzed parametrically. Because of its hypothesized relevance to this study, the Physical Aggression content category was analyzed nonparametrically. The PSM-C provides an innovative way to assess these problem-solving variables within three settings which are important to children: Peer conflict interactions, Teacher conflict interactions and Parent conflict interactions, and across two levels of conflict (frustration and hostile provocation). Thus, the three PSM-C variables were assessed across three settings, and two levels

of conflict, yielding 15 scores. Of these variables, the scores for Verbal Assertion with parents and Verbal Assertion on hostile conflicts was significantly correlated with Verbal I.Q.

Results

The Aggressive subjects did not provide significantly more PSM-R Physical Aggression solutions as hypothesized, though they did tend to give more Physical Aggression initial solutions to Peer conflict interactions X^2 (1, $\underline{N}$ = 38) = 3.07, $p < .09$). Univariate parametric analyses between the two groups for the other PCSC and PSM-R dependent variables indicated that, in comparison to Nonaggressive subjects, Aggressive boys had significantly lower PSCS Self Esteem, F (1, 36) = 8.33, $p < .01$, fewer Verbal Assertion solutions with peers, F (1, 36) = 5.59, $p < .05$, fewer Verbal Assertions in hostile conflicts, F (1, 36) = 5.86, $p < .05$, more Direct Action soltuions with teachers. F (1, 36) = 4.56, $p < .05$; and more Direct Action in hostile conflicts, F (1, 36) = 4.85, $p < .05$.

Three stepwise discriminant analyses were computed between the two groups. The first discriminant analysis, which consisted only of PSM-C variables, generated a discriminant function with three variables and had a lambda of .69, $p < .01$, and a canonical correlation of .55. The three PSM-C variables characteristic of the Aggressive group were less Verbal Assertion with peers, more Direct Action with teachers, and fewer total Alternative Solutions in parent conflicts. This discriminant analysis correctly classified 76% of the cases. The second discriminant analysis used PCSC variables only and generated a discriminant function with four variables, had a lambda of .64, $p < .01$, and a canonical correlation of .60. The Aggressive group was characterized by

lower Self Esteem, higher Cognitive Competence, low Social Competence and higher Physical Competence. This discriminant analysis correctly classified 79% of the subjects. Finally, the third discriminant analysis used both PCSC and PSM-C variables, and generated a discriminant function with five variables, had a lambda of .64 $p < .001$, had a canonical correlation of .73, and correctly classifeid 79% of the subjects. In this analysis, discriminating variables for Aggressive subjects included lower Self Esteem, more Direct Action solutions with teachers, fewer total alternative Solutions in parent conflicts, higher perceived cognitive competence, and lower perceived social competence.

Because of the directly opposite ways in which aggressive and nonaggressive subjects tended to produce verbal assertion and direct action solutions, a difference score between the two codes was then computed. The VAS-DA scores for the three settings and the two levels of conflict were calculated by substracting the Direct Action score from the Verbal Assertion score. The two groups of subjects were significantly different on the VAS-DA scores for peer conflicts, $F (1, 36) = 4.99$, $p < .05$, for teacher conflicts, $F (1, 36) = 6.82$, $p < .05$, and for hostile conflicts, $F (1, 36) = 8.40$, $p < .01$. A final discriminant analysis was computed using these VAS-DA scores and the PCSC scores, and generated a discriminant function with five variables, and had a Wilks lambda of .51, $p < .001$, and a canonical correlation of .70. On the analysis, aggressive subjects had a lower VAS-DA score for hostile conflicts, lower self esteem, a lower VAS-DA score for teacher conflicts, higher physical competence, and lower perceived social competence. This discriminant analysis correctly classified 92% of the cases.

Discussion

The current results indicate that aggressive boys have systematic deficits in their social cognition processing and in their self esteem. When aggressive boys think about how to resolve peer conflicts, they plan to use less verbal assertion and tend to plan to use more physical aggression. In conflicts with teachers, aggressive children anticipate using primarily direct action efforts to try to handle their frustration with teacher criticism of them. Finally, in conflicts with parents, aggressive boys are less able to think of a variety of different solution to resolve the conflict. The aggressive boys use of less verbal assertion and more direct action was more prevalent in hostile provocative conflicts than in conflicts involving milder frustration. Univariate statistics indicated that the strongest social cognitive characteristics of aggressive boys was their pattern of thinking of less verbally assertive and more action oriented solution in conflict situations. This problem-solving style may mediate children's level of aggressiveness.

Boys' perceptions of their self esteem and of their competence also are related to their level of aggressiveness. Highly aggressive boys have very poor self esteem, and they also tend to perceive that they are less competent in their social interactions with peers. However, despite having nonsignificantly lower intellectual abilities than the nonaggressive boys, the aggressive boys perceived that their cognitive competence was higher than the nonaggressive boys. This surprising finding may reflect a defensive denial process.

When combined together in discriminant analysis, the problem solving,

self esteem and perceived competence variables produced even stronger discriminant functions. This suggests that considering both social cognition and self esteem yields the most useful picture of the characteristics of aggressive children, and that the social cognition processes and self esteem measures represent at least partially independent variables. However, although the two sets of variables produced more significant discriminant function, the accuracy of the prediction of group status was only marginally improved when the two sets of variables were used. Prediction of group status was strongest when a PSM-C difference score was derived and used in the discriminant analysis.

These results expand on prior research on the self esteem and problem solving status of aggressive children by providing a more refined assessment of the significant deficit areas. Assessment of problem solving skills can be clearly improved by addressing a wider range of content of alternative solutions and by examining problem-solving skills within different types of socail settings and at different levels of conflict. Aggressive children's deficits vary in conflict situations with peers, teachers and parents, and according to the degree of hostility apparent in others' actions. These more comprehensive assessments lead more readily to formative changes in preventive and treatment interventions for aggressive boys. Thus, problem solving interventions with aggressive boys (e.g., Lochman, Nelson & Sims, 1981; Lochman, Burch, Curry & Lampron, 1984) can use these results to focus more specifically on children's rates of verbal assertion and direct action solutions with different significant others, on their perceived social competence, and on their self esteem.

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