



Emotional and
Behavioural Difficulties
© AWCEBD 2003
SAGE Publications
London, Thousand Oaks, CA
and New Delhi
vol 8(2) 120-139: 032480
1363-2752 (200305)8:2

Peer groups and behaviour problems

A study of school-based intervention for children with EBD

NADIA DESBIENS University of Montreal, Canada

EGIDE ROYER Laval University, Canada

ABSTRACT The study evaluated the effect of a programme for elementary school students with behaviour problems integrated into the regular classroom. The programme combined in-class social skills training and specific educational activities with peers, namely cooperative learning and tutoring by a prosocial peer. The innovative aspect is that the social status and affiliations of children with behaviour problems are key components in the matching of children during peer support. The goal is to improve social behaviour and to change peer perception through interventional strategies, therefore improving social reputation. Pre-test/post-test control group design was used. Results from traditional analysis indicated no significant difference between treatment and control groups after the programme. A modest effect size showed a relative improvement for students with behavioural disorders who participated in social skills training. Results are discussed in terms of the role of friends in the intervention programme.

KEYWORDS
emotional and
behavioural
difficulties;
school
intervention;
social
competency

Studies carried out in North America show that on average between 10% and 25% of students will, at some point during their studies, experience moderate or severe problems adjusting to their educational environment (Miller et al., 1998; Nafpaktitis and Perlmutter, 1998). According to public and government organizations, almost 10% of elementary and secondary school students will require special needs services to overcome behavioural and emotional problems (Day et al., 1995; Nafpaktitis and Perlmutter, 1998). However, it has been clearly demonstrated that childhood behavioural problems are very often associated with failure at school (Walker et al., 1995), antisocial behaviour (Farrington, 1995; Patterson et al., 1992),

dropping out (Stage and Quiroz, 1997), crime (Loeber and Dishion, 1983), drug use (Fergusson et al., 1995) and sexual precocity (Capaldi et al., 1996).

Lacking social skills in children with behavioural problems is a variable of critical importance to successfully integrating these children into the school environment (Desbiens et al., 1998; 2000; Royer et al., 1997; 1999). Numerous studies have demonstrated that children identified with behavioural problems do not possess the proper social skills to become accepted in school (Gresham, 1986; Kauffman, 1993) and are therefore considered 'socially incompetent' by teachers and peers alike (Gresham, 1982). It has been known for some time that children with behavioural problems are the most unpopular individuals in their class (Sabornie, 1987; Sabornie and Kauffman, 1985; Vacc, 1968; 1972). The difficulties these children encounter when trying to form relationships with others, coupled with their turbulent and aggressive behaviour in the classroom and schoolyard, create conflict with their peers and lead to rejection by their classmates (Coie et al., 1995; Zoccolillo and Huard, 1999). Rejection by their peers increases their mistrust and surliness, and exacerbates their marginalization. When attitudes and behaviour of the like persist over a number of years, they foment rejection, which in turn increases the level of marginalization and aggravates the children's behavioural problems.

Recent studies have confirmed the effect rejection plays on the social development of children with behavioural problems. Rejected by the majority of their classmates and limited in their choice of playmates, children with behavioural problems establish friendships with children of a similar disposition to themselves (Dishion et al., 1995; Farmer and Hollowell, 1994). These same studies have further confirmed that despite being the object of social rejection, the majority of children with behavioural problems do have friends (Cairns et al., 1988; Dishion et al., 1995; Farmer and Cairns, 1991; Farmer and Hollowell, 1994). These relationships are nonetheless characterized by similarly pronounced maladjusted social behaviour normally expressed as aggression. When these children are together, they encourage one other and foment antisocial behaviour (Dishion et al., 1991), which reinforces their behaviour patterns and strengthens their negative reputation with their peers (Adler et al., 1992; Desbiens et al., 1998; Farmer and Farmer, 1996). Further marginalized by their 'normal' peers, they gravitate towards groups of other 'deviant' peers where they adopt new forms of ever more frequent and serious deviant conduct (Patterson, 1993). Friendships therefore create an environment conducive to the exacerbation of their behavioural problems (Bowen et al., 2000).

This development model underscores the difficulty children with behavioural problems face when establishing and maintaining positive

relationships with peers and adults. It also explains the rapid expansion since the 1980s of in-school social skills programmes in the hope of being able to positively influence these children (Cartledge and Milburn, 1995; Golstein, 1988; Golstein et al., 1980; Meadows et al., 1991; Melloy, 1991; Royer, 1995; Stephens, 1992; Walker et al., 1988). As these programmes aim to foster social skills and reduce inappropriate behaviour, the majority of North American researchers and practitioners now consider them an integral component of any regime designed to help children with behavioural problems (Walker et al., 1995). Action focuses upon controlling one's emotions, acquiring sociocognitive skills, developing self-control strategies and resolving problems.

The effectiveness of these training programmes has been the subject of several studies (Mathur and Rutherford, 1996). On the whole, meta-analytical synthesis has demonstrated that these programmes, while promising, are of limited effect (Beelmann et al., 1994; Kavale et al., 1997; Schneider, 1992). Overall, the conceptual framework is often ill-defined and the programmes themselves rarely focus on the social validity of the skills being taught. Behaviour learned in a training situation is not generally carried over into other environments and is rarely maintained outside the classroom setting (Royer et al., 1997).

To enhance programme effectiveness, some researchers have underscored the need to involve social agents who have a considerably greater impact on these children's lives (Forness et al., 1996; Patterson et al., 1992) and recommend assessing how these social agents can reinforce skills learned as a result of these programmes. Parents are the greatest educating influence on their children, but teachers and classmates also have a significant social influence on them. Second only to the home, school provides an environment conducive to social learning, one in which children can develop and consolidate the social, emotional and sociocognitive skills they need to become socially competent (Bowen et al., 2001). Given its mission and the opportunities it affords for working on a daily basis with young people, school is the ideal environment for preventive intervention of the like. By identifying children with signs of atypical behaviour early and by developing and reinforcing the skills required to improve a child's social adjustment, school can play a key role in preventing behavioural problems (Bowen et al., 2000; Durlack, 1995). In addition, school is the one place where growing peer influence – approval, encouragement or rejection of social attitudes and behaviour – is felt in a decisive manner (Bowen et al., 2000). Indeed, peer influence can be harnessed and used when teaching preventive educational practices.

In recent years, researchers and practitioners have increasingly sought recourse with peers to improve both the quantity and the quality of social

interactions by students in difficulty. Using popular, skilled peers to identify, demonstrate and transmit specific social skills would appear to be appropriate in the circumstances (Cartledge and Milburn, 1995; Vitaro and Charest, 1988). Peers can be used as role models to guide, promote, reinforce and even initiate social interaction with children in difficulty. Studies conducted to assess the effectiveness of such procedures have, on the whole, generated positive results. However, it should be noted that workshops with peers were usually held outside the classroom, in small groups led by a remedial teacher.

Peer intervention outside social skills workshops, based on social ties between children and implying learning by observation, has also been studied. It is assumed that certain skills will be transmitted during interaction between children in difficulty and their peers. By adopting the desired social behaviour so that children in difficulty might copy and reproduce it, peers can serve as instigators of change, and reinforce previously learned skills (Odom and Strain, 1984). The involvement of peers outside formal training sessions indeed assists children in maintaining their newly acquired skills.

Other methods also enable children with behavioural difficulties to benefit from positive interaction with their classmates. Studies carried out in the field of education have demonstrated that teaching methods that enable children to organize learning at their own pace, manage problem-solving processes and learn from interaction with other students generate encouraging results from the social and educational standpoints (Bowen et al., 2000). These methods include cooperative learning, tutoring by peers, learning by project and any other teaching method that involves peer cooperation (Cohen, 1993; Slavin, 1994); all have been the subject of numerous studies designed to determine effectiveness. Generally speaking, cooperative learning and tutoring are recognized as means of enhancing support and assistance among students, fostering positive social skills and improving peer appreciation of children experiencing difficulties.

However, research designed to assess the effectiveness of peer involvement in social skills training programmes for children with behavioural difficulties has not produced very eloquent results. Some researchers have shown that problem children will continue to bear the stigma of being problem children, be less appreciated by their peers and be viewed in a negative sociometric light despite possible behavioural improvement (Bierman and Furman, 1984; Bierman et al., 1987; Lochman et al., 1983). This suggests that negative perception by peers does not relate solely to the nature of the behaviour but also to image and reputation. Moreover, notwithstanding real change in a child's behaviour, taught or otherwise, the negative perception of the child would appear to crystallize (Bowen et al., 2000; Wass, 1988).

This bias would appear to negatively impact the effectiveness of these programmes and compromise social adjustment for, as previously indicated, children in difficulty tend to establish relationships with children of a similar disposition, thereby accentuating their marginalization. These are important considerations to bear in mind when developing programmes for use in schools. If the children we work with in social skills training sessions interrelate with peers who value their deviant behaviour, newly learned social behaviour will rarely be transferred to the classroom or other environments (Desbiens et al., 1998).

Our analysis has enabled us to assess the merits of the various techniques employed to develop behavioural, cognitive and social skills in children with a view to preventing behavioural problems. If we concentrate on children at risk within the school system, we must introduce initiatives to enable them to better manage their emotions, adjust their behaviour in accordance with the demands made upon them, resolve conflict peacefully and avoid peer rejection. It is essential we intervene with these children directly in the classroom and provide techniques that will enable their classmates to support and reinforce these behavioural changes. Furthermore, if these programmes are offered in the classroom, as opposed to off-site, they will help prevent marginalization and enable teachers to intervene directly with those children who participate in the stigmatizing process.

Our objective was to assess the effectiveness of a classroom programme designed to promote social and cooperation skills in students with behavioural problems. All of these students had been placed or integrated into regular classes where the aim was to improve their behaviour and ensure better social integration into the class. The programme included social skills workshops for the entire class. Some subgroups participated in educational activities focusing on cooperative teaching to enhance interaction among children in difficulty and their socially recognized, more skilled peers. Activities were structured in such a way as to group children together according to popularity, and to make proper allowance for the characteristics and preferences of the children in difficulty. To assess the differential impact of this strategy, only some class groups applied this component.

Methodology

Subject selection and class distribution

Prior to setting up the prevention programme, six schools from a mid-socioeconomic environment in the Québec region were contacted. To participate in the study and respect the methodology, school principals had to agree to random distribution. Nine classes at the elementary Grade Three level were randomly assigned to one of the three study groups: group I,

social skills training programme; group II, social skills training programme combined with educational activities based on cooperative teaching model; group III, control group. The study group contained 212 children, comprising 110 girls and 102 boys. A quasi-experimental research plan, including control group pre-testing and post-testing, was used.

Two criteria were used to identify children with behavioural problems, namely: (1) identification by the school in its report to the Québec Ministry of Education; or (2) identification by the teacher, based on a systematic screening procedure for interiorized and exteriorized behavioural problems, adapted from the Systematic Screening for Behaviour Disorders (Walker and Severson, 1994). Of the 212 children in the study group, 54 students (21 girls and 33 boys) were identified as demonstrating behavioural problems. Written parental consent was required for the children to take part in this study; a total of 98% of parents complied.

Preventive intervention programme: characteristics

The PARC¹ programme (Potvin et al., 1988) was adapted and used to teach social skills to groups I and II in the six classes. This programme, based on the cognitive behavioural approach, aimed to reduce the incidence of disruptive behaviour by increasing children's control over their own behaviour – particularly in relation to problem solving and anger management – and by reinforcing social skills (Kendall and Braswell, 1993; Lochman et al., 1991). The programme comprised a series of activities such as role playing, positive reinforcement, modelling, shaping and cooperation. Hour-long workshops, led by graduate students, were held twice a week over a 10 week period. Sessions were integrated into the normal school schedule and offered during regular class time. Themes addressed at each meeting are shown in Table 1.

In conjunction with the social skills workshops, classes included in group II also participated in cooperative teaching educational activities with those peers recognized for their prosocial skills. A minimum of 2 hours, divided into four 30 minute sessions, was scheduled each week for these activities, which were structured to include all students based on their popularity and the preferences of the children demonstrating behavioural problems. Special attention was given to pairing children in difficulty with prosocial peers displaying similar characteristics such as interests, sports or friends in common. Since this teaching method is based on a number of basic principles that must be properly applied, all teachers assigned to this group took part in a cooperative learning training programme. We also performed three assessments during the experiment to determine whether the programme had been properly implemented. Observers met with teachers after each review to address issues requiring improvement.

Table 1 Descriptive statistics time 1

Variable	Mean	SD	Minimum	Maximum
<i>Peers' evaluation</i>				
Positive nomination (popularity)	2.00	2.13	0.00	8.00
Negative nomination (reject)	4.93	4.38	0.00	18.00
Social preference	-2.93	5.46	-18.00	8.00
Social impact	6.93	4.20	0.00	18.00
Social competency	-3.17	5.05	-14.67	9.33
School competency	-3.13	5.17	-14.00	10.67
Athletic competency	-1.69	5.14	-13.00	14.00
Social conduct	5.22	8.62	-9.50	23.00
<i>Teachers' evaluation</i>				
Popularity	3.36	1.18	2.00	6.00
Social competency	3.89	1.02	1.33	6.00
School competency	3.65	0.90	2.33	5.33
Athletic competency	4.36	1.70	3.00	6.00
Leadership	3.30	1.42	1.00	7.00
Social conduct	4.03	0.92	1.00	7.00
<i>Self-perception</i>				
Social competency	20.59	5.22	7.00	28.00
School competency	20.68	4.76	9.00	28.00
Athletic competency	22.56	4.19	13.00	28.00
Self-esteem	21.98	4.33	10.00	28.00

Instruments and procedures

Many data were collected in November during the pre-test period, and again in June at the end of the programme. Peers and teachers evaluated students on different levels of social and academic ability. Acceptance and appreciation by peers, level of social integration into the class, as well as self-perception of social competency were also measured. Two graduate students administered group, in-class assessments.

Sociometric status and peer acceptance

Data relating to sociometric status were obtained by the designation method, whereby each child indicated three classmates they liked to play with and three they did not. This information was used to determine acceptance and rejection scores for each child in the class, as well as social preference and social impact. Peer status was then calculated using the Coie and Dodge (1983) procedure. Over the last two decades, numerous studies have demonstrated the relevance and merits of this sociometric approach (Coie and Dodge, 1983; Coie et al., 1990).

Social reputation/standing among peers

This questionnaire, similar to the procedure used to determine sociometric status, assessed peer perception of a child's skills (Lapointe et al., 1993). The children were asked to identify those classmates who, based on their people skills in and out of school, stood out the most and the least. The questionnaire contained 18 sections covering nine aspects of social and academic ability, namely mood, leadership, cooperation, aggressiveness, disruptiveness, mathematics, French, art and physical activity/sports. Each child assessed his or her peers based on his or her personal perceptions.

Each child was attributed two scores: one for each positive and one for each negative peer assessment. Each child's rough scores were then weighted to give nine individual scores for each subject. For analytical purposes, these nine scores were then grouped together to produce a composite score for prosocial behaviour (cooperation, leadership and mood), social behaviour (aggressiveness and disruptiveness), academic ability (maths, French and arts and crafts) and athletic ability (sports). This recently developed tool has been used successfully in other studies and, according to data published by Lapointe et al. (1993), contains appropriate psychometric indicators. Verification for accuracy indicated adequate consistency for academic skills (0.91), prosocial behaviour (0.91) and social behaviour (0.87).

Social affiliations within the class

Social affiliations within the class were identified based upon the social grouping method (Cairns et al., 1990). Children were questioned directly on affiliative structure and asked to identify groups within the class as they perceived them. Initially, they were asked to write their first name and that (those) of their best friend(s) in a circle, and then to write the names of children they often saw together in other circles. Finally they were asked to write the names of children they rarely saw playing with others at the bottom of the page (one or two). This enabled us to determine each child's affiliations and their position within the social hierarchy of the class based on the frequency with which they appeared in a peer group. Many researchers have used this method and its pertinence is well documented (Cairns et al., 1990; Farmer and Cairns, 1991).

Perceived competence

Perceived competence was assessed using the self-administered Perceived Competence Scale of Children (Harter, 1982). This questionnaire comprised 28 items and assessed four fields of competence: academic, social, sports and self-esteem. Each item contained two statements, namely a two-tiered positive self-assessment and a negative self-assessment. This

self-assessment scale presents appropriate core measurement dimensions (Harter, 1982) and has been translated into French in accordance with habitual bidirectional translation practices.

Teacher assessment scale for academic and social adaptation

The teacher questionnaire addressed the same aspects as the peer questionnaire on social standing but was presented in the form of a Likert scale, weighted from 1 to 7, where the higher the value, the more positive the assessment. Teachers, to the best of their ability, attributed a value to every student on each of the items under consideration: behavioural levels (cooperation, mood, aggressiveness, disruptiveness, leadership) and academic (French, mathematics, art and sports). Each and every child received nine individual scores.

Results

Preliminary analyses

We initially confirmed that those students identified as experiencing behavioural difficulties did indeed present an academic and social profile different from that of the other children. Our analyses demonstrated that the majority of children with behavioural problems (66.6%) had a distinctively more negative profile and received a negative sociometric status from their peers (rejected, neglected or controversial) as opposed to only 32.3% of normal students. Chi-square analyses confirmed that children in difficulty were more prone to rejection ($\chi^2 = 14.15$, $p < 0.007$) while normal students received a more positive status (average or popular) ($\chi^2 = 56.11$, $p < 0.000$).

On the whole we observed that students with behavioural problems received more negative (mean = 4.93, SD = 4.38) than positive scores (mean = 2.00, SD = 2.13). The number of rejection scores (negative) was far greater and varied more (0 to 18) than positive scores (0 to 8). Median social preference scores were also negative (mean = -2.93, SD = 5.46), while social impact scores stood at 6.93 (SD = 4.20). With respect to reputation variables, we observed negative medians for social competency (mean = -3.17, SD = 5.05), academic ability (mean = -3.13, SD = 5.17) and athletic ability (mean = -1.69, SD = 5.14), while social conduct (aggressiveness and disruptiveness) proved positive (mean = 5.22, SD = 8.62).

When we analysed data from the teachers, we once again observed several differences between the two groups. Students with behavioural problems were perceived as being less skilled academically ($t = -4.02$, $p < 0.000$) and socially ($t = 6.89$, $p < 0.000$). Aggressiveness and

disruptiveness in class also set these students apart. Self-assessment data, however, turned up no difference between children with behavioural problems and those in the control group, for those children with problems viewed themselves on a par with their peers.

Further analysis enabled us to determine the level of integration of students with behavioural problems. We established an organizational portrait of social affiliations for each class by compiling references for each social subgroup into a co-reference sociometric matrix for each class, followed by a Pearson correlation of dyadic associations for all dyadic associations reported. These matrices were then converted to a similarity matrix of perceived associations (LaFerté, 1992; Strayer and Santos, 1996) and subsequently subjected to complete linkage cluster analysis in order to fully differentiate the subgroups.

The hierarchical grouping analysis for each class yielded a dendrogram grouping together students with similar profiles. A statistical criterion was then applied to identify subgroups and determine the degree of similarity between profiles, and to establish cut-off points between the dendrograms. Subsequently, the number of references within each subgroup was calculated in order to qualify the different types of subgroups thereby identified. Chi-square analysis was then used to assess the social cohesion of each subgroup (comparing the number of times each student was observed in and outside his subgroup) and, based on the quality of relations among the children, to differentiate social units. We were able to identify those children belonging to one social group linked by bonds of friendship from those with similar, non-reciprocated affinities, and from those showing no associative profile with others (children on their own – isolated).

Analysis of these results indicated that the majority of students with behavioural problems (72.2%) benefit from a cohesive social context, just as normal students (75.3%). Analysis of the chi-square data confirmed that the proportion of students in difficulty who belonged to a group was significantly higher than anticipated ($\chi^2 = 37.44$, $p < 0.000$). Furthermore, the data showed that five of the six students in the sample group identified as having no friends in class had been identified as having behavioural problems.

Visual examination of the hierarchical grouping graphs for each class confirmed that students with behavioural problems tended to form smaller groups of friends. Indeed, these students formed dyads or triads (average 2.1 children) while normal students formed much larger (average 8.6) groups.

Tests were also carried out to determine whether a group's social reputation could be determined by the inclusion or not of children with behavioural problems. Results indicated that groups comprising such children

did tend to have a more negative reputation than groups containing no such children, particularly in relation to social conduct (aggressiveness, disruptiveness) and academic skills. However, given the number of comparisons made, a Bonferroni alpha correction (Howell, 1991) did not enable us to attain a critical significance threshold. Despite higher rejection and lower academic skills scores for groups comprising children with problems, our analyses did not reveal any significant difference between the two sub-groups.

Impact analyses

As class groups rather than students were randomly assigned to the three research groups, we first verified group equivalence during the pre-test period. A variance analysis test revealed only one significant difference in teacher assessment of athletic ability ($F(2, 36) = 5.25, p < 0.01$). As a precautionary measure, we used the pre-score tests as covariables in all subsequent analyses to monitor group pre-test equivalence and programme impact assessment results. Subsequent analyses enabled us to assess the effectiveness of the social skills training programme and to determine the extent to which a strategy based on peer involvement could enhance overall programme impact.

To begin with, we once again determined sociometric status among peers after the programme had been implemented. Stability was determined by examining the percentage of children whose status remained unchanged from one assessment to the next. Classifications after the first assessment (T1), prior to implementing the programme, and the percentage of children whose status was unchanged after the second assessment (T2), several weeks after the conclusion of the experiment, are shown in Table 2. In the autumn pre-test period (T1) and the spring post-test period (T2), 71.4% of the popular subjects, 60% of the controversial subjects and 57.1% of the rejected subjects saw no change in their status, while those perceived as neglected (40%) and average (36.4%) showed less stability. However, it should be noted that change in status was greater among peers in the control group (11) than in experiment groups I (6) and II (8). Only one child's status moved up to popular, while six children joined the ranks of average. Seven students joined the ranks of neglected, and seven controversial, while four students were attributed rejected status in the post-test assessment.

To assess the effectiveness of the social skills training programme and determine whether peer involvement increased programme impact, we analysed results from the three study groups. Covariance analysis results (ANCOVA) with orthogonal representation (group I versus group II; groups I and II versus control group) showed no significant difference between the

Table 2 Stability of sociometric status between autumn T1 and spring T2

	T2					Number
	Popular	Average	Neglect	Controversial	Reject	
T1 Popular	71.4%	14.3%	–	14.3%	–	7
T1 Average	–	36.4%	18.2%	27.2%	18.2%	11
T1 Neglect	10%	30.0%	40.0%	–	20.0%	10
T1 Controversial	–	20.0%	–	60.0%	20.0%	5
T1 Reject	–	4.8%	23.8%	14.3%	57.1%	21
Number	6	17	10	11	10	54

groups – all dependent variables considered – following implementation of the programme (Table 3).

Since these results could be explained in part by the small size of the sample group and the difficulties inherent in applying traditional statistics in such a context, we conducted an effect size analysis following implementation of the programme (groups I and II versus control group). Results would appear to indicate a real, albeit modest improvement in the children with behavioural problems. Even though the students in the experimental groups were less socially skilled and were still perceived negatively by their peers, they nevertheless received more positive references ($r = 0.14$) after the programme and were perceived as having improved their cooperation skills ($r = 0.9$). Teachers also noted improvements in academic ability ($r = 0.06$) and prosocial skills ($r = 0.15$). Moreover, children who had taken part in the programme felt that their academic ability had improved ($r = 0.17$) and were more comfortable with their athletic ability ($r = 0.05$). Effect size analysis allowed us to situate the level of improvement at between 47% and 58% for programme participants, which was low at best in terms of real benefit for the children with behavioural problems.

Discussion

Our objective was to assess the degree to which a cooperative teaching module using prosocial peers would help improve the effectiveness of an in-class social skills training programme for students with behavioural problems. The results obtained did not support our research assumptions, as covariance analyses did not reveal any change in the academic and social standing of these students. Are we therefore to conclude that the programme was a failure? Are we to deduce that this type of intervention does not effectively modify the social behaviour of students with behavioural difficulties? Resultant ambiguity combined with our inability to

EMOTIONAL AND BEHAVIOURAL DIFFICULTIES 8(2)

Table 3 Mean and standard deviation of scores for peers' evaluation, teachers' evaluation and self-perception for experimental and control groups

		Experimental				Control	
		Group I (n = 19)		Group II (n = 18)		Group III (n = 17)	
		Social skills training and cooperative learning		Social skills training		Control	
		Mean	SD	Mean	SD	Mean	SD
<i>Peers' evaluation</i>							
Popularity	Pre-test	2.21	2.15	2.56	2.53	1.18	1.38
	Post-test	2.26	2.54	2.67	2.20	1.88	1.69
Reject	Pre-test	4.21	3.52	5.06	4.58	5.59	5.12
	Post-test	5.47	4.10	4.61	3.76	4.18	4.30
Social preference	Pre-test	-2.00	4.51	7.61	4.03	6.76	4.98
	Post-test	-3.21	5.41	7.28	3.34	6.06	4.56
Social impact	Pre-test	6.42	3.70	-2.50	6.20	-4.41	5.61
	Post-test	7.74	4.15	-1.94	5.17	-2.29	4.69
Social competency	Pre-test	-2.46	4.25	-3.04	6.95	-4.12	4.12
	Post-test	-3.21	5.41	-2.76	5.95	-2.98	3.39
School competency	Pre-test	-3.07	4.66	-3.04	6.95	-3.29	3.56
	Post-test	-3.32	5.80	-4.07	5.48	-3.67	4.75
Athletic competency	Pre-test	-2.11	4.28	-0.83	5.71	-2.12	5.57
	Post-test	-1.74	6.14	-0.67	7.63	-1.76	5.34
Social conduct	Pre-test	4.26	9.37	5.81	9.11	5.68	7.59
	Post-test	4.82	10.36	5.72	10.72	3.74	9.30
<i>Teachers' evaluation</i>							
Popularity	Pre-test	3.39	1.24	3.34	1.20	3.24	1.15
	Post-test	3.47	1.26	3.72	1.07	3.47	1.12
Social competency	Pre-test	3.65	0.79	3.89	1.07	3.49	0.91
	Post-test	3.67	0.87	4.07	1.17	3.49	0.91
School competency	Pre-test	4.09	0.95	3.83	1.01	3.73	1.13
	Post-test	3.70	0.87	4.00	0.92	3.51	0.93
Athletic competency	Pre-test	4.22	1.00	4.11	0.68	5.00	0.89
	Post-test	4.16	1.80	4.44	0.98	4.41	1.18
Social conduct	Pre-test	3.92	1.97	4.00	0.86	4.18	1.67
	Post-test	4.16	1.80	4.00	1.50	4.15	1.41
<i>Self-perception</i>							
Social competency	Pre-test	22.16	3.47	19.71	4.69	20.00	5.84
	Post-test	21.00	3.95	20.06	5.94	18.76	4.93
School competency	Pre-test	20.84	4.67	20.28	4.93	20.65	6.29
	Post-test	19.76	5.94	18.88	4.99	19.12	4.74
Athletic competency	Pre-test	22.89	3.25	21.89	4.99	22.88	4.37
	Post-test	22.76	4.58	21.82	3.52	21.88	4.30
Self-esteem	Pre-test	22.37	4.23	22.17	4.51	21.31	4.45
	Post-test	20.88	3.48	19.53	6.61	20.88	3.69

demonstrate any significant difference between the three groups raised numerous questions.

A certain number of methodological considerations would appear appropriate to understanding these results. Firstly, the intervention programme was aimed at those children identified by their schools as showing behavioural difficulties and having been placed in, or integrated into, regular classes. Obtaining a large sample group of children with behavioural difficulties was impossible in the circumstances and therefore limited the number of subjects in the three experimental groups. The possibility of carrying out differential analysis by sex and type of difficulty was also limited. According to Kazdin (1995), the probability of intervention reaching a significant statistical threshold measurable by analytical formats commonly used in social science is practically zero. However, several studies, notably those focusing on psychological therapy, do show significant change occurring in individuals who have been enrolled in such programmes. Kazdin believes that determining a programme's impact based solely on multivariate results is not really relevant. Given that the small sample group under study limited our ability to obtain a significant statistical threshold, we assessed effect size for each of the dependent variables where the scores obtained in the experimental groups were higher than those in the control group. This analysis showed that students with behavioural difficulties did improve after participating in the programme, albeit very modestly.

Our study also highlighted the limits facing researchers in applied social science, particularly those interested in studying the effects of programmes implemented in a natural environment and on specific subjects. Firstly, implementing an intervention programme in a school environment forces the researcher to use a quasi-experimental research plan, which prevents the random allocation of subjects to experimental control groups. However, the random allocation of schools combined with the use of a control group to check against pre-test data and the use of these data as covariables nonetheless enabled us to research monitoring and validity.

Qualified individuals were responsible for implementing this programme in the classroom. However, for the programme to be effective it had to be properly applied by the class teacher. The approach used to teach social skills (reinforcement, modelling) presupposed teacher support, in both attitude and behaviour. As in any therapeutic process, a teacher's day-to-day encouragement and reinforcement of a child's attempts to change and build self-esteem are essential if the child is to be helped. Indeed, if the programme is to work and succeed, teachers must believe in it, for when they do, they take control and apply it coherently. Although teacher technique plays an integral role in the programme, it is often difficult for

teachers to change, even when it would help facilitate child adjustment. According to Wehby et al. (1988), we cannot lay this problem solely at the feet of teachers. Other aspects such as shortcomings in initial training and support provided by school administrations (continuing education) are also to blame. We ourselves observed how teacher support for our project varied from one class to another: some teachers participated wholeheartedly, while others merely limited themselves to complying with our requests. Teacher commitment and teacher ability to work with students presenting behavioural difficulties could, at least in part, explain our results.

We must also underscore the limits of the measurements used in this study. Generally speaking, it is relatively difficult in social and human sciences to establish the exact nature of the relationship between independent and dependent variables, and to specify the number of units required in an independent variable to effect change in a unit with a dependent variable (Ladouceur and Bégin, 1980). To estimate the impact of our intervention on students with difficulties, we therefore measured three sources of perception (peers, teachers and students) before and after implementation of the programme. Obviously, perceptions are closely linked to a person's feelings and attitudes, which fluctuate with events. As students with behavioural difficulties are often in conflict with their teachers and peers, general perception of these students may have crystallized to the point where, despite real change in a child's behaviour, any change in perception is almost impossible.

Results of the preliminary analyses confirmed negative peer opinion of children with behavioural difficulties. The data clearly indicated that their peers did not like these children: their sociometric status was negative; they were more likely to be less appreciated and to be ostracized and rejected by their peers than other students. These results were consistent with other research demonstrating that children with behavioural difficulties placed in regular classes were less well accepted by their peers than students showing no such difficulties (Sabornie, 1987; Sabornie and Kauffman, 1985).

Nevertheless, an analysis of class affiliations showed that just like normal students, the majority of students in difficulty do have friends among their classmates. However, these groupings were characterized by the presence of other students in difficulty and distinguished by a more negative reputation than groups not including such students. This could be a reflection of the problems that students with behavioural difficulties experience in their social relations, as their inappropriate behaviour limits their ability to make friends with a larger group of classmates, particularly those who do not have behavioural problems.

A student's social ability is critical to his or her social reputation. Generally speaking, we can assume that after a certain length of time, a child's

reputation becomes dissociated from their behaviour and contributes to their persistent negative perception. Some research has demonstrated that classmates tend to perceive and react differently to their fellow students, based upon their positive or negative reputation within the group. Once a child's reputation has been established, peers react accordingly: negative behaviour in a child who is well liked and appreciated by his or her peers will be downplayed and treated as a small glitch, whereas an unliked and unappreciated child will be blamed and held responsible for similar behaviour.

In this context, students taking part in a social skills development programme inevitably appear to be subject to the negative attitudes and judgemental ways of their classmates. When these children attempt to put their newfound skills into practice, they risk reaping indifference and suspicion from their peers who normally find them hostile and disruptive. In conditions of the like, the desired *entrainment effect* cannot take hold. Even though a child's new social skills would normally elicit positive reaction from their entourage, thereby reinforcing their behaviour, peers do not appear inclined to respond accordingly. Without peer acceptance, newly learned social behaviour cannot be maintained and transferred to other environments.

Our results highlighted the all-important consideration that must be extended to classmates when developing intervention programmes for students with behavioural difficulties. Using peers as reinforcement agents would appear to be an effective strategy. However, as our study indicated that the social exclusion process within peer groups could negatively impact a social skills training programme, we must refine those techniques involving peers. Involvement of the class group and competent peers proved insufficient in developing and maintaining social skills in children with behavioural difficulties. Furthermore, our research highlighted the lack of instruments to assess the impact of social training skills programmes (assessment based generally on peer and teacher perceptions), and the need to develop finer measurements to determine the exact nature of the impact of components of intervention on children's behaviour.

The problems presented by children in difficulty are no less complex than the means required to prevent or attenuate them. Implementing educational projects or intervention programmes to teach prosocial behaviour, problem solving and self-control are essential if students with behavioural problems are to succeed academically. Keeping these children in school, teaching them adjustment techniques and allowing them to develop functional skills – from the social standpoint, for example – must remain a primary concern for educators one and all. Research is also central to the development and implementation of concerted action in our schools. Researchers must therefore continue their search to develop, implement

and assess appropriate in-school intervention models so that children demonstrating behavioural problems can succeed in life.

Acknowledgements

This research was supported by doctoral grants from the Social Sciences and Humanities Research Council of Canada.

Notes

1. PARC: programme d'autocontrôle, de résolution de problèmes et de compétence sociale pour les élèves du primaire ayant des troubles du comportement (self-control, problem-solving and social competency programme for primary school students with behavioural problems).

References

- Adler, P.A., Kless, S.J. & Adler, P. (1992) 'Socialization to Gender Roles: Popularity among Elementary School Boys and Girls', *Sociology of Education* 65: 169–87.
- Beelmann, A., Pfingsten, U. & Lösel, F. (1994) 'Effects of Training Social Competence in Children: A Meta-Analysis of Recent Evaluation Studies', *Journal of Clinical Child Psychology* 23: 260–71.
- Bierman, K.L. & Furman, W. (1984) 'The Effects of Social Skills Training and Peer Involvement on the Social Adjustment of Preadolescents', *Child Development* 55: 151–62.
- Bierman, K.L., Miller, C.L. & Stabb, S.D. (1987) 'Improving the Social Behavior and Peer Acceptance of Rejected Boys: Effects of Social Skill Training with Instructions and Prohibitions', *Journal of Consulting and Clinical Psychology* 55: 194–200.
- Bowen, F., Desbiens, N., Rondeau, N. & Ouimet, I. (2000) 'La Prévention de la violence et de l'intimidation en milieu scolaire', in F. Vitaro & C. Gagnon (eds) *Prévention des problèmes d'adaptation chez les jeunes*.
- Bowen, F., Desbiens, N., Martin, C. & Hamel, M. (2001) 'La Compétence sociale comme déterminant de la santé et du bien-être des enfants et des jeunes', in M. Hamel (ed.) *Les Déterminants de la santé et du bien-être des enfants d'âge scolaire*. Publications du Québec.
- Cairns, R.B., Cairns, B.D., Neckerman, H.J., Gest, S.D. & Gariépy, J.-L. (1988) 'Social Networks and Aggressive Behavior: Peer Support or Peer Rejection?', *Developmental Psychology* 24: 815–23.
- Cairns, R.B., Gariépy, J.-L. & Kinderman, T. (1990) 'Identifying Social Clusters in Natural Settings', unpublished manuscript, University of North Carolina at Chapel Hill.
- Capaldi, D.M., Crosby, L. & Stoolmiller, M. (1996) 'Predicting the Timing of First Sexual Intercourse for At-Risk Adolescent Males', *Child Development* 67 (2): 344–59.
- Cartledge, G. & Milburn, J.F. (1995) *Teaching Social Skills to Children and Youth: Innovative Approaches*, 3rd edn. Boston, MA: Allyn and Bacon.
- Coie, J.D. & Dodge, K.A. (1983) 'Continuities and Changes in Children's Social Status: A Five Year Longitudinal Study', *Merrill-Palmer Quarterly* 29: 261–82.
- Coie, J.D., Dodge, K. & Kupersmith, J. (1990) 'Peer Group Behavior and Social Status', in S.R. Asher & J.D. Coie (eds) *Peer Rejection in Childhood*. Cambridge: Cambridge University Press.

- Coie, J.D., Terry, R., Zakriski, A. & Lochman, J. (1995) 'Early Adolescent Social Influences in Delinquent Behavior', in J. McCord (ed.) *Coercion and Punishment in Long-Term Perspectives*. Cambridge: Cambridge University Press.
- Day, D.M., Golench, C.A., MacDougall, J. and Beals-González, C.A. (1995) *La Prévention de la violence à l'école au Canada: résultats d'une étude nationale des politiques et programmes*. Solicitor-General of Canada.
- Desbiens, N. (2000) 'La Réputation sociale des élèves en difficulté de comportement: effet d'un programme de promotion des habiletés sociales et de coopération en classe ordinaire', thèse de doctorat, Université Laval, Québec.
- Desbiens, N., Royer, É., Fortin, L. & Bertrand, R. (1998) 'Compétence sociale, status sociométrique et réseaux affiliatifs des élèves en trouble du comportement: perspectives d'intervention à l'école', *Science et Comportement* 26: 107-27.
- Dishion, T.J. et al. (1991) 'Family, School, and Behavioral Antecedents to Early Adolescent Involvement with Antisocial Peers', *Developmental Psychology* 27 (1): 172-80.
- Dishion, T.J., French, D.C. & Patterson, G.R. (1995a) 'The Development and Ecology of Antisocial Behavior', in D. Cicchetti & D.J. Cohen (eds) *Development and Psychopathology*, vol. 2. New York: Wiley.
- Dishion, T.J., Andrews, D.M. & Crosby, L. (1995b) 'Antisocial Boys and Their Friends in Early Adolescence: Relationship Characteristics, Quality, and Interpersonal Process', *Child Development*, 66: 139-51.
- Durlack, J.A. (1995) *School-Based Prevention Programs for Children and Adolescents*. Thousand Oaks, CA: Sage.
- Farmer, T.W. & Cairns, R.B. (1991) 'Social Networks and Social Status in Emotionally Disturbed Children', *Behavioral Disorders* 16: 288-98.
- Farmer, T.W. & Farmer, E.M.Z. (1996) 'Social Relationships of Students with Exceptionalities in Mainstream Classrooms: Social Networks and Homophily', *Exceptional Children* 62: 431-50.
- Farmer, T.M. & Hollowell, J.H. (1994) 'Social Networks in Mainstream Classrooms: Social Affiliations and Behavioral Characteristics of Students with EBD', *Journal of Emotional and Behavioral Disorders* 2: 143-55.
- Fergusson, D.M., Horwood, J. & Lynskey, M.T. (1995) 'The Prevalence and Risk Factors Associated with Abusive or Hazardous Alcohol Consumption in 16-Year-Olds', *Source Addiction* 90 (7): 935-46.
- Forness, S.R., Kavale, K.A., MacMillan, D.L., Asarnow, J.R. et al. (1996) 'Early Detection and Prevention of Emotional or Behavioral Disorder: Developmental Aspects of Systems of Care', *Behavioral Disorders* 21: 226-40.
- Goldstein, A.P. (1988) *The Prepare Curriculum: Teaching Prosocial Competencies*. Champaign, IL: Research Press.
- Goldstein, A.P., Sprafkin, R.P., Gershaw, N.J. & Klein, P. (1980) *Skillstreaming the Adolescent*. Champaign, IL: Research Press.
- Gresham, F.M. (1982) 'Misguided Mainstreaming: The Case of Social Skill Training with Handicapped Children', *Exceptional Children* 49: 49-54.
- Gresham, F.M. (1986) 'Conceptual Issues in the Assessment of Social Competence in Children', in P.S. Strain, M.J. Guralnick & H.M. Walker (eds) *Children's Social Behavior: Development Assessment and Modification*. Orlando, FL: Academic.
- Harter, S. (1982) 'The Perceived Competence Scale for Children', *Child Development* 53.
- Howell, D.C. (1985) *Fundamental Statistics for the Behavioral Sciences*. Boston, MA: Duxbury.
- Kauffman, J.W. (1997) *Characteristics of Emotional and Behavior Disorders of Children and Youth*, 6th edn. Toronto: Merrill.

- Kavale, K., Mathur, S., Forness, S., Rutherford, R. & Quinn, M. (1997) 'Effectiveness of Social Skills Training for Students with Behavior Disorders: A Meta-Analysis', in T. Scruggs & M. Mastropieri (eds) *Advances in Learning and Behavioral Disabilities*, vol. 11, pp. 1–26.
- Kazdin, A. (1995) 'Preparing and Evaluating Research Reports', *Psychological Assessment* 7 (3): 228–37.
- Kendall, P.C. & Braswell, L. (1993) *Cognitive-Behavioral Therapy for Impulsive Children*, 2nd edn. New York: Guilford.
- Ladouceur, R. & Bégin, G. (1980) *Protocoles de recherche en sciences appliquées et fondamentales*. St Hyacinthe: Edisem.
- LaFerté, P. (1992) 'La Nature et le développement de la structure affiliative dans les classes d'écoliers québécois du niveau primaire: une étude transversale et longitudinale', unpublished doctoral thesis, Université du Québec à Montréal.
- Lapointe, P., Noël, J.-M. & Strayer, F.F. (1993) 'La Réputation sociale de l'enfant en milieu scolaire', *Revue Canadienne des Sciences du Comportement* 25: 522–40.
- Lochman, J.E., White, K.J. & Wayland, K.K. (1991) 'Cognitive-Behavioral Assessment and Treatment with Aggressive Children', in P.C. Kendall (ed.) *Child and Adolescent Therapy: Cognitive Behavior Procedures*. New York: Kendall and Guilford.
- Lochman, J.E., Coie, J.D., Underwood, M.K. & Terry, R. (1993) 'Effectiveness of a Social Relations Intervention Program for Aggressive and Nonaggressive Rejected Children', *Journal of Consulting and Clinical Psychology* 61: 1053–8.
- Loeber, R. & Dishion, T. (1987) 'Antisocial and Delinquent Youths: Methods for Their Early Identification', in J.D. Burchard & S.N. Burchard (eds) *Prevention of Delinquent Behavior: Conference on the Primary Prevention and Psychopathology*. Vermont. Beverly Hills, CA: Sage.
- Mathur, S.R. & Rutherford, R.B. (1996) 'Analysis of Literature on Social Competence of Behaviorally Disordered Children and Youth', in L.M. Bullock, R.A. Gable & R.B. Rutherford (eds) *Improving the Social Skills of Children and Youth with Emotional/Behavioral Disorders*. Reston, VA: Council for Exceptional Children.
- Meadows, N., Neel, R.S., Parker, G. & Timo, K. (1991) 'A Validation of Social Skills for Students with Training for Elementary School Students with Behavioral Disorders', *Behavioral Disorders* 12: 252–63.
- Melloy, K.J. (1991) 'Identification of Critical Social Skills and Social Competence for Children with Behavioral Disorders', in R.B. Rutherford, S.A. DiGangi & S.R. Mathur (eds) *Severe Behavior Disorders of Children and Youth. Monograph in Behavior Disorders* no. 14. Reston, VA: Council for Exceptional Children.
- Miller, G.E., Brehm, K. & Whitehouse, S. (1998) 'Reconceptualizing School-Based Prevention for Antisocial Behavior within a Resiliency Framework', *School Psychology Review* 27 (3): 364–79.
- Nafpaktitis, M. & Perlmutter, B.F. (1998) 'School-Based Early Mental Health Intervention with At-Risk Students', *School Psychology Review* 27 (3): 420–32.
- Odom, S.L. & Strain, P.S. (1984) 'Peer Mediated Approaches to Promoting Children's Social Interaction: A Review', *American Journal of Orthopsychiatry* 54: 544–57.
- Patterson, G.R. (1993) 'Orderly Change in a Stable World: The Antisocial Trait as a Chimera', *Journal of Consulting & Clinical Psychology* 61 (6): 911–19.
- Patterson, G.R., Reid, J.B. & Dishion, T.J. (1992) *A Social Learning Approach. Vol. 4: Antisocial Boys*. Eugene, OR: Castilla.
- Potvin, P., Massé, L., Beaudry, G., Beaudoin, R., Beaulieu, J., Guay, L. & St-Onge, B. (1988) *PARC: Programme d'autocontrôle, de résolution de problèmes et de compétence sociale pour*

- les élèves du primaire ayant des troubles du comportement. Québec: Université du Québec à Trois-Rivières.
- Royer, É. (1995) 'Behavior Disorders, Suspension and Social Skills: Punishment Is Not Education', *Therapeutic Care and Education* 4: 32–6.
- Royer, É., Bitadeau, I., Desbiens, N., Maltais, N. & Gagnon, M. (1997) 'Effet d'un programme d'entraînement aux habiletés sociales sur le comportement d'adolescents en difficulté au secondaire', *Science et Comportement* 26: 1–16.
- Sabornie, E.J. (1987) 'Bi-Directional Social Status of Behaviorally Disordered and Nonhandicapped Elementary School Pupils', *Behavioral Disorders* 12: 45–57.
- Sabornie, E.J. & Kauffman, J.M. (1985) 'Regular Classroom Sociometric Status of Behaviorally Disordered Students', *Behavioral Disorders* 10: 268–74.
- Schneider, B.H. (1992) 'Didactic Methods for Enhancing Children's Peer Relations: A Quantitative Review', *Clinical Psychology Review* 12: 363–82.
- Slavin, R.E. (1994) *Educational Psychology: Theory and Practice*, 4th edn, pp. xxi, 616. Boston, MA: Allyn & Bacon.
- Stage, S.A. & Quiroz, D.R. (1997) 'A Meta-Analysis of Interventions to Decrease Disruptive Classroom Behavior in Public Education Settings', *School Psychology Review* 26 (3): 333–68.
- Stephens, M.T. (1992) *Social Skills in the Classroom*. Odessa, FL: PAR.
- Strayer, F.F. & Santos, A.J. (1996) 'Affiliative Structures in Preschool Peer Groups', *Social Development* 5: 117–30.
- Vacc, N.A. (1968) 'A Study of Behavior Disordered Children in Regular and Special Classes', *Exceptional Children* 35: 197–204.
- Vacc, N.A. (1972) 'Long Term Effects of Special Class Intervention for Behavior Disordered Children', *Exceptional Children* 39: 15–22.
- Vitaro, F. & Charest, J. (1988) 'Intervention impliquant les pairs auprès d'enfants en difficulté d'adaptation sociale', in P. Durning & R.E. Tremblay (eds) *Relation entre enfants recherches et interventions éducatives*. Paris: Éditions Fleurus.
- Walker, H.M. & Severson, H.H. (1994) *Systematic Screening for Behavior Disorders*. Longmont, CO: Sopris West.
- Walker, H.M., McConnell, S., Holmes, D., Todis, B., Walker, J. & Golden, N. (1988) *The Walker Social Skills Curriculum: The Accepts Program*. Austin, TX. Pro-Ed.
- Walker, H.M., Colvin, G. & Ramsey, E. (1995) *Antisocial Behavior in School: Strategies and Best Practices*. Pacific Grove, CA: Brooks Cole.
- Wass, G.A. (1988) 'Social Attributional Biases of Peer-Rejected and Aggressive Children', *Child Development* 59 (4): 969–75.

Correspondence should be addressed to:

NADIA DESBIENS, Professor, Faculty of Education, University of Montreal, CP 6128, succursale Centre-Ville, Montréal, Canada H3C 3J7. e-mail: nadia.desbiens@umontreal.ca