Developing Prosocial Behaviors in Early Adolescence with Reactive Aggression

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Abstract
Despite the alarming rise of early adolescence aggression in Hong Kong, it is the pioneer evidence-based outcome study on Anger Coping Training (ACT) program for early adolescence with reactive aggression to develop their prosocial behaviors. This research program involved experimental and control groups with pre- and post-comparison using a mixed model research method. Quantitative data collection consisted of the Peer Observation Checklist (POC), while qualitative data collections of the early adolescents' behaviors were assessed through structured interviews (early adolescents, parents and teachers). In post-intervention and follow-up studies the treated early adolescents showed a consistent increase in their physical and verbal prosocial behaviors.

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Numerous previous studies have shown that aggression persists both over time and across generations and situations (Prasad-Gaur, Hughes, & Cavell, 2001; Eron, Gentry, & Schlegel, 1996). Persistence of aggression reported from childhood through adolescence often predicts maladaptive outcomes such as delinquency and hostility in the adolescent and adult years. More longitudinal studies have linked aggression during early adolescence with long-term maladjustments and problems. Aggressive early adolescents were identified to have delinquency, drug use habits (Kupersmidt & Patterson, 1991; Roff, 1992; Brook, Whiteman, & Finch, 1992; Brook, Whiteman, Finch, & Cohen, 1995, 1996), externalizing behavior and difficulties (Hymel, Rubin, Rowden, & Le Mare, 1990; Rubin, Chen, McDougall, Bowker, & McKinnon, 1995; Coie, Terry, Lenox, Lochman, & Hyman, 1995). In high-risk situations, aggression may relate to and develop into psychopathology such as conduct disorder and oppositional defiant disorder (Loeber, Green, Keenan, & Lahey, 1995; Vitaro, Gendreau, Tremblay, & Oligny, 1998). Aggression deeply impacts and influences family, school and community life.

There are also studies linking early aggressive behavior to violence and antisocial behavior later in life (Achenbach, 1991). Aggressive reaction patterns observable at ages 10 can be substantially correlated with similar patterns observed eleven to fourteen years later (Farrington, 1978; Buckley, 2000). It should also be noted that such patterns could be used with some success to predict certain forms of antisocial behavior that will occur eleven to twelve years later. In addition, some studies have shown that marked aggressiveness towards peers and authorities, manifested as early as in the 10- to 12- year age range, is predictive of antisocial behavior in the following years (Robins, 1966, 1978). However, Walker and his colleagues (Bullis & Walker, 1995; Walker, Colvin, & Ramsey, 1995) provided evidence that if antisocial behavior patterns are not identified and treated before children reaching the age often, these patterns are considered to be chronic and are much more difficult to ameliorate than when they are identified and treated before that time. Besides, previous studies have presented and encouraged more attention to early adolescents' social behavior and to their antecedents and correlates (Fabes, Carlo, Kupanoff, & Laible, 1999; Carlo, Fabes, Laible, & Kupanoff, 1999). Furthermore, Carlo, Hausmann, Christiansen, and Randall (2003) highlighted that higher levels of altruism are linked to higher levels of ascription of responsibility and to lower levels of aggression for both early adolescents and middle adolescents. The objective of this research is to construct an Anger Coping Training (ACT) program for early adolescence with physically aggressive behavior, which is designed to assist them to use socially acceptable skills, assertive skills and problem-solving skills, and thereby to reduce their aggressive behavior.

Reviewing similar programs in past literature, evaluations of psychodynamic (Tate, Reppucci, & Mulvery, 1995; Tolan & Guerra, 1994), behavioral (Kazdin, 1995; Sanders & McFarland; 2000), or cognitive (Richardson, Fowers, & Guignon, 1999) approach as a foundation of intervention for children with aggressive behaviors have found minimal effects within the institution and negative effects at postrelease follow-up. Cognitive-behavioral therapy intervention is the best intervening approach for aggressive children (Lochman, 1999; Lochman, 1990; Kazdin, 1987, 1995; Lochman & Wells, 1996; Southam-Gerow & Kendall, 2000).

The ACT program is originally developed by the researcher in Hong Kong, and is characterized by parent-child parallel-group with Chinese culture incorporated. For the children's group, the theoretical framework is largely based on a Cognitive-behavioral Model of Anger and Aggression (Michael Nelson III and Finch, 2000), that is relied on the rationale that children's emotions and subsequent actions are regulated by the way they perceive, process, and mediate external stimulus. The experience of the emotion of anger is an integration of cognitive processing in physiological events. The Model handles anger firstly by examination of interrelated cognitive processes such as outcome expectations and reinforcement values; secondly, exploration of cognitive processes that are situational; thirdly, emphasis on developmental changes in cognition in cognitive-behavioral therapy; fourthly, integration of understanding basic cognitive processes such as attention, retrieval, and organization of information in memory into social information-processing models and into cognitive-behavioral therapy, and lastly, consideration of the importance of early caregivers on the evolution of children's cognitive controls, schemas, and self-regulation (Lochman, Whidby & FitzGerald, 2000). The reactively aggressive child possesses cognitive distortions and deficiencies, which directly stimulate the children's physiological and emotional arousal (anger) and behavioral response (aggression) to environmental cues eventually. The program is aimed to change individuals' contents of cognitive scripts regarding aggression and enhance their practical interpersonal skills and techniques. Then, their level of aggressiveness and prosocial behavior will be expectedly reduced and increased respectively.

For the parent's group, Patterson (2002) further verified that disruptive parenting practices are the proximal mechanism for generation of antisocial behavior. Patterson (1982, 2002) describes a multistep family process called "coercion training" that occurs frequently in families of aggressive boys which consists of escape-conditioning contingencies. Consistent with recent study, the more adolescents tell their parents and the lower the level of negativity in the parent-adolescent relationship, the less aggressive behavior they show (Wissink, Dekovic, & Meijer, 2006). Therefore, restructuring parent-child relationship and interactive pattern are core foundations to treat children with aggressive behavior. The theoretical framework of the parent's group is built on a conceptual Parenting Pyramid for rebuilding the relationship between parents and their aggressive children, restructuring the parental style and parental behaviors through establishing a secure and supportive environment for parents and their children, to relearn and reconstruct their interactive patterns (Webster-Stratton & Hancock, 1999). Parents are given specific instructions in ways to improve family management practices (Kazdin, 1996).

The uniqueness of the ACT program, ten 2-hour sessions in total, in parallel groups for early adolescence with reactive aggression and their parents, were devised originally by the researcher and localized thereafter. There are four phases of the ACT program which are relationship building, cognitive preparation, skill acquisition and application training. The ACT program is based on the premise that aggressive early adolescents have cognitive-processing deficits that dictate their aggressive behavior. This is supported by findings that aggressive early adolescents demonstrate distorted cognitive appraisals of social situations and utilize aggressive schemata for acting on these appraisals (Lochman & Dodge, 1998). For the parents, interventions have been developed under the assumption that changes in the parent-child relationship, and parenting style, and parental behavior will lead to noticeable changes in the children's

behaviour. Parent training has long been used as a highly successful means of treating highly aggressive children (Dumas, 1989; Cavell, 2000). Parent training in the ACT program is focused on teaching parents to apply attention, appreciation and reinforcement when children are behaving appropriately, and to use behavioral discipline strategies when children behave inappropriately.

The parents have a chance to learn how to handle their children's anger and the conflict with others through modelling the worker. Parents are invited to work out their children's conflict after observing the worker's demonstrations. In addition, workers introduce the token economy system in which children can gain stickers if they commit to the group and carry out the assigned task. After collecting a number of stickers, they can achieve desirable rewards. Contingent reinforcement allows the therapist to shape the child's behavior to be more adaptive (Miranda & Presentacion, 2000). Rewards may also be useful in encouraging the child to complete homework assignments designed to give the child practice using newly acquired coping techniques outside the sessions (Southam-Gerow & Kendall, 2000).

Parents report the daily records of their children's prosocial behaviors and give compliments and reinforcement to the children in the group. Parents learn how to shift their perceptions of their children from negative to positive through doing the appointed assignments. After each group session, they are encouraged to find out and reward the child's prosocial behaviors, and then report them in the following session. Furthermore, the children are encouraged to record their own prosocial behaviors everyday. If parents and children find that their relationship is emotionally satisfying, it can be a vehicle for promoting prosocial behavior (Wahler, 1997).

In this research, the levels of behavioral presentations of early adolescence physical and verbal prosocial behavior are defined as the dependent variables and the ACT program is defined as the independent variable. It is hypothesized that the early adolescents' physical and verbal prosocial behavior will increase after completing the ACT program. The ACT program is the original parent-child parallel group which is designed as intervention for early adolescence with reactive aggression in Hong Kong. The content incorporates localized and indigenous characteristics catering for Chinese parents and their children with physical aggressive behavior. Based on the ecological approach, the program content has consisted of individual system, family system, school system, and social system (Fung, 2004), which are integrated into 10-session of parent-child separated and joint groups (Fung, Wong & Wong, 2004).

Method

An experimental and control group pre and post comparison design is used for the present study. The Pre-test Post-test Control-group design with parallel experimental groups is the most appropriate for this study because it does an excellent job of controlling rival hypotheses that would threaten the internal validity of the experiment (Johnson & Christensen, 2004). The result of the experimental design would provide greater confidence that changes in the levels of behavioral presentations of aggressive early adolescence's physical and verbal prosocial behavior (the dependent variables) are associated with changes in the ACT program (the independent variable). It is hypothesized that the early adolescence's physical and verbal prosocial behavior will be increased after completing the ACT program.

Participants and Procedures

Pamphlets, posters and application forms were printed and distributed to schools and social welfare institutes. Additionally, personal contacts and follow-up calls with caseworkers, social workers, student guidance officers and schoolteachers were made. Pilot Study I was carried out between August and December 2002; and the phase of Pilot Study II was from January to May 2003. After the completion of the Pilot Studies I and II, the Main Study started in June 2003. The recruitment and promotion was from June to September 2003. By the deadline, there were 34 application forms submitted. One of them was self-referral, the rest of them were referred by caseworkers, school guidance officers and schoolteachers. The researcher and group facilitators contacted the potential clients to collect more preliminary particulars and explain the details of the research and to seek verbal parental consent. Kendal and Sheldrick (2000) recommend that the closer the demographic characteristics between the treatment group and control group, the more representative the normative group becomes. Hence, the working team had a preliminary assessment of the clients' demographic backgrounds, such as the level of early adolescence aggression, age, marital status, educational level and socio-economical status, and then selected 28 potential families with homogenous characteristics to go through the screening procedure. The screening and assessment process of the pre-test procedure made up numerous scores in the Child Behavior Checklist (CBCL), the Child Behavior Checklist- Teacher Report Form (CBCL-TRF), and the data from observation and structured interviews. In order that the selected people had reasonable representativeness of the study, the criteria of selection were based on the consistency with high scores of all parts of data and early adolescence aggression across different contexts. After systematic screening and assessment procedures, a group of 18 families with early adolescence classified in the subcategory of aggression based on the result of CBCL rated by parents and CBCL-TRF rated by teachers was identified.

In this study, the age of target early adolescence was 10. Seventeen of them were boys, only one was girl. The result was consistent with recent finding shown that males are more physically aggressive than females, and females are more prosocial and preferred by peers (Zimmer-Gembeck, Geiger & Crick, 2005). They were randomly distributed into three groups with six children and their parents, each namely (1) Experimental Group 1: A parallel treatment group for aggressive children and their parents; (2) Experimental Group 2: A parallel treatment group for aggressive children and their parents and (3) Control Group 3: A non-treatment group for children and their parents. The children and their parents in Experimental Group 1 and 2 received the ACT program, and the participants in control group obtained purely reading and study skills. Children and their parents in the control group showed enthusiasm and acceptance with the arrangement, which had a chance to improve their children's study skills. Pre-test and post-test procedures were conducted before and after the intervention process, the duration of which was approximately about three months. The impacts of intervention on the early adolescent, parents and teachers were assessed with observational measures at a three-month follow up after the intervention process. The findings of pre, post-test and follow-up across the groups were compared by using statistical analysis and multiple qualitative data sources.

Techniques

Quantitative Methods

Quantitative data is collected through self-administrated questionnaires, CBCL for parents and CBCL-TRF for teachers to screen out the targeted early adolescents who are above the clinical score in the subcategory of aggression, and behavioral observations to address stated hypotheses in the Peer Observation Checklist (POC). The early adolescents are randomly allocated into small groups for observation of their interaction at play. They are under the clinical observation of a professional team using a social behavior checklist for evaluation while the entire process in the playroom is video-taped. Data is collected through the early adolescent's interaction with the peer group in a spontaneous environment with clinical judgment being made by two independent raters. The POC consists of five items of verbal prosocial behavior: (1) Shows politeness; (2) Chats/ Communicates with others; (3) Invites others to have fun; (4) Breaks ice/ Greets, and (5) Tries to settle conflicts. It also consists of five items of physical prosocial behavior: (1) Smiles; (2) Tries to assist; (3) Shares toys; (4) Plays with others in harmony/ co-operates, and (5) Makes proper and friendly eye/ body contacts. Observational procedures included rating response frequency of 10 items of verbal and physical prosocial behavior. Event recording counts how many times a target behavior occurs within a half-hour period per session in both forms of behavioral observation. Two independent raters are required for the event recording. In interval recording, an observation period is divided into equal intervals and the rater records whether the target behavior occurs in the interval. Each subject is observed for three 30-minute sessions at the pre-test, post-test and follow-up studies. For the analysis of the quantitative data, the non-parametric statistical procedure, Mann-Whitney *U* Test, is used to assess the differences between those two experimental groups and a control group (Experimental group 1 between Control group; and Experimental group 2 between Control group).

Qualitative Methods

Qualitative methods include structured interviews for assessing parents, children and their teachers both before and after an experimental treatment. Multiple observers from multiple perspectives of different contexts are involved, including aggressive children's parents, discipline teachers, counselling teachers, class mistresses, and teachers teaching major subjects. Multiple qualitative data sources are compared, reconciled and merged in analyzing qualitative data. Thus, quantitative and qualitative data provide in-depth understanding towards early adolescence's prosocial and aggressive behavior under different contexts, which include the individual, peer, school and family system.

Results

Interrater reliability was used to test the extent to which observation scores were consistent among independent raters. 30 minutes of peer interactions were videotaped for subsequent rating by two independent raters. Both were professional social workers with master degrees in social work and over 5 years of in-service experience. The raters were well-trained before the ratings. In total, they received

three 2-hour training sessions in Pilot Studies I and II and the Main Study. Every training session consisted of a briefing of the POC, rating guidelines, and three trail-marking ratings of the children's peer interactions. The raters were totally blind as to the status of the participants which ensured that the rating process was free from any bias. As Table 1 and 2 indicate, the Mann-Whitney *U* test was applied to the ranked data. For an alpha level of .05, the mean ranks of the pre-test, post-test and follow-up scores between Rater A and Rater B were not significantly different, *z* value ranged from -.11 to -.19 (pre-test assessment) and from -.19 to -.89 (post-test and follow-up assessment). The results demonstrated that the scores obtained for the two independent raters of the POC were significantly and positively correlated with each other. This was an indication of high interrater reliability for this measurement.

The results showed no significant differences on the pre-treatment scores between experimental group 1 and 2, so as the pre-treatment scores between two experimental groups and the control group. In conclusion, all results already showed that the technique of randomization in this study was very effective. Correspondingly, the post-test procedure comprised of the same assessment components as the pre-test process. For the analysis of the quantitative data from the pre-test and post-test self-report questionnaires, quantitative analyses including non-parametric statistical procedures were involved.

Observational Measurement

The Children's Physical Prosocial Behaviour

As Table 3 shows, in post-test assessment, the mean rank of physical prosocial behaviour rated in the experimental groups was higher (12.17) than the mean rank in the control group (4.17). There was a significant difference between the experimental and control groups, $z = -3.00$, $p < .01$.

The 3-month follow-up results indicated that the mean rank of physical prosocial behavior rated in the experimental groups was higher (11.88) than the mean rank in the control group (4.75). There was a significant difference between the experimental and control groups, $z = -2.69$, $p < .01$.

As Table 4 shows, the mean rank of physical prosocial behaviour rated in the experimental group 1 (6.42) was lower than the experimental group 2 (6.58) in post-test assessment. There was no significant difference between both experimental groups, $z = -.08$, *ns*. In addition, the mean rank of physical prosocial behaviour rated in the experimental group 1 (8.67) was higher than the experimental group 2 (4.33) in follow-up studies. There was no significant difference between both experimental groups, $z = -2.11$, $p < .05$.

Hence, there were significant differences between pre- and post-intervention scores on physical prosocial behaviour. Treated early adolescents demonstrated strong improvement in behaving prosocially. Both experimental groups showed positive effects after completing the ACT program.

The Children's Verbal Prosocial Behaviour

As Table 3 indicates, the mean rank of verbal prosocial behaviour rated in the experimental groups was higher (12.00) than the mean rank in the control group

(4.50) in post-test assessment. There was a significant difference between the experimental and control groups, $z = -2.81$, $p < .01$.

The 3-month follow-up results indicate that the mean rank of verbal prosocial behaviour rated in the experimental groups was higher (9.88) than the mean rank in the control group (8.75). Yet, differences were not significant between the experimental and control groups, $z = -.43$, *ns*.

As Table 4 shows, the mean rank of verbal prosocial behaviour rated in the experimental group 1 (7.83) was higher than the experimental group 2 (5.17) in post-test assessment. There was no significant difference between both experimental groups, $z = -1.28$, *ns*. In addition, the mean rank of verbal prosocial behaviour rated in the experimental group 1 (7.83) was higher than experimental group 2 (5.17) in follow-up studies. There was no significant difference between both experimental groups, $z = -1.29$, *ns*.

Observers rated the treated early adolescents as having more verbal prosocial behaviour than the non-treated early adolescents after completing the ACT program, but fewer verbal prosocial behaviors was observed 3 months after the intervention.

Structured Interview

Structured interviews with aggressive early adolescents, their parents and teachers can be extremely helpful in identifying situational variables related to the occurrence of prosocial behaviour. Three kinds of structured interviews (child, parents, and teachers) were conducted by the same interviewer in the Pilot Study I, II and Main Study. Qualitative data were collected through 373 individual interviews (with adolescence, parents and teachers) in the main study, focusing on the adolescences' cognitive characteristic and aggressive behaviors across contexts (at home, school and in classroom). The focus of structured interview was based on the Cognitive-behavioral Model of Ander and Aggression, children with reactive aggression show particular characteristics of their social-cognitive style that differ in a meaningful way from nonaggressive children. The premise behind the ACT program was that cognitions or thoughts influence the behaviour that an individual shows in various situations, and thus, alter both the individual's behavioral response patterns and the cognitions that accompany or precede the behaviors. The program was designed to impact their social behaviour and related cognitive and emotional processes. Thus, through participating in the ACT program, treated children might have changes in cognitive characteristics, behavioral presentations, and affective reactions. They might develop a self-control mechanism, an anger coping method and problem solving skills.

The basic procedures in qualitative data analysis were transcribing data; reading and rereading transcripts; segmenting and coding the data, coding categories and enumeration; and searching for relationships and themes in the data. The coding and developing category systems were appraised by two independent reviewers. Pre- and post-intervention perceptions from multiple informants and information from different sources on the early adolescence's change are presented.

Prosocial Behavior With Appropriate Problem-solving Solutions

Early adolescence with aggressive behavior demonstrate deficiencies in prosocial behavior with appropriate problem-solving solutions. In response to hypothetical interpersonal conflicts, aggressive early adolescents offer fewer verbal assertion solutions, fewer compromise solutions, more direct action solutions, and more physically aggressive responses.

There were no other ways to relieve my tension. He hurt me by hitting me, even though he touched me accidentally, I would beat him up until he bled. (LING)

Nobody is allowed to touch him. If he finds someone touching him, he will hit him or her immediately. (CHAN'S PARENTS)

I could not think of any other useful ways that were better than fighting. (CHOW)
He believes that nobody can help him, fighting is the only way to protect himself. (LEUNG'S TEACHER)

Fighting is a way to solve problems. (LEE)

I scold others until they are speechless. (NG)

He always uses foul language to fight back. (CHOY'S MOTHER)

Screaming, shouting and yelling frequently occur under a conflictual situation at school. (MAN'S TEACHER)

Teachers cannot help me solve interpersonal problems, fighting is the only way to cope with them. (FONG)

I have many enemies, I have to protect myself. I find fighting as the greatest way. (LAI)

I hate people laughing at me, I must fight back. (CHU)

Aggressive early adolescents have a deficiency in the number of solutions they can generate to resolve social problems.

To me, fighting is a medium to make friends. I would fight or scare others before making friends with them. (TAM)

His lack of social skills led an aggressive child, Tam, to use aggression as a means of making friends. He thought that "Fighting is a medium to make new friends". Aggressive early adolescents evaluate aggressive behavior as less negative than early adolescents without aggressive behavior problems.

After the completion of the program, early adolescents were able to generate more problem solving methods which they demonstrated in their daily and school life. They were found to use prosocial problem-solving methods to deal with interpersonal conflicts at post-intervention. Their views were as follows:

I tell the teacher I will not fight back. He triggers me but I do not care about him… (SIN)

Now, he takes a deep breath and leaves the spot. He does not fight with others. (AU'S MOTHER)

He will leave the spot and drink cold water to calm himself down. No fighting anymore. (CHAN'S TEACHER)

He tells us about his feelings and thoughts when he found himself nearly losing his temper. (CHOY'S PARENTS)

I tell myself that I do not care about others, or instead think that they are idiots. (NG)

He thinks that he is a talented and brilliant student, fighting is a foolish action. He has many ways to deal with the conflicts. (LUI'S TEACHER)

If I beat others, I will be punished. I will consider the consequences. (CHENG)

The intervention was found to have lasting effects at the follow-up assessment. These findings were vital because skill development was difficult and there was a risk of relapse. Treated early adolescents shared their experiences in applying prosocial problem-solving methods in the social world.

Somebody triggered him during recess once. He stopped for a few minutes, then told the teacher. The teacher praised him for doing things correctly. (CHU'S TEACHER)

I tried to seek help from a monitor who told the on-duty teacher. He punished the fellow classmate that used foul language. (CHAN)

If I encounter a conflicting situation, I will bully people in the worst scenario, but will not beat up others. In my heart I will count from 1 to 10. (TAM)

Most of the time I will use the deep breath method. The second best way is to write my feelings on paper and then tear it off. (LAI)

Now, he will tell others of his own feelings. Then he leaves the spot and looks at other things. (YIP'S MOTHER)

Now I will express my thoughts and feelings to others, then start positive conversations instead of fighting. (TONG)

The effectiveness of the ACT program has been consistently verified by the quantitative and qualitative methods, and the result outcomes are consistent. In post-intervention and follow-up studies the treated early adolescence showed an unvarying increase in their physical and verbal pro-social behavior In conclusion, the ACT program was efficacious in enhancing early adolescence's social skills.

Discussion

In Chinese culture, parents easily tend to exercise physical punishment, coercive and punitive discipline, which is directly affected by Chinese traditions. Some traditional proverbs are related to parental cognition and coercive physical punishment, which are positively associated with a child's achievement and filial obedience. Some mothers perceived childhood aggression was characterized as a kind of boys' temperament. Males exercise their power through aggression, and females usually play submissive roles. Therefore, some parents normalized their son's physically aggressive behaviors. They thought that it was appropriate for boys acting out explicitly and made friends through fighting. On the other hand, some parents rejected their sons with physically aggressive behaviors. Although boys in traditional Chinese society are at a higher and superior position in family, some mothers reported that they preferred girls' gentle and caring personality to boys' insensitive and hostile character. In spite of their intimacy with their daughters, they maintained a discordant relationship with their aggressive sons.

After completing the program, treated children and their parents were found to gain cognitive restructuring. Children had less self-reported anger, fewer time-out restrictions, and improvements in coping self-statements and generation of problem solutions. Parents had more positive perceptions and attitudes towards the child, improvements in parent-child relationship and effectual parental behaviors. These positive treatment effects provide evidence supporting the recommendations by Lochman and Larson (2002) that cognitive-behavioral therapy for children with reactive aggression and their parents is the best approach for an anger coping program.

Hence, parental involvement in the group is vital. There are well-documented and effective treatments for childhood aggression in Behavioral Parent Therapy (Kazdin, 1987, 1995; Lochman, 1990; Long, Forehand, Wierson, & Morgan, 1994; McMahon & Wells, 1989). These treatments focus on altering the deficient parenting skills and parental aggressiveness that are so often evident in families of aggressive children. In a parent-child parallel group design in the ACT program, the parent's treatment promotes changes in parents' appraisal distortions and social problem-solving deficiencies. As parents change their parental cognition, their children can begin responding to the parents' modelling of more adaptive and competent cognitive processes.

Parents are found to have increasing play-facilitating behaviors such as praising (verbally reinforcing the child during the activity), describing (commenting on what the child is doing and how the child might be feeling), and touching (appropriately touching the child during the activity). In addition, parents also reduce detracting behaviors such as confronting (challenging the child with unnecessary questions during the activity), commands (telling the child what to do during the activity), and criticism (negatively evaluating the child's behaviour during the activity). Parents and children learn and practise prosocial interaction behaviors in joint group sessions such as starting a conversation, participating in activities, sharing, cooperating, asking questions, and listening. Besides, parents learn new parental and management skills through demonstration and role-playing. After acquiring effective skills and parental

practice, parents actually can play a trainer role in providing positive guidance for their children.

It is the first systematic research of studying how to enhance social skills of aggressive early adolescence in Hong Kong based on qualitative and quantitative results. This study demonstrates that the ACT program developed through this research holds good potential for helping aggressive early adolescence and their families to improve such children's management of aggression (Fung, 2004; Fung & Tsang, 2006). There are plenty of contributions in the research, theoretical, and practical aspects: (1) it is the first systematic research of improving prosocial skills for aggressive early adolescence in Hong Kong; (2) it strives to link up separate literature and to design an indigenous intervention program; (3) it offers a multi-method assessment of an early adolescent's aggressive and prosocial behaviour, which provides a platform for further studies in late adolescence aggression and prosocial behaviour; (4) it focuses on the cognitive, affective and behavioral characteristics of the early adolescence; (5) it helps to enhance the understanding of the development of early adolescence with aggressive and prosocial behaviour from multi-perspectives and different points of view; (6) it involves parents in a parent-child parallel-group model; and (7) it is the first study in which the specific targets mainly focused on reactively aggressive children, which provides insight to teachers, professionals, and parents on assessing and dealing with this specific type of early adolescence aggression.

Furthermore, it is the hope of the researcher that the ACT Program will be expanded: (1) to focus on different types of early adolescence with aggressive and prosocial behaviour; (2) to focus on some specialized target groups such as new immigrants from the Mainland; (3) to address with tailor-made anger control treatment programs the different characteristics of each particular school; (4) to provide intensive training for teachers to improve their positive attitudes towards student aggression and enhance their prosocial skills in problem management; (5) to offer professional training for social workers and counsellors in order to strengthen their group facilitating skills; (6) to include elder aggressive youth and adolescents with peers recruited as counsellors and positive role models; and (7) to promote the significance of the parental role in early adolescence aggression, to be more conscious of their parenting style and to help to prevent early adolescence aggression.

Conclusion

The effectiveness of the ACT program is well supported by evidence in this outcome study. This multi-component intervention, child- and parent-focused parallel group, has shown the best gains in reducing early adolescence aggression and enhancing the adolescents' prosocial skills. The level of peer acceptance and positive interpersonal relationships is enhanced and established. This, in turn, diminishes the number of victimized adolescence in school. Most of the aggressors are found to have been bullied by others in the past; therefore, it stops the spread of school violence and hostility.

Although the current research has not included the school system in the intervention program, teachers were involved in the pre- and post-intervention. Teachers reported that the parents tended to have a positive attitude towards

correcting their child's behavioral problems. The parents showed the initiative to contact them for further understanding of their children's performances at school. Teachers found that home-school collaboration and effective teacher-parent communication patterns were established and enhanced.

Tables

Table 1
Mann-Whitney U Test – POC (Rater A vs. Rater B) Pre-test Table

		N	Mean Ranks	U	Z	Sig. Level
Physical Prosocial Behaviors	Rater A	18	18.83	156.0	-.19	#
	Rater B	18	18.17			
Verbal Prosocial Behaviors	Rater A	18	18.31	158.5	-.11	#
	Rater B	18	18.69			

Note: ** p < .01, * p < .05, # ns

Table 2
Mann-Whitney U Test – POC (Rater A vs. Rater B) Post-test & Follow-up Summary Table

		N	Mean Ranks	U	Z	Sig. Level
Physical Prosocial Behaviors Post-test	Rater A	18	17.58	145.5	-.52	#
	Rater B	18	19.42			
Physical Prosocial Behaviors Follow-up	Rater A	18	18.17	156.0	-.19	#
	Rater B	18	18.83			
Verbal Prosocial Behaviors Post-test	Rater A	18	16.94	134.0	-.89	#
	Rater B	18	20.06			
Verbal Prosocial Behaviors Follow-up	Rater A	18	17.86	150.5	-.37	#
	Rater B	18	19.14			

Note: ** p < .01, * p < .05, # ns

Table 3
Mann-Whitney U Test – 2 Experimental Groups vs. Control Group Post-test & Follow-up Summary Table

		n	Mean Ranks	U	Z	Sig. Level
POC – Physical Prosocial Behaviors Post-test	2 Experimental Groups	12	12.17	4.0	-3.00	**
	Control Group	6	4.17			
POC – Physical Prosocial Behaviors Follow-up	2 Experimental Groups	12	11.88	7.5	-2.69	**
	Control Group	6	4.75			
POC – Verbal Prosocial Behaviors Post-test	2 Experimental Groups	12	12.00	6.0	-2.81	**
	Control Group	6	4.50			
POC – Verbal Prosocial Behaviors Follow-up	2 Experimental Groups	12	9.88	31.5	-.43	#
	Control Group	6	8.75			

Note: ** p < .01, * p < .05, # ns

Table 4
Mann-Whitney U Test – Group 1 vs. Group 2 Post-test & Follow-up Summary Table

		n	Mean Ranks	U	Z	Sig. Level
POC – Physical Prosocial Behaviors Post-test	Experimental Group 1	6	6.42	17.5	-.08	#
	Experimental Group 2	6	6.58			
POC – Physical Prosocial Behaviors Follow-up	Experimental Group 1	6	8.67	5.0	-2.11	*
	Experimental Group 2	6	4.33			
POC – Verbal Prosocial Behaviors Post-test	Experimental Group 1	6	7.83	10.0	-1.28	#
	Experimental Group 2	6	5.17			
POC – Verbal Prosocial Behaviors Follow-up	Experimental Group 1	6	7.83	10.0	-1.29	#
	Experimental Group 2	6	5.17			

Note: ** p < .01, * p < .05, # ns

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