



## Evaluation of Parents and Adolescents Communicating Together (PACT): a conflict resolution program

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### Abstract

This study was designed to evaluate *Parents and Adolescents Communicating Together* (PACT), a program based on the skills of the *Wise Ways to Win* conflict resolution model (CRM). Mothers and adolescents participated in this program to enhance their communication skills and to develop effective conflict resolution skills. Multivariate analyses were used to examine whether mothers' and adolescents' understanding of the specific skills of the CRM improved following participation in the program. Results indicated that the program was successful in increasing mothers' and adolescents' abilities to resolve conflict with the aim of finding win-win solutions to problems. Changes in mother-adolescent conflict levels and improvements in communication skills were small, although the participants reported low levels of conflict in the mother-adolescent relationship and reasonable communication skills prior to participation in the program. The *Wise Ways to Win* conflict resolution model appears to be a theoretically sound model for teaching mothers and adolescents effective conflict resolution skills with the aim of creating win-win solutions to problems.

### Keywords

*conflict resolution, parents, parenting, adolescents, evaluation, program evaluation*

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### Introduction

Conflict between parents and adolescents may be detrimental to parent-adolescent relationships and can impact upon adolescent development (Riesch, Bush, Nelson et al., 2000). Frequent and intense parent-adolescent conflict has been implicated in the aetiology and maintenance of adolescent problems such as low self-esteem and drug use (Gonzales, Cauce & Mason, 1996; Mruk, 1999). Research suggests that repeated conflict within the family may train children in aggressive and coercive behaviours that can lead

to negative social consequences for the child (Shek, 1998). Parents may also experience mental health concerns due to parent-adolescent conflict, such as lowered self-esteem, diminished life satisfaction, increased anxiety and depression (Steinberg & Steinberg, 1994). It is important, therefore, that families are equipped to deal with parent-adolescent conflict, to ensure that mental health is maintained and that parent-adolescent relationships are preserved. The developmental stage of adolescence is an appropriate stage for teaching conflict resolution skills. According to the literature, adolescents

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between the ages of 11 and 15 develop the ability to reason in more abstract and logical ways, and they begin to tune in to more subtle signs of others' feelings and deeper interests, recognising what others' actions might mean (Piaget, 1954; Wertheim, Love, Littlefield & Peck, 1992).

Research has shown that if parents and adolescents learn skills to resolve conflict, parent-adolescent disputes can be prevented from escalating into severe relationship difficulties (Riesch et al., 2000). Adolescents who are able to resolve conflict also tend to have good peer relationships and a fulfilled family life (Johnson & Johnson, 2004). Given the positive benefits that can be derived by teaching parents and adolescents conflict resolution skills, it is crucial that programs are constructed and available. Past research has made significant contributions to the identification of the skills needed to resolve conflict (Burton, 1987; DeReuck, 1990; D'Zurilla & Goldfriend, 1971; Fisher & Ury, 1986; Thompson, 1990). Therefore, skills to resolve parent-adolescent conflict should be built on theory and empirical findings from previous research in the area of conflict resolution.

### ***Conflict resolution models and intervention programs***

A number of intervention strategies exist for resolving parent-adolescent conflict. Research confirms that conflict resolution skill deficits are important factors contributing to excessive conflict and family discord (Openshaw, Mills, Adams & Durso, 1992; Robin & Foster, 1989). The most common programs include interventions that focus on teaching appropriate skills to parents and adolescents, including social skills (Openshaw et al., 1992). Many programs include instruction in problem-solving and communication skills, which tend to be effective in non-clinical populations (Riesch et al., 1993; Robin & Foster, 1998; Wood & Davidson, 1993). Programs that include skills training in problem-solving and communication training, plus additional components like anger management and cognitive restructuring, are helpful for parents and adolescents with very specific skill deficits (Foster, 2000; Robin & Foster, 1989). Intervention programs are also available for parents and adolescents seeking

mediation to resolve conflict (Van Slyck, Stern & Newland, 1992).

The main purpose of this study was to evaluate the effectiveness of *Parents and Adolescents Communicating Together* (PACT), an early intervention conflict resolution program designed for parents and adolescents. Components of the *Wise Ways to Win* conflict resolution model (CRM) were incorporated into PACT. *Wise Ways to Win* is an exemplary conflict resolution model that focuses on achieving a mutually acceptable outcome for each person in the dispute. This model was created by the four authors of the books *I Win: You Win* and *Skills for Resolving Conflict* (Wertheim et al., 1992; Wertheim, Love, Peck & Littlefield, 1998). The *Wise Ways* model incorporates a variety of conflict resolution skills that have been empirically validated (Davidson & Versluys, 1999; Feeney & Davidson, 1996) and focus on achieving mutually acceptable outcomes for each person in the dispute. This model uses a problem-solving approach that includes understanding and addressing interests in order to resolve conflict. The core of this model is divided into four main components that represent the different stages of successful conflict resolution: developing expectations for win-win solutions; identifying each party's interests; brainstorming creative options; and combining these options into win-win solutions (Littlefield, Love, Peck & Wertheim, 1993).

Two separate studies have evaluated the validity of the skills prescribed by the *Wise Ways* model to resolve conflict. The findings from Davidson and Versluys (1999) and Feeney and Davidson (1996) support the conflict resolution processes included in the *Wise Ways* model as a basis for creating future conflict resolution programs. Often, anecdotal evidence has been used to support the efficacy of conflict resolution models and programs (Feeney & Davidson, 1996). Very few studies have empirically evaluated the skills behind conflict resolution training models and programs (Feeney & Davidson, 1996; Pruitt, 1981). The *Wise Ways* model fills this void by incorporating a variety of approaches from principles supported in psychological (Feeney & Davidson, 1996) and conflict resolution literature (Burton, 1990; Carnevale & Pruitt, 1992; Fisher & Ury, 1986).

The focus of this study was to evaluate the effectiveness of this early intervention conflict resolution program for mothers and adolescents. Multiple outcome measures were included in this study to meet this aim. It was expected that: program participants trained in the theoretical aspects of the *Wise Ways to Win* CRM should display: (i) increased understanding of the component skills of the model; (ii) greater ability to identify each person's interests in a dispute; (iii) greater ability to brainstorm creative options; (iv) greater ability to combine the brainstormed options into win-win solutions; (v) improved communication skills; and (vi) reduced levels of conflict in the mother-adolescent relationship as compared to a Wait-list Comparison Group.

## Method

### *Design and overview of program evaluation*

This study was a group design. Participants from six secondary schools took part and quantitative and qualitative data were collected through the administration of questionnaires at four time points. An overview of the design is shown in Figure 1.

The evaluation was originally designed so that each participant would complete a questionnaire at all four time points. Participants were allocated to a Wait-list Comparison Group or to an Experimental Group. The program was withheld from the Wait-list Comparison group for two weeks while the Experimental Group participated in the program. The Wait-list Comparison Group would then attend the same program as the Experimental Group. Due to attrition, the pre- to post-program to follow-up analyses included a reduced group of mothers and adolescents, with insufficient numbers to perform statistical analyses.

Two weeks pre-program/ Baseline	Pre-program	Post-program	Follow-up
2 weeks	2 weeks Program implementation		4 weeks

**Figure 1. Design of program evaluation**

### *Participants*

Mothers and adolescents volunteered to participate in this study after being notified about the conflict resolution program by the adolescents' schools. Six programs were conducted, each with 20 to 30 participants (adolescents and their mothers). A total of 86 mothers and 86 adolescents began participation in PACT. Of these, 50 mothers and 46 adolescents completed the evaluation component of this study. Some participants had missing data or did not complete a questionnaire at each time point. The adolescents were in Year 9 or Year 10, aged between 14 and 16 years, and 62% were female. Preliminary analyses revealed limited gender differences between boys or girls on the key variables of interest. Mothers were aged between 36 and 62 years (one attendee was an adolescent's grandmother). On average, mothers had a TAFE/tertiary level of education. Preliminary analyses revealed no differences between Year 9 and Year 10 adolescents' scores on key variables, therefore all data was included in the analyses. According to socio-economic information provided by the school welfare coordinators, two of the schools were in upper middle class areas, two in middle-class areas and two in working-class areas.

### *Measures*

#### *Conflict Behaviour Questionnaire (CBQ) (Robin & Foster, 1989)*

The CBQ provides a general estimate of how much conflict and negative communication parents and adolescents engage in at home. The shorter CBQ-20, used in this study, retains the 20 items from the CBQ that maximally discriminate distressed from non-distressed families; it yields a single summary score that correlates .96 with the scores from the long form (Robin & Foster, 1989). The CBQ-20 is a self-report measure of both negative and positive (reversed for scoring) behaviours. The Adolescent Version was adapted for this study by replacing the words 'mother or father' by the word 'mother' as the focus of this study was conflict with mothers only. Examples of the items include 'My mother often seems angry with me' and 'My mother is defensive when I talk to her' (rated as 'true' or 'false' for the adolescent in the last two weeks). The Mother Version of this questionnaire did not require

adaptation of the wording. A score is obtained by allocating one point for each response indicating the presence of negative behaviour or the absence of positive behaviour (range 0 to 20) (Robin & Foster, 1989). A high score indicates a high level of conflict. Psychometric characteristics of the CBQ-20 include internal consistencies (coefficient alphas) of .90 and above for mother and adolescent reports on the scale (Robin & Foster, 1989). In the current study, the Cronbach alpha coefficient across each time point was above .90 for mothers and above .82 for adolescents.

***Parent Adolescent Communication Scale (PACS)***  
(Olson, McCubbin, Barnes et al., 1985)

PACS is a 20-item questionnaire with both parent and adolescent versions. It has two subscales: Open Family Communication and Problems in Family Communication. Each scale has ten items that are worded either positively (e.g., 'I can discuss my beliefs with my mother without feeling restrained or embarrassed') or negatively (e.g., 'I don't think I can tell my mother how I really feel about some things'). The Adolescent Version was adapted for this study by replacing the words 'mother or father' by the word 'mother' as the focus of this study was on mothers only. Items are rated on a 5-point Likert type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Although the total scale score (range 20 to 100) is generally used, it is possible to use the scores from each subscale separately. Higher scores indicate better communication skills. The reported alpha reliability is .87 for the Open Family Communication scale and .78 for the Problems in Family Communication scale. In the current study, the Cronbach alpha coefficients on the Open Family Communication scale were .84 for mothers and .89 for adolescents and on the Problems in Family Communication scale were .75 for mothers and .80 for adolescents. The reported test-retest reliabilities are .78 and .77 respectively (Hartos & Power, 1997; Pink & Wampler, 1985).

***Conflict Resolution Model Skills (CRMS)***

Four questions were developed to measure participants' understanding of the conflict resolution skills outlined by the *Wise Ways to Win* model. The CRMS consists of scenarios about conflict situations that occur between

parents and adolescents. Participants were instructed to consider two conflict scenarios. Each scenario was followed by four questions that referred to the conflict resolution skills outlined by the CRM (identifying interests, brainstorming options and creating win-win solutions) to examine participants' understanding of the model. Conflict scenarios were created based on a review of the extensive literature in the area of mother-adolescent conflict situations (see Arnett, 1999; Dowdy, & Kliever, 1998; Moshman, 1999; Robin, & Foster, 1998; Smetana, 1988). Twenty postgraduate students in psychology participated in a trial of the CRMS after being taught the *Wise Ways to Win* CRM. They responded to questions for each conflict scenario. One question was later revised and another eliminated because of difficult wording or ambiguity. The CRM skills were separated into four variables and labelled *general understanding of model, identifying interests, brainstorming options, and creating win-win solutions*. Participants were asked to provide short answers to questions that examined their knowledge of each variable.

Question 1 of the inventory assessed participants' ability to report their *general understanding of model*. Participants were asked: 'What is the process you should take to resolve an argument between you and your son/daughter [alternatively, you and your mother]?' There were four steps involved in this process and participants earned one point for each step identified (recognise each person's position, identify interests, brainstorm options, and create win-win solution). Each step was rated on a 2-point scale (0 = concept not present; 1 = concept present), for a maximum of 4.

Question 2 assessed participants' ability to *identify interests*. Scores for Questions 2a ('In the space below, list as many things as you can think of that the argument in Scenario A might really be about for you') and Question 2b ('In the space below, list as many things that you can think of that the argument in Scenario A might really be about for your son/daughter [alternatively mother]') were combined to assess the variable. Each response was rated in two separate parts; the first examined the number of interests participants could identify, and the

second examined the depth of the interests that participants identified. Part 1 was rated on a 3-point scale (0 = no interest present; 1 = one interest present; 2 = two or more interests present). Part 2 was rated on a 3 point scale (0 = no understanding of interests; 1 = surface interest identified; 2 = underlying interest identified). T-tests revealed no difference in participants' ability to generate quantity of interests compared to quality of interests; therefore, the two parts were summed to generate a single score reflecting understanding/identifying interests, with a possible outcome out of 4 for each question, for a maximum score of 8.

Question 3 assessed participants' ability to *brainstorm options*. Participants were asked, 'Imagine that you and your son/daughter (mother) sit down to try to solve the problem in Scenario A. In the space below, create a list of options of what could be done to solve this argument.' The answers were split into two separate parts; the first examined the number of brainstormed options that included interests for the adolescent, and the second examined the number of options that included interests for the mother. Part 1 and 2 were rated on a 3-point scale (0 = no interest identified; 1 = one interest identified; 2 = two or more interests identified) with a possible outcome score of 4.

Question 4 assessed participants' ability to *create a win-win solution*. Participants were asked, 'What is a good solution to the problem in Scenario A?' The assessment of the answer to this question was split into two separate parts; the first examined the number of interests met for the adolescent in the win-win solution, and the second examined the number of interests met for the mother in the win-win solution. Part 1 and 2 were rated on the same 3-point scale outlined for Question 3. Higher scores on each CRMS variable indicated a better understanding of the variable.

The Cronbach alpha coefficients for general understanding of model, identifying interests, brainstorming options, and creating win-win solutions were above .53, .74, .60 and .45 for mothers respectively, and above .46, .86, .55 and .61 for adolescents respectively, across each time point. Some of the Cronbach alpha coefficients are low; however, this is the first time that this measure has been used in a study. The four items

of the CRMS were subjected to principal component analysis (PCA) using SPSS. PCA revealed the presence of four significant components. Varimax rotation was then performed, showing four distinct components that each accounted for almost a quarter of the variance. Further research that explores the use of this measure to assess the conflict resolution processes outlined by the *Wise Ways to Win* CRM needs to be replicated with a larger sample and further validation of the scale.

## **Procedure**

### **Program development**

PACT (Burke, Littlefield, Woolcock et al., 2001) was designed as a group program for secondary school students between the ages of 13 and 17, and their parents, to teach skills for resolving conflicts. Through workshops, leaders were trained to administer this program. The program was developed and funded by the Exploring Together Program while located at the Parenting Research Centre (formerly the Victorian Parenting Centre) in Melbourne, Australia. It was based on the *Wise Ways to Win* CRM.

### **Structure of PACT**

The program consists of a session for adolescents, a parent evening, another session for adolescents, then a combined parent-adolescent evening. The sessions last for 2 hours (plus homework). The parent-adolescent evening needs to take place after all the other sessions.

*Adolescent sessions (sessions 1 and 3).* The adolescent sessions aim to provide adolescents with skills to manage conflict with their mothers. Adolescents are taught how to set the scene to engage others to participate in cooperative problem-solving. They are also taught skills to identify their own and the other parties' positions and interests in a dispute, how to generate multiple solutions to a dispute using brainstorming skills, and how to combine several brainstormed options into a win-win solution. In addition, communication skills and management of negative emotions are taught. These concepts are taught through group activities, role-play, and by working through examples on a whiteboard.

*Parent evening (session 2).* This session provides mothers with the opportunity to share their experiences of parenting adolescents with

one another. Mothers are provided with information about the developmental changes of adolescence that may cause conflict, are taught communication skills and given an overview of the *Wise Ways to Win* conflict resolution model that is taught to their adolescents. These concepts are taught by working through examples on a whiteboard and through activities.

*Parent/adolescent evening (session 4)*. This evening aims to reinforce the learning of the *Wise Ways to Win* conflict resolution model. It also provides an opportunity for parents and adolescents to set the scene for engaging in negotiation and to try out conflict resolution skills. Leaders discuss techniques for managing negative emotions. Mothers and adolescents form small groups and work through a conflict situation using the skills of the *Wise Ways to Win* conflict resolution model. Mothers and adolescents use role-play scenarios to promote the use of effective communication skills.

#### **Program implementation**

Leaders were selected through formal interview and had a background in either psychology or social work. To obtain a sample of Year 9/10 adolescent-mother dyads, public and private schools in the metropolitan Melbourne area were approached. Letters were sent to school principals and student welfare coordinators inviting their schools to participate in the research study. Two government schools, one Catholic school and three private schools agreed to participate in this study. Each school assigned a contact person to assist in the implementation of the study (usually the student welfare coordinator). The schools were required to provide the necessary facilities for the program, including a large room, overhead projector, white board, and seating for the participants. The

rooms provided for the adolescent sessions were generally located away from the main thoroughfare of the school to minimise distractions.

Schools sent letters to each of their Year 9/10 students' families, explaining the research study and inviting them to participate. Families that were interested in participating in the study returned an enrolment form to the school office. The school contact person then provided the researcher with a copy of each enrolment form to allow the researcher to contact participants by mail. Questionnaires were then distributed or mailed out to participants.

#### **Results**

A MANOVA was performed to compare the Wait-list Comparison Group and Experimental Group scores for adolescents and mothers on the CRM. Four dependent variables derived from the CRM were: General understanding of model, identifying interests, brainstorming options, and creating win-win solutions. Table 1 provides a summary of results.

A comparison of the results of the Wait-list Comparison Group and Experimental Group indicates that the Experimental Group significantly improved on the CRM variables pre- to post-program. Figure 2 displays the changes in means between the Experimental (pre- to post-program) and Wait-list Comparison (two weeks pre- to pre-program) Groups on the four measures. An inspection of the mean scores confirms the findings that the Experimental Group mothers' and adolescents' knowledge of the conflict resolution processes involved in the CRM improved significantly compared to the Wait-list Comparison Group.

**Table 1. Differences in CRMS scores for Wait-list Comparison Group and Experimental Group**

<b>Source</b>	<b>df</b>	<b>F</b>	<b>p</b>	<b>Partial eta squared</b>
<b>Time * Experimental/Wait-list Control</b>	4,55	14.6	< .001	.57
General understanding of model				
Identifying interests				
Brainstorming options				
Creating win-win solutions				

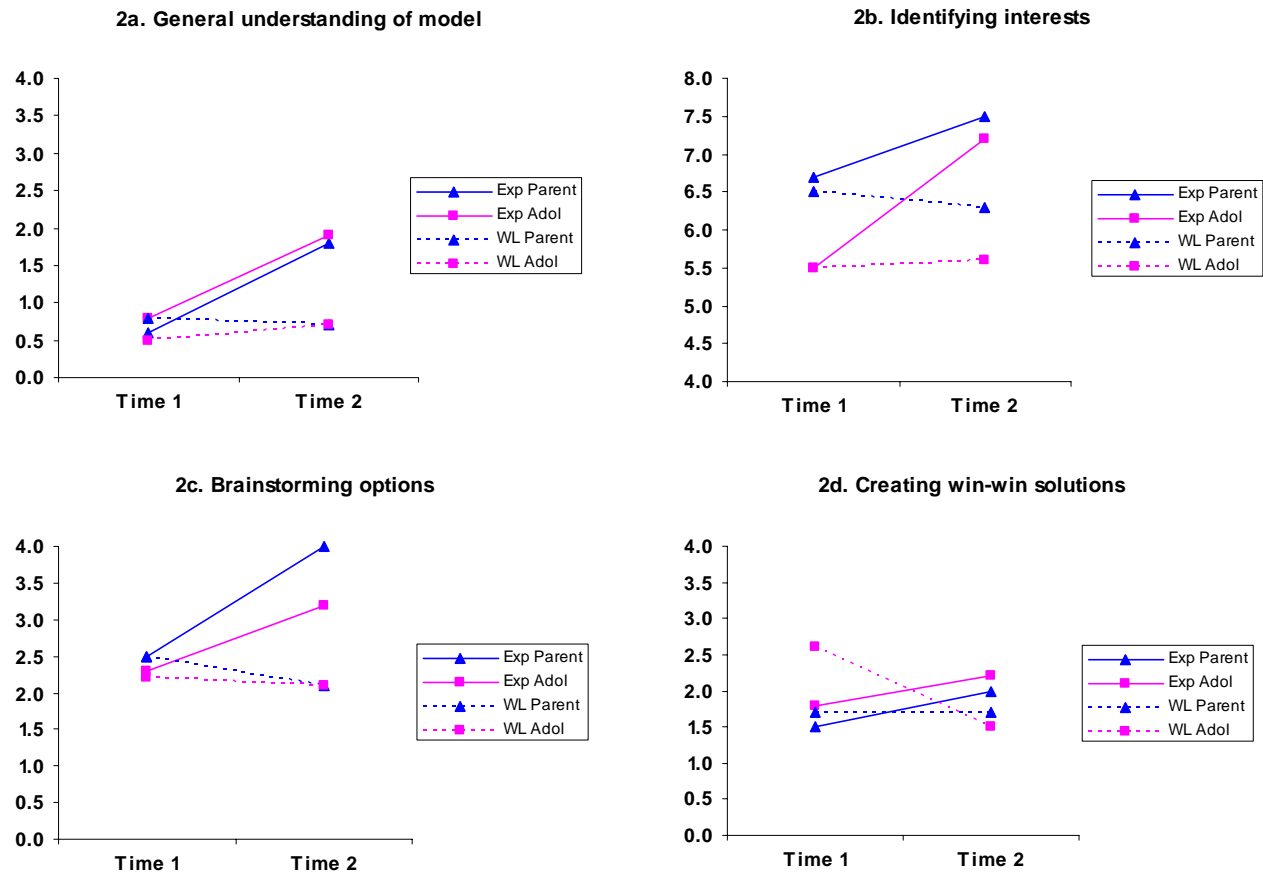


Figure 2. Experimental and Wait-list Control Group scores for parents and adolescents on each of four measures to assess the conflict resolution model

Post-hoc analyses were performed following the guidelines of Hochberg and Tamhane (1987). Paired sample t-tests were conducted for both the Experimental and Wait-list Comparison Groups to investigate which pair wise comparisons were statistically different. Using Bonferroni adjustment, the alpha level was set at .0125 (four variables divided by .05) to test for statistical significance. The Experimental Group's (mothers and adolescents) skills significantly improved on each CRM variable pre- to post-program, with the exception of mothers' skills on the 'creating win-win solutions' variable.

Despite participation in PACT, the Experimental Group's scores on CBQ and PACS did not change significantly at post-program compared to the Wait-list Comparison Group. This finding is not surprising considering participants had low levels of conflict and reasonably well-established communication skills at the start of the program.

Both mothers and adolescents in the Experimental Group and Waitlist Control Group scored similar to normative samples on the CBQ prior to participation in PACT (mothers,  $M = 7.9$ ,  $SD = 5.7$  and adolescents,  $M = 6.8$ ,  $SD = 7.3$ ) and PACS (mothers,  $M = 75.5$ ,  $SD = 11.1$  and adolescents  $M = 66.6$ ,  $SD = 12.1$ ).

## Discussion

This study was designed to evaluate *Parents and Adolescents Communicating Together* (PACT), a prevention/early intervention program designed to teach mothers and adolescents effective conflict resolution skills.

As expected, the Experimental Group trained in the skills of the CRM performed significantly better than the Wait-list Comparison Group in applying the integrative conflict resolution processes of the CRM. The Experimental Group

participants displayed an increased understanding of the component skills of the CRM, a greater ability to identify interests, a greater ability to brainstorm creative options, and a greater ability to combine the brainstormed options into win-win solutions. An exception to this was that the Experimental Group mothers' scores on the skill 'creating win-win solutions' were not shown to improve significantly over the course of the program. The effect sizes were generally in the moderate to large range, indicating a fairly strong treatment effect. Overall, the improvements in mothers' and adolescents' understanding of the skills of the CRM were consistent with the hypothesis that participants who completed PACT significantly improved on CRM skills, as compared to a Wait-list Comparison Group.

These results confirm the importance of this model as a basis for a conflict resolution program that can train participants to engage effectively in integrative conflict resolution strategies. Participants who have learned the theoretical components of this model are equipped with skills that can help them to reach win-win solutions. According to the conflict resolution literature, the benefits of obtaining win-win solutions may be longer lasting if both parents and adolescents feel that they have been treated fairly and that their interests have been addressed. Additional benefits include enhanced parent-adolescent relationships and giving participants a sense of mutual satisfaction (Carnevale & Pruitt, 1992; Thompson, 1990; Wertheim et al., 1992).

The results of this PACT evaluation are consistent with those of other investigations that have evaluated different programs based on the *Wise Ways to Win* CRM. Both the Feeney and Davidson (1996) experimental study and the Davidson and Versluys (1999) experimental study evaluated university students trained in a short-term conflict resolution program based on the core skills of the *Wise Ways to Win* CRM compared to control groups. Results of both studies showed that trained participants performed better than control groups in each skill area of the model. The Davidson and Versluys (1999) study further emphasises that participants' performance is enhanced if they are trained in all of the skills in the model, rather

than just in its individual components. The consistency of findings between these two studies and the current research further validates the individual theoretical components of the *Wise Ways to Win* CRM.

The hypothesis that participants trained in PACT would show improved communication skills compared to a Wait-list Comparison Group was not supported. It is possible that a significant improvement did not occur because participants' communication skills were in the normal range prior to participation in the program. It would be interesting for further studies to assess whether populations that are experiencing marked communication difficulties improve their communication skills after participating in PACT.

The hypothesis that participants trained in PACT would show reduced levels of conflict, compared to the Wait-list Comparison Group, was also not supported. The effect size was small, indicating no treatment effect. It is possible that participants need to have elevated levels of conflict prior to participation in programs in order to see significant reductions on this measure. This study did not set criteria for participants to be pre-screened for levels of conflict. As the current study was designed to evaluate a prevention/early intervention program that sampled a non-clinical school population, and the major aim of the study was to teach skills to resolve conflict if the need arose, it is not surprising that both mothers and adolescents scored in the normal range on the measure of conflict prior to participation in the program. However, it would be informative for future studies to sample distressed populations to determine whether participants experience reduced levels of conflict following participation in this program.

### **Limitations**

While this study provided valuable information regarding the specific skills that mothers and adolescents acquired by attending PACT, it has some limitations. Firstly, while this program was made available to every mother and adolescent of Year 9 and 10 students at the schools, mothers and adolescents volunteered to participate in this study and could not be randomly assigned to the Experimental and Wait-list Comparison Groups.

In this study, groups were formed based on the timing of each school's ability to participate in the study. It was considered preferable to include a Wait-list Comparison Group, albeit with non-random assignment of participants, rather than not to provide a comparison group. Data for the present study were collected over a two-year period; therefore, it was not feasible to obtain a larger sample with random assignment of participants. Ideally, future studies should endeavour to randomly assign participants to an Experimental Group and a Wait-list Comparison Group in order to ensure that no systematic differences exist between the groups at the pre-program stage. Fortunately in this study, a test indicated there were no significant differences between the groups on any of the key variables prior to the program commencing.

The current study only includes mothers and adolescents. Previous research suggests that adolescents experience more frequent conflicts with their mothers (Collins, 1990; Montemayor, 1983) but that conflict does exist in father-adolescent relationships and it is desirable for all family members to learn conflict resolution skills (Adams & Laursen, 2001; Riesch et al., 2000; Shek, 1998). Therefore, the inclusion of fathers should be considered in further program development and evaluation research. Unfortunately, it was not possible to include fathers in this particular study, due to limitations of time and economic resources. The Conflict Resolution Model Skills (CRMS) measure would also benefit from further validation.

It would be preferable for this program to be incorporated into the secondary school curriculum, rather than offering it only to families able to participate at specified times. If this was done, each adolescent would be assured of an opportunity to learn effective conflict resolution skills. Research suggests that teaching adolescents conflict resolution skills can enhance their self-concepts and may have a long-term positive impact on academic, social and psychological well-being (Johnson & Johnson, 1996). Parents would be invited to attend the parent-only and combined parent-adolescent sessions. The program structure could be modified to allow more numerous but shorter adolescent sessions to ensure that adolescents have increased time outside of the program to

incorporate and practice each skill. Teachers and student welfare coordinators could be trained to implement this program in school settings, thus generalising the skill set beyond the parent-adolescent dyad.

### ***Real world advantages***

A benefit of having evaluated PACT with mothers and adolescents is that the results of this study can be generalised more extensively than other studies that examine conflict resolution skills using subjects from university populations (e.g., Feeney & Davidson, 1996). The problem of obtaining samples from university populations is that they may be unrepresentative of the general population. PACT was of direct value to participating mothers and adolescents as they have been equipped with skills to manage conflict if the need arises. Schools also benefit because adolescents can generalise the conflict resolution skills that they have learned to their relationships with peers and teachers. Furthermore, providing adolescents with conflict resolution skills helps to prevent intolerant, antisocial and violent behaviours, and can lead to the enhancement of adolescents' well being and improved conflict resolution both at home and school (Johnson & Johnson, 2001). A further advantage of evaluating PACT in school settings is the building of relationships between academic researchers, school personnel, students and families. This in turn promotes a culture for evidence-based interventions in schools. Furthermore, some conflict resolution theorists would suggest that it is important to teach adolescents cooperative approaches to handle conflict so that problem-solving can become the expectation and norm within the next generation of society (Wertheim et al., 1998).

### ***Summary and conclusions***

The current research has provided preliminary evidence for the effectiveness of the conflict resolution processes involved in the *Wise Ways to Win* CRM and adds to the body of existing evidence that supports the use of this model as a basis for training in conflict resolution (Davidson & Versluys, 1999; Feeney & Davidson, 1996). PACT appears to have facilitated acquisition of the conflict resolution skills prescribed by the *Wise Ways to Win* CRM, thus the major aim of this study was met. However, little evidence emerged for

improvement in communication or reduced levels of mother-adolescent conflict.

Teaching conflict resolution processes outlined by the *Wise Ways to Win CRM* to mothers and adolescents is proactive and preventative, with an aim of providing individuals with strategies to enhance and preserve family relationships. Relationships can suffer if conflict is not managed effectively; therefore, it is important for investigators to continue to devote effort to the study of parent-adolescent relationship problems. Issues have been raised in this study that could be addressed by investigators interested in the amelioration of parent-adolescent conflict.

## References

- Adams, R. & Laursen, B. (2001). The organization and dynamics of adolescent conflict with parents and friends. *Journal of Marriage and Family*, 63(1), 97-110.
- Arnett, J.J. (1999). Adolescent storm and stress, reconsidered. *American Psychologist*, 54, 317-326.
- Burke, S., Littlefield, L., Woolcock, C., Soltys, M., & Walsh, B. (2001). *Parents and Adolescents Communicating Together: A Facilitator's Manual*. Melbourne, Victoria: Exploring Together Program.
- Burton, J. W. (1990). *Conflict: Human Needs Theory*. London: Macmillan Press.
- Burton, J.W. (1987). *Resolving Deep Rooted Conflict: A Handbook*. Lanham, MD: University Press of America.
- Carnevale, P.J. & Pruitt, D.G. (1992). Negotiation and mediation. *Annual Review of Psychology*, 43, 531-582.
- Collins, W. (1990). Parent-child relationships in the transition to adolescence: Continuity and change in interactions, affect, and cognition. In R. Montemayor, G.R. Adams, & T.P. Gullotta (Eds.), *From Childhood to Adolescence: A Transitional Period?* (pp. 85-106). Newbury Park, CA: Sage.
- Davidson, J. & Versluys, M. (1999). Effects of brief training in cooperation and problem solving on success in conflict resolution. *Peace and Conflict: Journal of Peace Psychology*, 5, 137-148.
- De Reuck, A. (1990). A theory of conflict resolution by problem-solving. In J. Burton & F. Dukes (Eds.), *Conflict: Readings in Management and Resolution* (pp. 183-198). Basingstoke: Macmillan.
- Dowdy, B. & Kliewer, W. (1998). Dating, parent-adolescent conflict, and behavioural autonomy. *Journal of Youth and Adolescence*, 27, 473-492.
- D'Zurilla, T. & Goldfried, M. (1971). Problem solving and behavior modification. *Journal of Abnormal Psychology*, 78, 107-126.
- Feeney, M.C. & Davidson, J.A. (1996). Bridging the gap between the practical and the theoretical: An evaluation of a conflict resolution model. *Peace and Conflict: Journal of Peace Psychology*, 2, 255-269.
- Fisher R. & Ury, W. (1986). *Getting to Yes: Negotiating Agreements Without Giving In*. London: Hutchinson Business.
- Foster, S. (2000). *Negotiating Adolescence: A Behavioral Family Systems Approach to Parent-Adolescent Conflict*. Workshop presentation at 'Helping Families Change' Conference, Brisbane, Australia, February 17-19.
- Gonzales, N.A., Cauce, A.M., & Mason, C.A. (1996). Inter-observer agreement in the assessment of parental behavior and parent-adolescent conflict: African American mothers, daughters, and independent observers. *Child Development*, 67, 1083-1104.
- Hartos, J.L. & Power, T.G. (1997). Mothers' awareness of their early adolescents' stressors: Relation between awareness and adolescent adjustment. *Journal of Early Adolescence*, 17, 371-389.
- Hochberg, Y. & Tamhane, A. (1987). *Multiple Comparison Procedures*. New York: John Wiley & Sons.
- Johnson, D. & Johnson, R. (1996). Conflict resolution and peer mediation programs in elementary and secondary schools: A review of the research. *Review of Educational Research*, 66(4), 459-506.
- Johnson, D. & Johnson, R. (2001). *Teaching Students to be Peacemakers: A Meta-Analysis*. Paper presented at American Education Research Association (AERA) Annual Meeting, 'What we know and how we know it', Seattle, Washington, April 10-14.
- Johnson, D. & Johnson, R. (2004). Implementing the 'Teaching students to be peacemakers program'. *Theory into Practice*, 43(1), 68-79.
- Littlefield, L., Love, A., Peck, C., & Wertheim, E. (1993). A model for resolving conflict: Some theoretical, empirical and practical implications. *Australian Psychologist*, 28, 80-85.
- Montemayor, R. (1983). Parents and adolescents in conflict: All families some of the time and some families most of the time. *Journal of Early Adolescence*, 3, 83-103.
- Moshman, D. (1999). *Adolescent Psychological Development: Rationality, Morality and Identity*. New Jersey: Lawrence Erlbaum Associates, Publishers.

- Mruk, C. (1999). Assessment of family function and social support. In L. Cushman (Ed.), *Psychosocial Assessment in Medical Rehabilitation* (pp. 275-297). Washington, DC: American Psychological Association.
- Olson, D., McCubbin, H., Barnes, H., Larsen, A., Muxen, M., & Wislon, M. (1985). *Family Inventories: Inventories Used in a National Survey of Families Across the Family Life Cycle*. St. Paul: University of Minnesota.
- Openshaw, D.K., Mills, T.A., Adams, G.R., & Durso, D.D. (1992). Conflict resolution in parent-adolescent dyads: The influence of social skills training. *Journal of Adolescent Research*, 7, 457-468.
- Piaget, J. (1954). *The Construction of Reality in the Child*. New York: Basic Books.
- Pink, J.E. & Wampler, K.S. (1985). Problem areas in stepfamilies: Cohesion, adaptability, and the stepfather-adolescent relationship. *Family Relations – Journal of Applied Family & Child Studies*, 34, 327-335.
- Pruitt, D.G. (1981). *Negotiation Behavior*. New York: Academic.
- Riesch, S., Bush, L., Nelson, J., Ohm, B., Portz, B., Wighman, R., & Jenkins, P. (2000). Topics of conflict between parents and young adolescents. *Journal of the Society of Paediatric Nurses*, 5(1), 27-39.
- Riesch, S.K., Tosi, C.B., Thurston, C.A., McNally Forsyth, D., Stack Kuenning, T., & Kestly, J. (1993). Effects of communication training on parents and young adolescents. *Nursing Research*, 42, 10-16.
- Robin, A. & Foster, S. (1989). *Negotiating Parent-Adolescent Conflict*. New York: The Guilford Press.
- Robin, A. & Foster, S. (1998). Parent-adolescent conflict and relationship discord. In E.J. Mash & R.A. Barkley (Eds.), *Treatment of Childhood Disorders* (pp.601-646). New York: The Guilford Press.
- Shek, D.T. (1998). A longitudinal study of the relations between parent-adolescent conflict and adolescent psychological well-being. *The Journal of Genetic Psychology*, 159, 1, 53-67.
- Smetana, J.G. (1988). Adolescents' and parents' reasoning about actual family conflict. *Child Development*, 60, 1052-1057.
- Steinberg, L. & Steinberg, W. (1994). *Crossing Paths: How Your Child's Adolescence Triggers Your Own Crisis*. New York: Simon & Schuster.
- Thompson, L. (1990). Negotiation behaviour and outcomes: Empirical evidence and theoretical issues. *Psychological Bulletin*, 108, 515-532.
- Van Slyck, M., Stern, M., & Newland, L. (1992). Parent-child mediation: An empirical assessment. *Mediation Quarterly*, 10, 75-88.
- Wertheim, E., Love, A., Littlefield, L., & Peck, C. (1992). *I Win – You Win: How to Have Fewer Conflicts, Better Solutions and More Satisfying Relationships*. Ringwood, Victoria: Penguin.
- Wertheim, E., Love, A., Peck, C., & Littlefield, L. (1998). *Skills for Resolving Conflict*. Melbourne, Victoria: Eruditions Publishing.
- Wood, C. & Davidson, J. (1993). Conflict resolution in the family: A PET evaluation study. *Australian Psychologist*, 28, 100-104.