

**MODERATORS OF CHILDREN'S EXPOSURE TO
INTERPARENTAL CONFLICT: CONTROL AND ROLE
RESPONSIBILITY BELIEFS**

by

Renée Lili Patenaude

B.A., University of British Columbia 1989

M.A., Simon Fraser University 1995

**Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy**

in the Department
of
Psychology

© Renée Lili Patenaude, 2000

SIMON FRASER UNIVERSITY

April, 2000

All rights reserved.
This work may not be reproduced in whole or part, by
photocopy or
other means, without permission of the author.



National Library
of Canada

Acquisitions and
Bibliographic Services

395 Wellington Street
Ottawa ON K1A 0N4
Canada

Bibliothèque nationale
du Canada

Acquisitions et
services bibliographiques

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file *Votre référence*

Our file *Notre référence*

The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

L'auteur conserve la propriété du droit d'auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

0-612-51910-4

Canada

ABSTRACT

The present study examined the moderational effects of children's role responsibility beliefs and control beliefs, in the context of protector and caretaker roles, on the relationship between exposure to interparental conflict and child adjustment. Role responsibility beliefs were defined as the extent to which children believe that they should take on a parentified role in relation to their parent. The Control and Role Responsibility Scale (CARRS; Patenaude & Kerig, 1997) was developed to measure these beliefs. A Principle Components Analysis (Direct Quartimin rotation) of the CARRS items indicated the presence of three factors that were labelled Role Responsibility, Control over Protecting and Control over Caretaking. Moderational effects were tested using hierarchical multiple regression (Baron & Kenny, 1986). The Role Responsibility factor was found to moderate the relationship between exposure to interparental conflict and both mother-reported and child-reported internalizing problems for girls only. At the highest level of role responsibility beliefs, mothers' reports and girls' reports of internalizing problems decreased as exposure to interparental conflict increased. The Control over Protecting factor was found to moderate the relationship between exposure to interparental conflict and mother-reported child externalizing problems for girls only. At the highest level of control over protecting beliefs, mothers' reports of externalizing behaviour also decreased as girls' exposure to interparental conflict increased. Finally, no moderational effects for the Control over Caretaking factor were found.

DEDICATION

This dissertation is gratefully dedicated to my wonderful parents, Maurice and Lilie Patenaude. They have been behind me all the way, and I thank them from the bottom of my heart.

ACKNOWLEDGEMENTS

I would like to take this opportunity to thank the many people without whom I would have found completing my dissertation very difficult, if not impossible. I am very grateful to my supervisors, Marlene Moretti and Ray Koopman, who have been an indescribable help and comfort during the completion of my project. I also thank Meredith Kimball for agreeing to step in at the last minute on my committee. I thank my external examiners Drs. Marion Ehrenberg and Jeremy Carpendale, and I thank Dr. Michael Coles for acting as my committee chairperson. On a personal level, I thank Leanne and Bob Dalton, and Sean Edwards for supporting and encouraging me to work hard. I thank my wonderful support group of fellow graduate students, who listened to me when I was most frustrated and discouraged. A big thank you goes to Corina Brown, my collaborator on the Kids in Divorce and Separation Research Project, who was always responsible and dedicated to our joint endeavour. I also thank Jessica Stanley, Melanie McConnell, and Tasha Embree for their invaluable assistance to the project. I thank my computer support person, Elizabeth Michno, for her humour and patience with me; and Bev Davino and Lorie Tarcea for guiding me through the administrative necessities of the Psychology Department during my stay there. Finally, I thank all the graduate students who were indispensable to the project for their excellent work as Kids Group leaders, as well as all the parents and children who made this project possible.

TABLE OF CONTENTS

Approval.....	ii
Abstract.....	iii
Dedication.....	iv
Acknowledgements.....	v
Table of Contents	vi
List of Tables	ix
List of Figures.....	x
Introduction	1
Divorce and Interparental Conflict and Their Influence on Child Adjustment.....	1
The Importance of Process Models	3
The Cognitive-Contextual Model.....	4
Control Beliefs	5
Role Responsibility Beliefs.....	6
Children's Roles in their Parents' Relationship: Protectors and Caretakers	9
Gender Differences in the Moderational Impact of Protector and Caretaker	
Roles: Theoretical Contributions	12
The Present Study.....	13
Method	15
Participants.....	15

Child Measures.....	18
Parent Measures	23
Procedure.....	24
Results	25
Establishing the Factor Structure of the CARRS.....	25
Factor Structure Invariance Across Gender	26
Exploratory Factor Analyses of the CARRS.....	28
Pearson Correlations of the CARRS Factors with Children's Reports of Their Interventions into Interparental Conflict.....	30
Relationship of the CARRS Factors to Age, Gender and Time	31
Relationship of the CARRS Factors to Self-Blame and Threat.....	31
Investigation of Moderational Effects Using Hierarchical Multiple Regression.....	32
Role Responsibility Beliefs as a Moderator of the Relationship Between Exposure to Interparental Conflict and Child Internalizing Problems	33
Role Responsibility as a Moderator of the Relationship Between Exposure to Interparental Conflict and Child Externalizing Problems.....	40
Control over Protecting Actions as a Moderator of the Relationship Between Exposure to Interparental Conflict and Child Internalizing Problems.	41
Control Over Protecting Actions as a Moderator of the Relationship Between Exposure to Interparental Conflict and Child Externalizing Problems	41
Control Over Caretaking Actions as a Moderator of the Relationship Between Exposure to Interparental Conflict and Child Internalizing Problems	43
Control Over Caretaking Actions as a Moderator of the Relationship Between Exposure to Interparental Conflict and Child Externalizing Problems	44

Discussion	45
Limitations of the CARRS	53
Limitations of the Moderational Analyses	54
Exploratory Analyses	56
Directions for Future Research	58
Concluding Remarks	59
References	62
Appendix A	69
Tables	69
Appendix B	79
Control and Role Responsibility Scale (CARRS) – Practice Questions	79
Control and Role Responsibility Scale (CARRS)	80
Appendix C	84
Children’s Interventions into Interparental Conflict	84
Appendix D	85
Kids In Divorce and Separation Study	85
Information Sheet For Parents	85
Informed Consent Form For Mothers/Guardians	87
Informed Consent For Minors By Mothers/Guardians	88

LIST OF TABLES

Table 1: Demographic Information.....	69
Table 2: Comparison of Items from the Discord Control and Coping Questionnaire and the Control and Role Responsibility Scale	70
Table 3: Pattern Matrix of a Three Factor Solution of the CARRS Items Using Principle Components Analysis with a Direct Quartimin Rotation for Boys and Girls Separately	71
Table 4: Pattern Matrix for a Four Factor Solution of the CARRS Items Using Principle Components Analysis With a Direct Quartimin Rotation.....	72
Table 5: Pattern Matrix for a Three Factor Solution of the CARRS Items Using Principle Components Analysis with a Direct Quartimin Rotation.....	73
Table 6: Pearson Correlations Among CARRS Factors	74
Table 7: Pearson Correlations of CARRS Factors with Child-Reported Interventions into Interparental Conflict	75
Table 8: Pearson Correlations of CARRS Factors with Child Age, Child Gender, and Time Since the Child's First Knowledge of the Separation.....	76
Table 9: Means, Standard Deviations, and Ranges of Child Adjustment Variables	77
Table 10: Summary of the Moderational Effects of the CARRS Factors on the Relationship Between Exposure to Interparental Conflict and Child Adjustment.....	78

LIST OF FIGURES

<u>Figure 1: Effect of Role Responsibility Beliefs on the Relationship Between Children's Exposure to Interparental Conflict and Mother-Reported Child Internalizing Problems for Boys</u>	35
<u>Figure 2: Effect of Role Responsibility Beliefs on the Relationship Between Children's Exposure to Interparental Conflict and Mother-Reported Child Internalizing Problems for Girls</u>	36
<u>Figure 3: Effect of Role Responsibility Beliefs on the Relationship Between Children's Exposure to Interparental Conflict and Child-Reported Anxiety for Boys</u>	37
<u>Figure 4: Effect of Role Responsibility Beliefs on the Relationship Between Children's Exposure to Interparental Conflict and Child-Reported Anxiety for Girls</u>	38
<u>Figure 5: Effect of Role Responsibility Beliefs on the Relationship Between Children's Exposure to Interparental Conflict and Child-Reported Depression for Boys</u>	39
<u>Figure 6: Effect of Role Responsibility Beliefs on the Relationship Between Children's Exposure to Interparental Conflict and Child-Reported Depression for Girls</u>	40
<u>Figure 7: Effect of Control Over Protecting Beliefs on the Relationship Between Children's Exposure to Interparental Conflict and Mother-Reported Child Externalizing Problems for Boys</u>	42
<u>Figure 8: Effect of Control Over Protecting Beliefs on the Relationship Between Children's Exposure to Interparental Conflict and Mother-Reported Child Externalizing Problems for Girls</u>	43

INTRODUCTION

When faced with interparental conflict, there is evidence that many children attempt to assist their parents by intervening in their disputes (Davies & Cummings, 1994, 1998; Grych & Fincham, 1993; Jenkins, Smith, & Graham, 1989; O'Hearn, Margolin, & John, 1997). In particular, children may adopt a parentified role in their parents' arguments in order to buffer strained family relationships (Mahler & Rabinovitch, 1965). According to Jurkovic (1997), parentification may be characterized by children's attempts to satisfy their parents' needs by performing activities including protecting or comforting them. The present study focused on these protector and caretaker roles, and examined children's control beliefs and role responsibility beliefs with respect to these roles. More specifically, the present study investigated gender differences in the moderational effects of children's control and role responsibility beliefs, with respect to their protector and caretaker roles, on the relationship between exposure to interparental conflict and child adjustment.

Divorce and Interparental Conflict and Their Influence on Child Adjustment

In recent years, the media have highlighted the prevalence of divorce and the occurrence of child adjustment problems in children exposed to interparental conflict. In North America, approximately 2/3 of all marriages will end in divorce and 60% of all 2-year old children will spend some part of their lives in a single parent household (Hodges, 1991). In Canada, more than 30% of new marriages can be expected to end in divorce (Dumas & Peron, 1992). Divorce impacts the lives of children in every socio-economic class, and in every Canadian neighbourhood. The research literature indicates that divorce can be damaging for children and represents a risk to

child adjustment (Amato & Keith, 1991; Emery, 1982, 1988). Researchers have been particularly interested in identifying what aspects of divorce are most detrimental. Amato and Keith (1991) conducted a comprehensive meta-analysis of 92 studies comparing children in divorced homes with children from intact families. They discovered that, of all the potential concomitants of divorce which might explain its negative impact on children (e.g., parental absence, economic and social status losses, etc.), the most powerful effect was attributed to children's exposure to interparental conflict. As Emery (1982) pointed out in his seminal treatise on the effects of divorce on children's adjustment, the level of interparental conflict to which children are exposed is more strongly related to child outcome than actual marital status. In fact, research has indicated that children from conflictual divorced homes experience more adjustment difficulties as compared to children with a deceased parent (Emery, 1982). Sadly, the negative effects of children's exposure to interparental conflict may be long lasting. Chess and her colleagues (1983) followed children of divorced parents to young adulthood and found that only those who had lived in highly conflictual divorced homes remained psychologically distressed.

The early post-separation period in the process of parents' transition to divorce may be particularly difficult for children because, as Wallerstein and Kelly (1980) reported, this may be a time characterized by escalated interparental conflict as the family system struggles to re-stabilize itself. Family systems theorists postulate that a disequilibrated family system will struggle to attain equilibrium (Becvar & Becvar, 1993) and, therefore, in the early post-separation period, children may be at increased risk for being co-opted by a parent to take a role in parental disputes (Hetherington, Cox, & Cox, 1982). Anna Freud (1965) speculated that divorce may produce a "role vacuum" within the family that the child feels compelled

to fill, thus placing considerable strain on the child. In particular, children may feel compelled to enter into a parentified role in the family focused on either protecting (e.g., trying to stop the parents' fight) or caretaking (e.g., comforting after the parents' fight is over) their parents.

The Importance of Process Models

Many researchers have identified the relationship between children's exposure to interparental conflict and negative child adjustment (Amato & Keith, 1991; Grych & Fincham, 1990). However, researchers have also begun to recognize that main effects models are unable to explain this relationship adequately (Emery, Fincham, & Cummings, 1992). Therefore, researchers have created process models that propose various mechanisms (e.g., moderators and mediators) that may be responsible for the relationship between children's exposure to interparental conflict and child adjustment difficulties (Cummings & Cummings, 1988; Grych & Fincham, 1990). Process models may be particularly relevant when results are contradictory or inconclusive. For example, gender differences in children's adjustment to interparental conflict have been found in some studies, but not in others (Amato & Keith, 1991; Crockenberg & Covey, 1991; Emery & O'Leary, 1982; Katz & Gottman, 1993). However, developmental psychopathologists recognize that hidden differences may exist in the pathways that lead two individuals to the same surface outcome (Cicchetti, 1993). In other words, although both boys and girls may react negatively to interparental conflict, different underlying processes may be responsible for their reactions. To identify these hidden differences, there must be attention to the process mechanisms that influence the relationship between variables. For example, when exposed to interparental conflict, boys' adjustment

may be moderated by a need to *protect* parents, while *girls'* adjustment may be moderated by a need to *caretake* parents. In other words, it is possible that boys and girls develop adjustment difficulties via different mechanisms. If this is the case, it suggests that interventions created to assist boys and girls who are exposed to interparental conflict need to target different underlying processes.

The Cognitive-Contextual Model

Grych and Fincham (1990) devised an early process model in this area called the cognitive-contextual model. Their approach was innovative because it identified several groups of process mechanisms that might have an impact on the relationship between children's exposure to interparental conflict and child adjustment. The cognitive-contextual model postulates that, when faced with interparental conflict, children attempt to actively "make sense" of the situation and then, using this information, make decisions about how to respond. The model is divided into three general categories of process mechanisms. The first category includes the child's perceptions of the properties of the conflict (i.e., the frequency, intensity, and degree of resolution). The next category consists of the contextual factors that influence the child's response to the conflict (i.e., the child's mood at the time, child age, and child gender). The third category contains the child's cognitive appraisals of the conflict itself (i.e., perceptions of control, level of perceived threat, self-blame, and coping efficacy). The present study concerned itself with a process mechanism in the third category - children's control beliefs when faced with interparental conflict.

According to Grych and Fincham (1990), when confronted with interparental conflict children attempt to make sense of the situation. They may do this, in part, to identify what role they should take to assist their parents (e.g., protecting parents by

trying to stop the fight, or comforting them after the fight has ended). In the present study, it was proposed that children ask themselves both "What can I do?" and "What am I supposed to do?" when faced with interparental conflict. The first question reflects children's control beliefs, one of the process mechanisms identified by Grych and Fincham (1990) in their model, and has been studied in children exposed to interparental conflict by other researchers (Rossman & Rosenberg, 1992). The second question, however, is seen as related to, but distinct from, control beliefs and has not been previously investigated in the literature. Children's beliefs about what they should do, or *have to try to do*, when faced with interparental conflict was labelled "role responsibility beliefs" for the present study.

Control Beliefs

Perceived control has long been a variable of interest in the child coping literature (Skinner, 1995). Research suggests that, when confronted with a stressor, children assess whether or not the source of the distress is controllable (Altshuler & Ruble, 1989; Compas, Banez, Malcarne, & Worsham, 1991; Compas, Malcarne, & Fondacaro, 1988). Several researchers have highlighted the importance of this distinction because a child's choice of coping strategies may also be influenced by the extent to which the child views the stressor as controllable or uncontrollable (Band & Weisz, 1988; Lazarus & Folkman, 1984). For example, controllable stressors may be best negotiated through the use of problem-focused coping strategies, which involve direct actions to change stressful situations, whereas uncontrollable stressors may require emotion-focused coping, centering on efforts to manage internal distress (Band & Weisz, 1988; Compas, Worsham, & Ey, 1992).

In recent years, researchers have begun investigating the impact of children's control beliefs on child adjustment specifically in the context of interparental conflict

(Cummings, Davies, & Simpson, 1994; Kerig et al., 1998; Rossman & Rosenberg, 1992). This was important because, as Rossman and Rosenberg (1992) pointed out, control beliefs may be situation specific. Rossman and Rosenberg (1992) devised a measure, the Discord Control and Coping Questionnaire (DCCQ), to examine the moderating effects of control beliefs in the context of interparental conflict on the adjustment of 94 children between the ages of 6 and 12. They hypothesized that children's control beliefs would act as a *vulnerability moderator* with respect to problematic child behaviour (i.e., higher control beliefs would relate to more problematic behaviour). Specifically, Rossman and Rosenberg (1992) looked at two types of control beliefs that children might hold: beliefs about their direct control over the parental conflict, itself, and beliefs about their ability to calm themselves if they became upset. Their results indicated that self-calming control beliefs functioned as a *compensatory moderator* of children's problematic behaviour (i.e., higher self-calming control beliefs related to lower levels of problematic behaviour). Direct control beliefs, however, were found to be a vulnerability moderator of children's *perceived competence* (i.e., higher direct control beliefs were associated with lower perceived competence). To explain these findings, Rossman and Rosenberg (1992) hypothesized that children who believe that they have direct control over interparental conflict may be more likely to intervene in marital conflict and experience the failure of their interventions, given that marital conflict is an uncontrollable stressor for children. This failure would then result in a reduction in children's perceptions of personal competence.

Role Responsibility Beliefs

In the present study, role responsibility beliefs were seen as related to children's parentification in distressed families. According to Jurkovic (1997),

parentified children feel a sense of personal or social responsibility for fulfilling particular roles in their relationship with parents, and this often leads to maladjustment including anxiety and depression. In the present study, it was proposed that children assess the extent to which they believe it is their personal responsibility to engage in various actions to assist their parents in conflict, thereby fulfilling a parentified role in relation to their parents.

Research has established that children feel a sense of "social responsibility" that prompts them to aid others who are in distress (Bryan, 1972; Staub, 1970) and, from a young age, take on comforting roles with others in distress (Zahn-Waxler & Radke-Yarrow, 1982; Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992). Cummings and her colleagues (1989) investigated children's sense of social responsibility when exposed to anger between their mother and another adult. They found that 23% of the 2-5 year-old children in their sample engaged in protecting and/or caretaking behaviour of their mother in response to angry conflict. As Jurkovic (1997) stated "...by the age of two or three, children have developed rudimentary sociocognitive skills to support their emotional responsiveness to parental figures and their possible functioning in a parentified role. (pg.27)" As early as two years of age, there is evidence that children actively *intervene* to stop conflict and attempt to comfort their parents. As children grow older, they maintain their parentified role in the family and also appear less angry and upset (Cummings, Zahn-Waxler, & Radke-Yarrow, 1981; 1984). A trend toward better adjustment might reflect a potential *buffering* of stress by the parentified role, in some cases.

However, it is certain that the parentification of children exposed to interparental conflict can have many significant, negative effects. Boszormenyi-Nagy (1965) suggested that whether or not parentification is damaging for children

depends on the "...dynamic meaning within the balance of give and take in the family (pg. xiii)". Jurkovic (1997) drew a distinction between destructive and adaptive parentification. Several aspects of parentification may contribute to its destructiveness such as: its age-appropriateness, its chronicity, whether or not the role represents a principle source of self-esteem for the child, the degree to which the role violates appropriate boundaries between parent and child, and how the parent responds to the child's interventions (Jurkovic, 1997). Researchers have suggested that children who are exposed to interparental violence may feel an exaggerated sense of responsibility to protect and care for their parents (Cummings, Pellegrini, Notarius, & Cummings, 1989; Jaffe, Wolfe, & Wilson, 1990) and that parents in distressed marriages are more likely to look to their children for emotional support (Jacobvitz & Bush, 1996). In essence, parentified children from homes characterized by chronic, extreme levels of conflict, such as marital violence, receive constant evidence that their interventions are ineffective.

In the case of marital violence, children may be more pressured to take on parentified roles, and they also take on responsibility for preventing future violence (Elbow, 1982). For some children, their parentified role may be accompanied by feelings of guilt which are associated with their inability to protect or comfort parents over the long term. However, this should not imply that self-blame and role responsibility beliefs invariably co-exist. Some children who take on parentified protecting or caretaking roles in the face of interparental conflict may not blame themselves for the conflict, itself, or its aftermath. For example, a child may recognize that his or her parents argue because they do not get along and yet still feel that he or she should try to intervene in the conflict situation. Jenkins, Smith, & Graham (1989) found that 71% of 9-12 year-old children in their sample attempted to

intervene directly in parental arguments, while 62% attempted to comfort their distressed parents after the fight had ended. This suggests that the majority of children felt responsible for taking a role in their parents' arguments, however only 24% of the sample were found to blame themselves for the conflict, itself.

Considerable research has identified that self-blame moderates the adjustment of children who have been exposed to interparental conflict, particularly for girls (Cummings, Davies, & Simpson, 1994; Kerig et al., 1998; Patenaude & Kerig, 1995), however, in the present research, role responsibility beliefs were conceptualized as being distinct from self-blame attributions. Brickman and his colleagues (1982) devised a model of helping behaviour that drew a distinction between taking responsibility for a problem and taking responsibility for the solution to the problem. In the same vein, children may or may not view themselves as responsible for interparental conflict (i.e., self-blame), and still feel that they are responsible for taking a role in the conflict situation to assist their parents (i.e., role responsibility).

Children's Roles in their Parents' Relationship: Protectors and Caretakers

When examining children's control beliefs and role responsibility beliefs, the particular role adopted by the child is an important consideration. To the extent that the parentified role is sex-role congruent, it may have a more or less deleterious impact on the child. For example, a parentified caretaking role may impose a greater degree of pressure on a female child given that attention to social relationships is an expectation of the traditional female role. A male child, on the other hand, may feel free to adopt a more flexible, androgynous orientation that allows for a wider variety of responses to interparental conflict including caretaking (Ember, 1973). In the reverse, a sex-role congruent approach to interparental conflict may provide a female

child with a sense of mastery and accomplishment that benefits her self-esteem and identity (Jurkovic, 1997).

Johnston, Campbell, and Mayes (1985) interviewed 44 latency-aged children from conflictual separated and divorced homes and described several different roles that they adopted in their families such as spying for information about the other parent, being used as a passive weapons between parents, or acting as a communication channel. As it struggles to re-establish itself, the family system may, in fact, force children into inappropriate roles vis-à-vis their parents' relationship. In the present study, roles were conceptualized as patterns of behaviour that children take in relation to interparental conflict that are associated with underlying beliefs about what their part or function should be in the conflict situation. Roles may be adopted by children in distressed families to help them cope with the stress of interparental conflict. The present research focused on children's role responsibility and control beliefs in the context of two particular roles that children may take in relation to their parents: protectors and caretakers.

Developmental psychopathologist, Carolyn Zahn-Waxler (1993), described two distinct patterns of social behaviour, or roles, displayed by children coping with stress and she characterized these roles as "warrior" and "worrier" approaches to stressful events. In the context of interparental conflict, it may be that children who function as warriors strive to protect parents in the conflict situation, whereas children who function as worriers take on the emotional burden of the conflict and try to comfort parents. Proponents of developmental psychopathology (Cicchetti, 1993) would propose that the specific roles children take in interparental conflict may set them on maladaptive trajectories which culminate in specific forms of maladjustment (Zahn-Waxler, 1993). In other words, the typical ways in which children approach

conflict between their parents, either as a "protector" or a "caretaker", may predict the particular form of maladaptive adjustment (i.e., externalizing or internalizing behaviour problems) they later display. Given that the protector role requires the child to insert him or herself into the conflict situation, it may be that such children are more likely to become overtly, destructively triangulated in interparental conflict (Kerig et al., 1998; Minuchin, 1974). These children may act out in an angry or aggressive fashion when faced with interparental conflict, in an effort to end the conflict in accordance with their protector role, and be consequently viewed by parents as displaying externalizing behaviour problems. On the other hand, children who take on a caretaker role, and therefore act as the receptacle of their parents' negative emotions, may display internalizing behaviour problems such as anxiety and depression.

In the research literature, externalizing behaviours have been seen as being more common to boys, while internalizing behaviours have been seen as being more common to girls (Emery, 1982; Gjerde, Block, & Block, 1988). Other research has indicated that boys tend to respond aggressively to interadult anger while girls react more often with depressive symptomatology (Crockenberg & Covey, 1991; Cummings, Vogel, Cummings, & El-Sheikh, 1989). Gender differences in the moderational effects of children's beliefs in the context of protector and caretaker roles were proposed in the present study. Specifically, following from Zahn-Waxler's theory (1993), it was hypothesized that children's control and role responsibility beliefs in the context of the warrior (protector) role would have a greater moderational impact on the adjustment of boys. It was also hypothesized that such beliefs in the context of the worrier (caretaker) role would have a greater moderational impact on the adjustment of girls.

Gender Differences in the Moderational Impact of Protector and Caretaker Roles: Theoretical Contributions

A number of researchers have studied the differential sex-role socialization experiences that shape boys and girls into their stereotypic gender roles. Block (1983) reported that these roles are communicated to young children through parents, and through the social environment, in general. Research has indicated that boys are more often reinforced for displaying agentic, instrumental behaviour, and girls for displaying cooperative and empathic behaviour. As a result, children develop sex-role congruent approaches to problem-solving. For example, Pierce and Edwards (1988) investigated gender differences contained in stories constructed by 9- to 14-year-old children. They discovered that boys were more likely to include conflict themes in their stories while girls were more likely to be conflict avoidant. In fact, boys tended to avoid nonviolent resolutions to conflict. Girls, on the other hand, were more likely to write about internal conflict, but they also possessed more variety in their knowledge of resolution strategies. In general, female characters in the children's stories were stereotypically viewed as more passive than male characters. Research conducted by Miller, Danaher, and Forbes (1986) studied play groups of five and seven year old children and found that, when faced with conflict between their peers, girls were more concerned with maintaining interpersonal harmony than were boys. Boys, however, tended to enter into conflict situations more readily than girls, who were more conflict avoidant. Miller and her colleagues found that boys were more likely to use "heavy-handed persuasion", characterized by the greater use of threat and aggressive means, in their attempts to resolve conflict situations. Hay, Zahn-Waxler, Cummings, and Iannotti (1992) found that stressors in the family system, such as maternal depression, only serve to exaggerate gender differences in

children's problem-solving. Particular to girls, Kerig, Cowan, and Cowan (1993) found evidence to suggest that mothers in distressed marriages actually negated daughters' behaviour if it was inconsistent with the feminine sex-role, suggesting that the social environment plays a powerful role in shaping and maintaining sex-role behaviour in children. These findings fit well with Block's (1983) ideas about the differential socialization of boys and girls and may predict gender differences in children's responses to interparental conflict.

The Present Study

In the present study, children's control beliefs and role responsibility beliefs in the context of protector and caretaker roles were the research focus. However, a means to measure these beliefs in children exposed to interparental conflict did not exist in the research literature. Therefore, the Control and Role Responsibility Scale (CARRS; Patenaude & Kerig, 1997) was created to investigate the following hypotheses:

It was expected that four factors would be found in the Control and Role Responsibility Scale (CARRS; Patenaude & Kerig, 1997) and that these factors would distinguish between children's control beliefs and role responsibility beliefs in the context of protector and caretaker roles. The factors were to be labelled: Control over Protecting, Control over Caretaking, Role Responsibility for Protecting, and Role Responsibility for Caretaking.

It was expected that role responsibility beliefs and control beliefs, in the context of caretaking, would moderate the relationship between children's exposure to interparental conflict and both mother and child-reports of internalizing behaviour problems, whereas role responsibility beliefs and control beliefs, in the context of

protecting, would moderate the relationship between children's exposure to interparental conflict and maternal reports of externalizing behaviour problems.

Gender differences were also anticipated in the moderational impact of children's control and role responsibility beliefs with respect to the protector and caretaker roles. Specifically, it was expected that the impact of children's beliefs regarding the caretaking role, on the relationship between exposure to conflict and child adjustment, would be greater for girls than for boys. Conversely, it was expected that the impact of children's beliefs regarding the protecting role, on the relationship between exposure to conflict and child adjustment, would be greater for boys than for girls.

METHOD

Participants

Data were collected from 118 children, however thirteen cases were not included due to concerns regarding the child's comprehension and effort during the interview¹. Five other cases were discarded due to incomplete data. Therefore, participants in the present study were 100 children ($n = 45$ boys, $n = 55$ girls) between the ages of 8 and 12 ($M = 10.55$ years; $SD = 1.26$ years), and their biological mothers, who ranged in age from 26 to 52 years ($M = 39.03$ years; $SD = 5.47$ years). Children included in the study had been informed of their parents' intentions to separate within the previous 24 months (Range = 1 to 24 months; $M = 8.14$ months; $SD = 5.21$ months)². In the present sample, 62% of mothers rated the

¹ Specifically, the decision to discard data in each case was made based on the interviewer's impression of the child's level of comprehension of the measures, particularly the Control and Role Responsibility Scale. The interviewers indicated their assessment of the child's comprehension for each measure on a 4-point scale ranging from "not at all" to "completely". Cases were discarded when the child was rated as having understood either "not at all" or "a little". Cases were retained if the child was described as having understood either "mostly" or "completely".

² This criterion was selected given that the period leading to and following a parental separation is usually characterized by considerable interparental conflict and the effects of children's exposure to this conflict was the research focus.

break-up with their child's father as either "somewhat angry" or "very angry". The large majority of children resided primarily with their mothers after the separation (94%). Six mothers indicated that their child resided with his or her father, but these children continued to have regular contact with their mothers. In these cases, noncustodial mothers also provided data for the project. Residential mothers were asked to describe the amount of contact children continued to have with their fathers. The majority of children (92%) saw their fathers at least once a month, and 24% of those saw their father daily. Five mothers indicated that their child had no contact with his or her father.

Mothers were asked to provide demographic information in order to describe the sample. Mothers reported their annual gross income, maternal education level, and maternal ethnicity. These characteristics are summarized in Table 1 (see Appendix A). In this sample, the modal response (43%) for range of mothers' annual gross income was \$20,000 to \$40,000. Eight mothers did not report their income. Of the 59% of fathers who provided alimony and/or child support payments, mothers indicated that they supplied an average of \$643.53 ($SD = \740.88) each month. However, 30% of mothers reported that their ex-partner did not provide any child support and 11% of mothers did not respond to the question. The modal response given for maternal education level was "vocational or some college/university" (43%). One mother did not provide information regarding her educational level. With respect to ethnic background, 81% of mothers identified as Caucasian, 9% as Asian, 1% as East Indian, 5% as First Nations, and 3% as Hispanic. One mother indicated that she did not fit any of these ethnic categories.

Recruitment for the present project was completed by distributing newsletters, with the assistance of school counsellors and principals, to parents of

elementary students in seven school districts including Surrey, Langley, Burnaby, Coquitlam, Vancouver, Richmond, and North Vancouver. Also, announcements were made in local newspapers, and separating parents were given information about the project by family court counsellors, and by leaders of "Parenting After Separation" classes for recently separated parents that were being conducted at various mental health centres in the Lower Mainland. The sample used in the present study came from a variety of different communities in the Lower Mainland. Specifically, 19% resided in Surrey/White Rock, 5% in Langley, 14% in Burnaby/New Westminister, 24% in the Tri-Cities (Coquitlam, Port Coquitlam and Port Moody), 13% in Vancouver, 7% in Richmond/Delta, and 15% in North Vancouver/West Vancouver. Finally one participant resided in each of Mission and Pitt Meadows. The address of one participant was unknown.

All study materials and procedures for this project were approved by the Simon Fraser University Research Ethics Review Committee and by the S.F.U. Clinical Psychology Centre. Mothers were provided with information outlining the expectations of study participants and were informed of their right to remove themselves and their child from the study at any point without penalty. All mothers signed consent forms for their own participation and the participation of their minor child. Following their completion of the questionnaires for the present study, each child was entered into an 8-week support group programme for children of separated parents which was held either at the S.F.U. Clinical Psychology Centre or at a location in the community. Mothers were also invited to contact the researcher at a future date to receive the results of the study.

Child Measures

Control and Role Responsibility Scale (CARRS; Patenaude & Kerig, 1997).

The CARRS is a 24-item measure of children's control beliefs and role responsibility beliefs in the context of interparental conflict (see Appendix B). The CARRS measures these two types of beliefs in the context of two roles that children may adopt when faced with interparental conflict. These roles are: 1) *protector* (e.g., getting a parent out of a fight situation, getting one parent to stop yelling at the other), and, 2) *caretaker* (e.g., providing emotional support for a parent, helping a parent feel better after a fight has ended). The CARRS was developed specifically for the present study.

The CARRS was developed as an adaptation of the Discord Control and Coping Questionnaire (DCCQ; Rossman, & Rosenberg, 1992). The DCCQ is a 23-item measure created to assess children's control beliefs in the context of interparental conflict. The items on the DCCQ fall onto two general factors. These factors include: 1) Direct Intervention, which refers to active ways in which the child attempts to exert control in the conflict, and 2) Self-Calming, which refers to strategies that the child may employ to control their emotional response to the conflict.

The CARRS was developed in the following manner. Six items from the Direct Intervention factor of the DCCQ were selected to illustrate the "protector" role. These items were selected as they appeared to be the most clearly conceptually related to the goal of protecting a parent during interparental conflict (e.g., by keeping parents from fighting, stopping parents from fighting, or protecting parents during a fight). For the "caretaker" role, two items were adapted from the DCCQ Self-Calming factor to illustrate the goal of caretaking a parent (e.g., comforting a

parent after the fight is over, making the parent feel better after the fight). Also, four new items were written to reflect the goal of caretaking an upset parent (e.g., by cheering the parent up, making the parent happy, keeping the parent from crying or feeling bad, or taking the parent's mind off the fight). See Table 2 (Appendix A) for a listing of the twelve items selected for the CARRS, including the eight items from the DCCQ that were adapted.

These 12 items were then expanded to 24 by writing each item to address either a control or a role responsibility belief. This was achieved by inserting the statement "*Some kids think they can*" (control belief) or "*Some kids think they have to try*" (role responsibility belief) in the stem of each question. The phrase "*Some kids think they have to try*" was selected to elicit role responsibility beliefs following a pilot study of 30 children who explained what several phrases (e.g., it's their job, they should, they have to) meant to them. The phrase "they have to try" was selected because it suggested that the child felt compelled to act but did not imply that the child's intervention had to be successful. Role responsibility beliefs were conceptualized as children's beliefs that they *should* do something, not whether they actually act, or if their attempts result in any particular outcome. Ultimately, the CARRS, was designed to include four combinations of child beliefs and roles (i.e., control over protecting; control over caretaking; role responsibility for protecting; role responsibility for caretaking) with six questions in each group for a total of 24 items.

The DCCQ was developed using a structured alternative response format. For the CARRS, it was decided to use a simpler 4-point Likert scale response format. The CARRS was initially piloted using the alternate response format of the DCCQ. It was eliminated due to concerns that the variance within the measure would be limited by forcing a dichotomy in the children's responses and because it was viewed

as more cognitively challenging for children. In particular, the alternate response format asks children to hold two opposing views in mind concurrently and then go on to make a choice between them. Other researchers have criticized the usefulness of this format (Fantuzzo, McDermott, Manz, Hampton & Burdick, 1996; Wichstrom, 1995). The Likert format that was adopted for the CARRS had children indicate the degree to which they endorsed each statement (e.g., "not at all", "a little", "pretty much", or "a lot") and this was believed to simplify the cognitive requirements necessary to complete the measure. In order to guard against an affirmative response set, reminders were placed in the question stems letting children know that they may or may not endorse a particular statement (e.g., "Some kids....but other kids don't do that"). This approach was used to limit social desirability effects by presenting opposing views as equally acceptable.

As described, the CARRS was initially constructed to consist of 24 items. However, the last two item pairs were discarded before data analyses began because they were viewed during the interviews as confusing for children and/or not as strongly conceptually related to the role they were designed to illustrate. The discarded items were: "Some kids think they can.../ have to try to warn their mom that a fight with their dad was going to happen" and "Some kids think they can.../have to try to take their mom's mind off their parents' fight after it's over". In the first case, several children complained in the interview that they could not answer the question as they did not know, in advance, when arguments between their parents would happen. In the second case, the item was discarded because it appeared to be less clearly related to the idea of improving the emotional state of a parent who was upset (i.e., as compared to "comforting", "cheering up", or "stopping a parent from crying").

Children's ratings of their interventions into interparental conflict (CCI; Kerig, 1994). Children were asked to rate the degree to which they engaged in seven specific types of interventions when faced with interparental conflict. This group of ratings was completed in the context of a semi-structured interview (Children's Coping Interview; CCI, Kerig, 1994; see Appendix C). The individual rating scales were read aloud to each child. Children read along with the researcher and, using a 4-point Likert scale, they indicated the extent to which they engaged in each type of intervention (e.g., "never", "a little", "pretty much", or "a lot"). Seven intervention types were presented including: "information-seeker" (e.g., "Some kids ask their mom and dad about the fight after it's over"), "comforter" (e.g., "Some kids try to comfort their mom or dad after the fight and try to make them feel better"); "positive distracter" ("Some kids try to keep their parents from fighting by doing something nice or behaving really good"), "negative distracter" ("Some kids try to distract their mom or dad from fighting by misbehaving or causing trouble"), "interrupter" (e.g., "Some kids come in the room when their mom and dad are fighting and ask them what's going on"); "problem-solver" (e.g., "Some kids come in the room when their mom and dad are fighting and try to solve the problem they are fighting about"); and "fighter" (e.g., "Some kids come in the room and get involved in the fight too, like maybe they try and stick up for one of their parents"). Of interest in the present study were the "comforter", "interrupter", "problem-solver", and "fighter" interventions. These four interventions were seen as relevant for comparison to protecting (e.g., directly intervening in the conflict to bring it to an end) or caretaking (e.g., providing emotional support to the parent).

Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978) is a measure of trait anxiety symptoms consisting of 37 items, of which 28

items measure the child's level of manifest anxiety (Anxiety Scale). The remainder of the items provides an estimate of the child's attention to impression management (Lie Scale). The child is asked to answer either "yes" or "no" to each symptom. The RCMAS has demonstrated internal consistency ($KR_{20} = .83$; Reynolds & Richmond, 1978), concurrent validity with the trait scale of the State-Trait Anxiety Inventory for Children ($r = .85$, $p < .001$; Reynolds, 1980), and construct validity based on a factor analysis which revealed three factors consistent with previous research (Reynolds & Richmond, 1979). An acceptable level of internal consistency was demonstrated for both the Anxiety Scale (Cronbach's alpha = .90) and Lie Scale (Cronbach's alpha = .69) in the present sample.

Children's Depression Inventory (CDI, Kovacs, 1985). The CDI is a 27-item measure of depressive symptomatology. It was modeled after the adult-focused Beck Depression Inventory and has been used widely in the literature. Good test-retest reliability of $r = .82$ (Finch, Saylor, Edwards, & McIntosh, 1987) and internal consistency ranging from $\alpha = .71$ (Kovacs, 1982) to $\alpha = .94$ (Saylor, Finch, Spirito, & Bennett, 1984) can be found in the literature. The CDI correlates well with other self-report measures of internalizing problems (as cited in Grych, Seid, & Fincham, 1992). Good internal consistency was evident in the present sample (Cronbach's alpha = .87).

Children's Perceptions of Interparental Conflict Scale (CPIC; Grych, Seid, & Fincham, 1992). The CPIC is a measure consisting of 51 items regarding the child's experience of interparental conflict answered either "true", "sort-of-true", or "false" by the child. From these 51 questions, nine subscales have been derived which have been further combined through factor analyses to yield three factor scales: Conflict Properties (i.e., frequency, intensity, and degree of resolution), Threat, and Self-

Blame. The three factors have adequate psychometric properties including: internal consistency (coefficient alphas range between .78 and .90), test-retest reliability (r 's range between .68 and .76) and external validity (Grych, Seid, & Fincham, 1992).

Parent Measures

Demographics Information. Several questions were asked to help describe the sample including maternal education level, income, and ethnicity. Also, other information specific to the marital separation was gathered including the family's living arrangements since the announcement of the separation and the noncustodial parent's access to the child.

O'Leary Porter Scale (OPS; Porter & O'Leary, 1980). This is a 10-item measure of the parent's perception of the frequency with which the child experiences interparental conflict. The OPS has good internal consistency (Cronbach's alpha = .86), test-retest reliability over two weeks ($r = .96$; Porter & O'Leary, 1980) and concurrent validity, as it is significantly correlated with other measures of interparental conflict such as the Conflict Properties subscale of the Children's Perceptions of Interparental Conflict Scale ($r = .30$; Grych, Seid, & Fincham, 1992). In the present sample, acceptable internal consistency (Cronbach's alpha = .75) was demonstrated.

Child Behavior Checklist - Parent version (CBCL; Achenbach, 1991). This well-established measure asks parents about their child's competencies and problem behaviours. The measure provides numerous factor-derived problem scales, but those that will be of primary interest in the present study include the Externalizing Behaviour T score and the Internalizing Behaviour T score. The psychometric properties of the CBCL are known to be excellent, including test-retest reliability over

a 7-day, 1-year, and 2-year period for the problem scales ($r = .89$; $r = .75$; $r = .71$, respectively), as well as content, construct, and criterion-related validities (Achenbach, 1991).

Procedure

Data was collected at a meeting that took place before the children entered an 8-week support group for children of separated parents. The interview was conducted either in the family home or at the SFU Clinical Psychology Centre. Interviewers were graduate or advanced undergraduate students in Psychology at Simon Fraser University. Questionnaires were read aloud to each child in order to eradicate any differences that might accrue from variations in children's reading ability. At the same time, mothers completed their own pencil and paper questionnaires. Each child's privacy was assured by conducting the interview in a location away from their mother or any other family member. Children and mothers were informed that their responses would not be shared, except in the case that a child revealed information suggesting that he or she was in need of protection as required by law in British Columbia. Mothers also gave consent for a measure of children's behaviour (Teacher Report Form, Achenbach, & Edelbrock, 1991) to be distributed to their child's teacher, however, a poor response rate prevented any further analyses of these data.

RESULTS

The results will be organized into two sections: 1) establishing the factor structure of the CARRS, and 2) testing moderational hypotheses using the CARRS factors.

Establishing the Factor Structure of the CARRS

The CARRS was collected from 100 children for this study.³ The distribution of scores on the CARRS, and the presence of outliers, was assessed to ensure that it was appropriate to proceed with the factor analysis.⁴

³ One case contained missing items. Missing values for this case were estimated using the TWOSTEP procedure wherein "...each missing value for a variable is estimated by regressing that variable on up to two variables selected by stepwise regression" (BMDP-7.0 Manual Vol. 2, 1992, pg. 965). In other words, items that are expected to relate to the item with missing values are entered, whereupon the programme selects up to two of those items that best estimate the missing values. For each missing value, estimates were rounded to the closest whole number.

Factor Structure Invariance Across Gender

The similarity of the factor structure for the CARRS between boys and girls was examined to determine the feasibility of combining the data across gender for the factor analyses. In other words, a test was performed to determine if the boys and girls scores on the CARRS came from the same population. A Box's M statistic was computed to test the degree of difference between covariance matrices for the boys and girls (Seber, 1984). For the present data, the computed Box's M was 377 ($F(210, 27052) = 1.40, p = .00012$), however this statistic is known to be sensitive to nonnormality. To avoid dependence on normality assumptions, a permutation procedure was used to create a distribution for Box's M. This was achieved by randomly assigning gender to the observed scores, computing Box's M, and developing a distribution comprised of the Box's M results for each of 100,000

⁴ Before exploring the factor structure of the CARRS, histograms were examined to assess item distributions. For each item, the total possible range was utilized (i.e., on a 4-point Likert scale). There was evidence of positive skew in several items, however, all items were skewed in the same direction which suggests that positive correlations between items, which would be necessary to identify an underlying factor structure, were possible. To assess for multivariate outliers, Mahalanobis distances were calculated for each case and compared to a χ^2 with 20 degrees of freedom at significance levels of $p = .01$ and $p = .001$. The critical value for a p value of .01 is 37.57 with 20 degrees of freedom. In this sample of 100, 7 cases were found to have Mahalanobis distances that exceeded this value. However, the largest Mahalanobis distance in this sample was 44.8, which is less than the critical value for a p of .001 (i.e., $\chi^2 = 45.31$). The Bonferroni correction applied to a family-wise error rate of .10 in this case would require that p values of less than .001 be achieved in order to justify discarding cases. Therefore, it was decided that there was not sufficient reason to discard any cases from subsequent analyses.

permutations of the sex vector. The Box's M for the actual data was then compared to this distribution to determine what proportion of the permuted Box's Ms would be larger than the original result. The original Box's M was found to fall at a p value of .034 on this distribution, suggesting that there is a real difference between the covariance matrices for boys and girls in this sample and thus rejecting the null hypothesis that the covariance matrices came from the same population.

The root mean square error of approximation (RMSEA) was computed to compare the boys and girls covariance matrices because it, unlike the Box's M, is not sensitive to the effects of sample size (Steiger & Lind, 1980). In general, a RMSEA of less than .05 indicates that the differences between covariance matrices are small. Conversely, an RMSEA of greater than .10 indicates that the differences between covariance matrices are large. The RMSEA for the present data was found to be .090, which falls in a "gray area." To explore the differences in factor structure across gender, factor analyses were done separately for boys and girls. The results indicated that the differences in factor loadings occurred only on three items (see Table 3, Appendix A) and, otherwise, the factor structures for boys and girls were similar. Specifically, the items comprising the Role Responsibility factor were similar for boys and girls. Differences were present in the item loadings for the Control over Protecting and Control over Caretaking factors. For boys, one item that fell on the Control over Caretaking factor in the full sample and in the sample of girls, was split between the Control over Protecting (0.50) and Control over Caretaking (-0.46) factors. This item was "Some kids think they can make their mom happy after the parents' fight is over." For girls, two items that fell on the Control over Protecting factor for the full sample and the sample of boys, fell on the Control over Caretaking factor. These items were "Some kids think they can get their mom out of a fight with

their dad" (0.67) and "Some kids think they can protect their mom during a fight with their dad" (0.52). Otherwise, the large majority of CARRS items fell on the same factors for both boys and girls.

It was decided for the present study that a greater degree of sampling error would be incurred if the analyses were done separately for boys and girls. This conclusion was drawn given that the individual sample sizes for the analyses divided by gender would be small. This risk was compared to the potential bias incurred by treating the factor structure as similar across gender, when some minor differences between the covariance matrices for boys and girls exist. Based on this reasoning, the boys and girls data were combined for all subsequent analyses of the CARRS.

Exploratory Factor Analyses of the CARRS

Since the CARRS was constructed anticipating that four factors would be identified to reflect the four combinations of beliefs (i.e., control and role responsibility) and roles (i.e., protecting and caretaking), a confirmatory factor analysis specifying four factors was performed using LISREL 8 (Jöreskog & Sörbom; 1993, Weighted Least Squares method using matrices of polychoric correlations). This analysis failed to indicate a fit to a four-factor model as specified. However, the sample size of 100 was minimal for the purposes of identifying an underlying factor structure using this method. For this reason, a Principle Components Analysis (PCA) was done using SPSS 10.0 (SPSS Inc., 1999), specifying the presence of four factors, but allowing the program to select the items loading onto each factor. The PCA method, as opposed to a common factor analysis, was selected as it provides factor scores that are directly employable for subsequent analyses. An oblique

rotation (Direct Quartimin) was selected as it allows for correlation between factors, which was theoretically anticipated in the construction of the CARRS.

The results of these analyses are summarized in Table 4 (Appendix A). The presence of four eigenvalues over 1 initially suggested a four-factor solution. Upon examining the pattern matrix, however, the four-factor solution was observed to have few substantial loadings on the fourth factor, and did not yield a factor structure that was coherent or interpretable.⁵ In contrast, the three factor solution (see Table 5, Appendix A) explained 61.3% of the variance and was interpretable, although some residual correlations⁶ among particular items were larger than ideal. The largest absolute residual was 0.16, suggesting that the three-factor solution was acceptable for interpretation⁷. Following an examination of the items comprising each of the factors in the three-factor solution, the factors were labelled 1) Role Responsibility, 2) Control over Protecting, and 3) Control over Caretaking. As expected, there was a significant degree of correlation among the three factors (see Table 6, Appendix A).

In summary, the expected factor structure was confirmed with the exception of combining the role responsibility beliefs for both protecting (e.g., role responsibility

⁵ A five factor solution was also examined but found to be uninterpretable.

⁶ The residual correlation refers to the difference between the observed correlations and the correlations estimated by the factor analysis.

⁷ A small number (2.6%) of absolute residuals exceeded 0.15 and 10% fell between 0.10 and 0.15.

x protecting) and caretaking (e.g., role responsibility x caretaking) into a single factor (Role Responsibility). The Control over Protecting and Control over Caretaking factors were observed as anticipated.

Pearson Correlations of the CARRS Factors with Children's Reports of Their Interventions into Interparental Conflict

Preliminary construct validity was investigated by correlating the CARRS factors with children's ratings of their actions when faced with interparental conflict. Consistent with expectations, role responsibility beliefs correlated significantly with children's reports of being a "comforter" ($r = .35, p < .001$), but was not significantly correlated to other modes of intervention. Williams-Hotelling t-tests were calculated to determine if the correlations between the interventions and CARRS factors were significantly different from each other. It was revealed that the correlation between Role Responsibility and the "comforter" intervention was significantly different from the correlation between Role Responsibility and the "interrupter" intervention at the $p < .05$ level, and from the correlations between Role Responsibility and each of the "problem-solver" and "fighter" interventions at the $p < .10$ level. Control over Protecting beliefs were correlated significantly with the "fighter" ($r = .26, p = .01$), and "problem-solver" ($r = .28, p = .005$) modes of intervention, both of which are active attempts to end interparental conflict. As expected, Control over Protecting was not significantly correlated with children's reports of intervening as a "comforter".

However, Williams-Hotelling t-tests indicated that neither correlation between Control over Protecting and the “problem-solver” or “fighter” interventions was significantly different from the correlation between Control over Protecting and the “comforter” intervention. Finally, as expected, Control over Caretaking was correlated significantly with the “comforter” description ($r = .37, p < .001$), but was not significantly correlated with any of the other three categories. According to the Williams-Hotelling t-tests, the correlation between Control over Caretaking and the “comforter” intervention was significantly different from the correlations between the Control over Caretaking factor and the other three interventions at the $p < .05$ level (see Table 7, Appendix A).

Relationship of the CARRS Factors to Age, Gender and Time

With respect to age, specific developmental differences were not anticipated in children's control and role responsibility beliefs on the CARRS. As anticipated, there were no significant correlations between any of the three factors on the CARRS and child age. With respect to gender, it correlated positively with the Control over Protecting factor (Boys' $M = 0.27$; Girls' $M = -0.22$; $r_{pb} = -.24$; $p = .02$). However, gender did not correlate significantly with the other factors. Also, length of time since the child was first made aware of their parents' intention to separate was not significantly correlated with any of the CARRS factors (see Table 8, Appendix A).

Relationship of the CARRS Factors to Self-Blame and Threat

Although a relationship between children's role responsibility beliefs and children's appraisals of self-blame for conflict was anticipated, they were viewed as nonredundant variables. A Pearson correlation of $r = .29$ ($p = .003$) between the Self-Blame factor from the Children's Perceptions of Interparental Conflict Scale

(CPIC; Grych, Seid, & Fincham, 1992) and the CARRS Role Responsibility factor suggested that these variables were significantly, but not highly, correlated. Role Responsibility was also viewed as nonredundant with children's perceptions of threat, although some relationship between them was anticipated as both children's perceptions of threat and role responsibility beliefs were expected to increase as interparental conflict became more extreme. A Pearson correlation of $r = .28$ ($p = .005$) was observed between the Threat factor, from the CPIC, and the CARRS Role Responsibility factor.

Investigation of Moderational Effects Using Hierarchical Multiple Regression

The present study was concerned with identifying gender differences in the moderational impact of children's beliefs on the relationship between exposure to interparental conflict and child adjustment (see Table 9, Appendix A). It was proposed that each of the three factors (e.g., Role Responsibility, Control over Protecting, and Control over Caretaking) would act as moderators, in that they would influence the strength and/or direction of the relationship between exposure to interparental conflict and child adjustment. The presence of moderation is established if the addition of the interaction term between the independent and moderator variables in the final step of the regression analysis explains a significant portion of variance in the dependent variable (Baron & Kenny, 1986).

Given that the present study was concerned with identifying gender differences in the impact of the moderator variables, gender was included in the regression equations. Each hierarchical multiple regression was performed in three blocks. In the first block, gender, exposure to interparental conflict, and one factor from the CARRS (i.e., Role Responsibility, Control over Protecting, or Control over

Caretaking) were entered along with a constant value. In the second block, all three two-way interactions between variables were added and, in the third block, the three-way interaction was entered⁸. For those hierarchical multiple regression analyses that indicated the presence of moderational effects, t-tests were performed to determine if the effects were significant for boys and girls (see Table 10, Appendix A).

Role Responsibility Beliefs as a Moderator of the Relationship Between Exposure to Interparental Conflict and Child Internalizing Problems

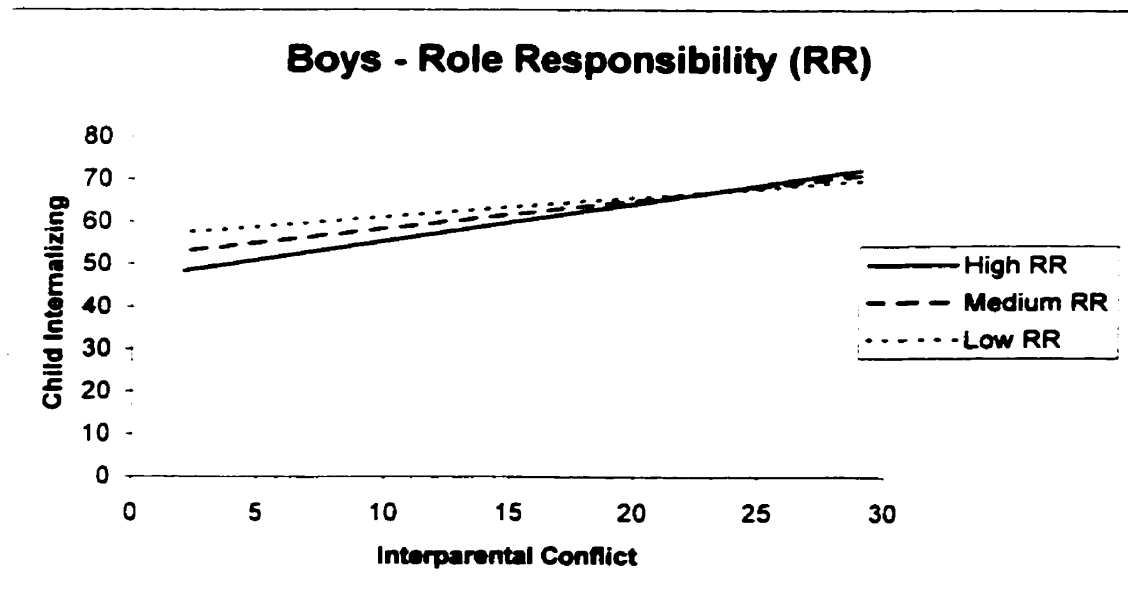
As predicted, the three-way interaction between child exposure to interparental conflict, role responsibility beliefs, and mother reported child internalizing problems was significant, raising R^2 from .121 to .166 and accounting for an additional 4.6% of the variance in maternal reports of child internalizing problems (Change $F(1, 92) = 5.04, p = .03$). Figures 1 and 2 display the interaction between exposure to interparental conflict and maternal reports of child internalizing problems for boys and girls respectively, suggesting gender differences in the moderational effects of role responsibility beliefs on this relationship. In order to understand the impact of the moderation for boys and girls, regression lines were

⁸ According to power tables devised by Cohen (1992) as a guideline for research, hierarchical multiple regression involving eight terms will require a minimum of 107 participants when a medium effect size is anticipated. The present study consisted of 100 participants, which approached the required sample size to ensure adequate statistical power in the analyses.

plotted to estimate the dependent variable at low, medium, and high levels of the moderator. This was accomplished using the unstandardized beta weights in the regression equation and setting the moderator at either the mean (dashed line), plus one SD (solid line) or minus one SD (dotted line) over the range of possible values for interparental conflict. A t-test was performed to determine the significance of the moderational effect for boys and girls separately. Linear combinations of the unstandardized beta coefficients derived from the complete model were utilized for this purpose.⁹ For boys, role responsibility beliefs did not moderate the impact of exposure to interparental conflict on maternal reports of child internalizing problems ($t(92) = 0.66, p = .51$). Mothers reported increased child internalizing problems as exposure to conflict increased (see Figure 1).

⁹ Linear combinations of the coefficients for the complete model were used to retain the degrees of freedom from the complete model. Had the t-tests been done using the degrees of freedom associated with the subgroups of boys and girls, the tests would have been unnecessarily conservative, thereby impairing the detection of moderational effects in the gender subgroups.

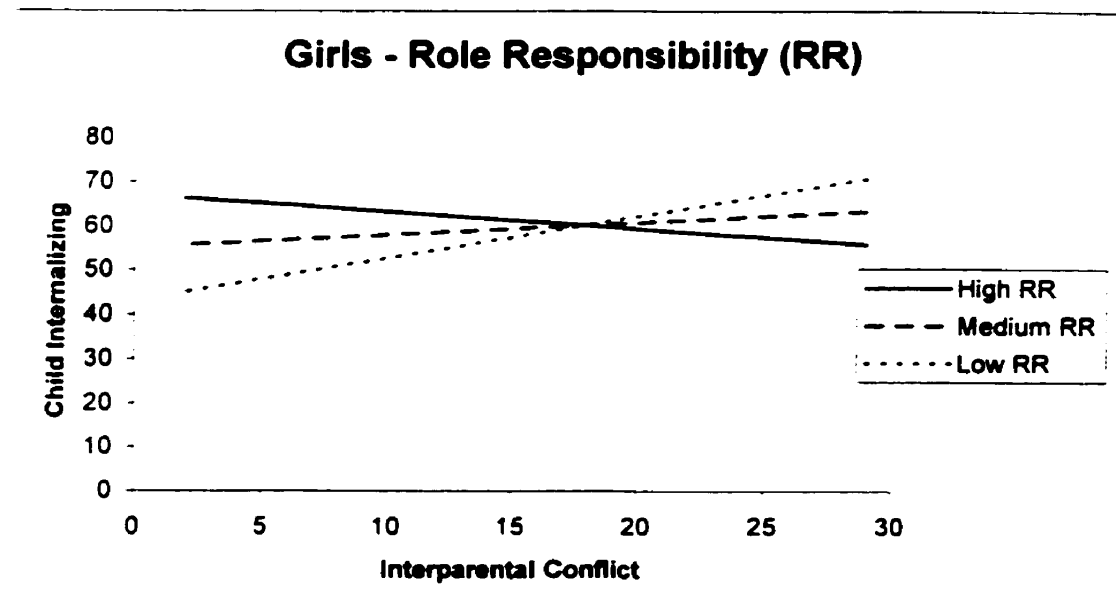
Figure 1: Effect of Role Responsibility Beliefs on the Relationship Between Children's Exposure to Interparental Conflict and Mother-Reported Child Internalizing Problems for Boys



However, there was evidence of moderation for girls ($t(92) = -2.91, p = .005$).

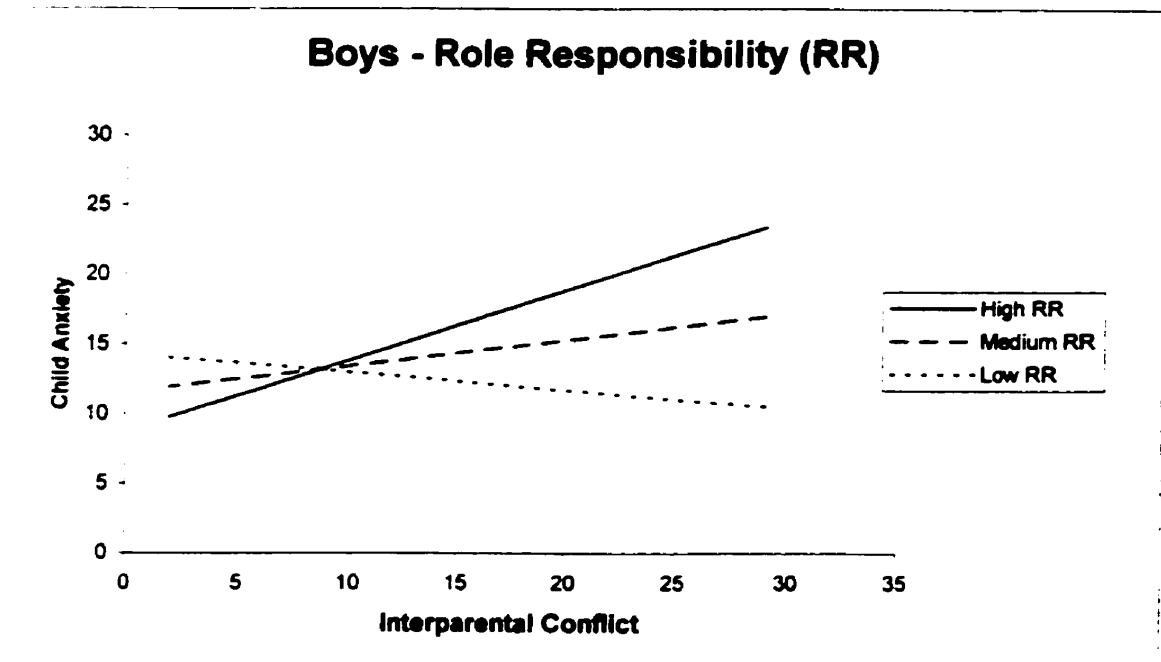
For girls, maternal reports of child internalizing problems were high for those who accepted role responsibility, or believed they should take some action in situations of interparental conflict, when their exposure to conflict was low. However, maternal reports of child internalizing problems decreased, for girls who held high levels of role responsibility beliefs, as their exposure to conflict increased (see Figure 2).

Figure 2: Effect of Role Responsibility Beliefs on the Relationship Between Children's Exposure to Interparental Conflict and Mother-Reported Child Internalizing Problems for Girls



Additionally, the moderational impact of role responsibility beliefs on the relationship between exposure to interparental conflict and child-reported anxiety was significant accounting for an additional 8.2% in the prediction of child-reported anxiety and raising the R^2 from .190 to .272 (Change $F(1, 92) = 10.34, p < .002$). The moderational effect for boys and girls was plotted in the manner described previously. Test of significance indicated that moderational effects were present for girls ($t(92) = -3.20, p = .002$). For the boys, the moderational effect was significant at the $p < .10$ level ($t(92) = 1.68$), therefore, there was some weak evidence for moderation. In this case, boys who felt the most responsibility for helping their parents in a conflict situation reported increased anxiety as their exposure to interparental conflict increased (see Figure 3).

Figure 3: Effect of Role Responsibility Beliefs on the Relationship Between Children's Exposure to Interparental Conflict and Child-Reported Anxiety for Boys



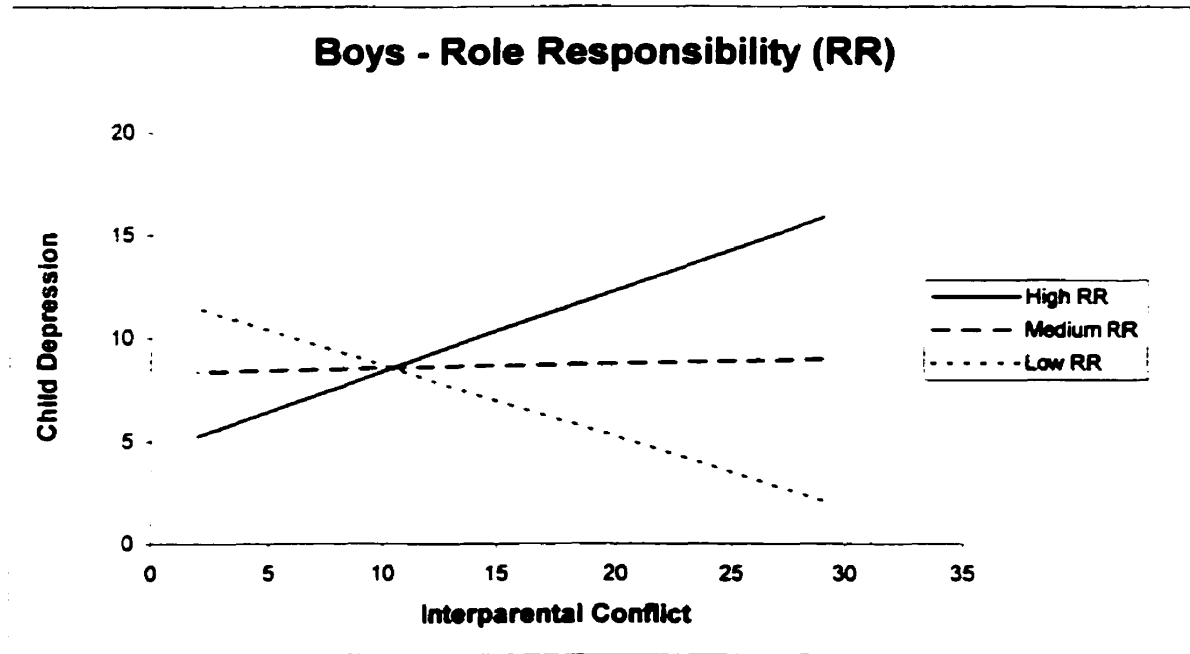
For girls the pattern was quite different. Girls who accepted high levels of role responsibility in situations of interparental conflict reported high levels of anxiety when their exposure to conflict was low and their anxiety decreased as exposure to interparental conflict increased (see Figure 4).

Figure 4: Effect of Role Responsibility Beliefs on the Relationship Between Children's Exposure to Interparental Conflict and Child-Reported Anxiety for Girls



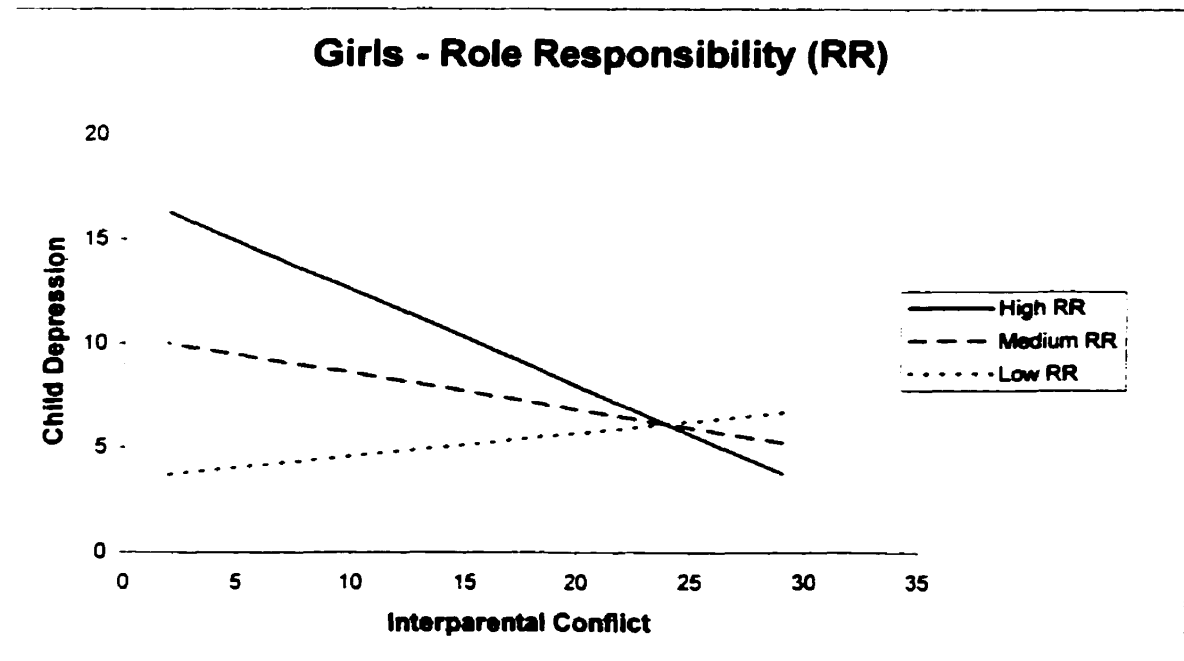
Finally, the moderational impact of role responsibility beliefs on the relationship between interparental conflict and child-reported depression was significant explaining an additional 7.2% of the variance in child-reported depressive symptoms and raising the R^2 from .098 to .169 (Change $F(1, 91) = 7.84, p = .006$). The moderational effects were significant for girls ($t(91) = -2.02, p = .046$). For boys there was weak evidence of a moderational effect ($t(91) = 1.95; p = .05$). The plotted regression lines indicated the same patterns for boys and girls as outlined above for child-reported anxiety. Boys who felt the greatest responsibility for assisting their parents during interparental conflict showed the highest level child-reported depressive symptomatology when conflict was high and the lowest level of depressive symptoms when conflict was low (see Figure 5).

Figure 5: Effect of Role Responsibility Beliefs on the Relationship Between Children's Exposure to Interparental Conflict and Child-Reported Depression for Boys



Girls who felt the greatest degree of role responsibility toward their parents reported more depressive symptomatology when interparental conflict was low and their child-reported depressive symptomatology decreased as exposure to interparental conflict increased (see Figure 6).

Figure 6: Effect of Role Responsibility Beliefs on the Relationship Between Children's Exposure to Interparental Conflict and Child-Reported Depression for Girls



Role Responsibility as a Moderator of the Relationship Between Exposure to Interparental Conflict and Child Externalizing Problems

The moderational impact of role responsibility beliefs on the relationship between exposure to interparental conflict and mother-reported child externalizing problems was not significant, raising R^2 from .112 to .116 (Change $F(1, 92) = .44$, $p = .51$) and accounting for only an additional 0.4% of the variance in maternal reports of child externalizing problems. Stepping back one level in the regression analysis, the inclusion of the three two-way interactions also did not explain a significant amount of additional variance in child externalizing problems (Change $F(3, 93) = 1.47$, $p = .23$). This indicates that children's role responsibility beliefs did not interact with either child gender or child exposure to interparental conflict in the prediction of child externalizing problems.

Control over Protecting Actions as a Moderator of the Relationship Between Exposure to Interparental Conflict and Child Internalizing Problems.

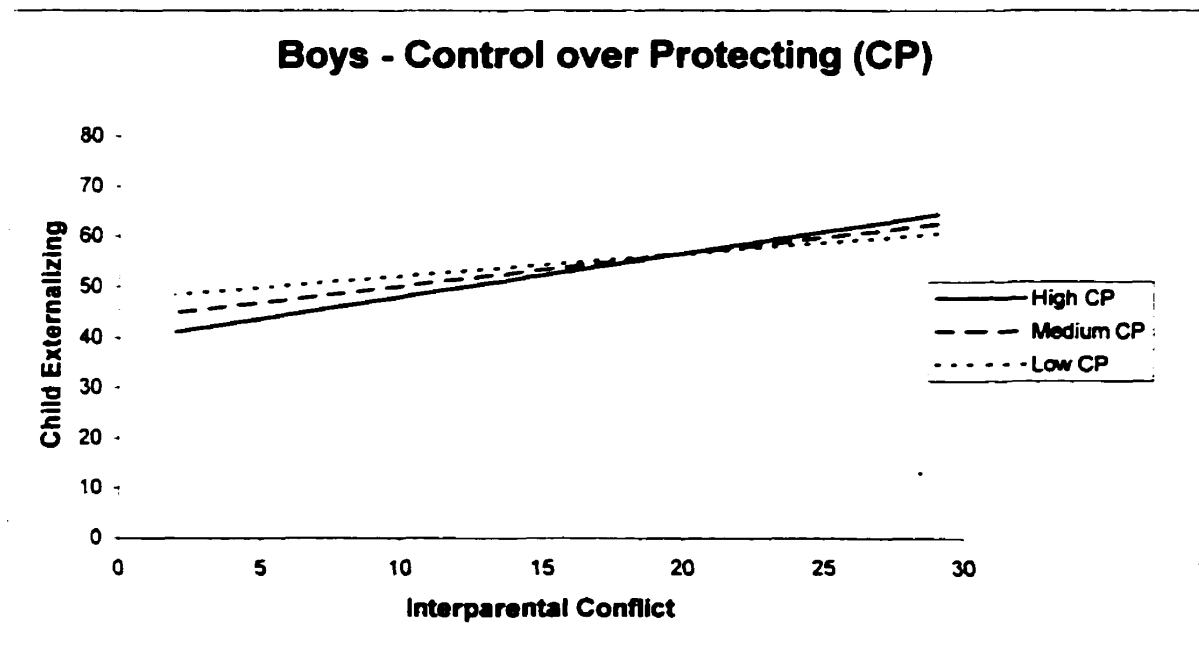
Control over protecting beliefs were not found to moderate the relationship between children's exposure to interparental conflict and maternal reports of child internalizing problems and explained only an additional 0.7% of the variance in child internalizing problems, raising the R^2 from .095 to .103 (Change $F(1, 92) = 0.77, p = .38$). Also, control over protecting did not moderate the relationship between exposure to interparental conflict and child-reported anxiety raising the R^2 from .057 to .074 (Change $F(1, 92) = 1.68, p = .20$) predicting only an additional 1.7% of the variance in the dependent variable. Finally, control over protecting was not found to moderate the relationship between exposure to interparental conflict and child-reported depressive symptoms raising the R^2 from .069 to .091 (Change $F(1, 91) = 2.20, p = .14$) and explaining only an additional 2.2% of the variance in that case. Stepping back a level in the regression analyses, the inclusion of the two-way interactions did not explain a significant amount of additional variance in maternal reports of internalizing problems (Change $F(3, 93) = .74, p = .53$), or child reports of anxiety (Change $F(3, 93) = 1.12, p = .35$) and depression (Change $F(3, 92) = 1.62, p = .19$).

Control Over Protecting Actions as a Moderator of the Relationship Between Exposure to Interparental Conflict and Child Externalizing Problems

However, hierarchical multiple regression suggested that children's control over protecting beliefs do moderate the relationship between exposure to interparental conflict and mother-reported child externalizing. The addition of the interaction term (e.g., child gender x interparental conflict x control over protecting)

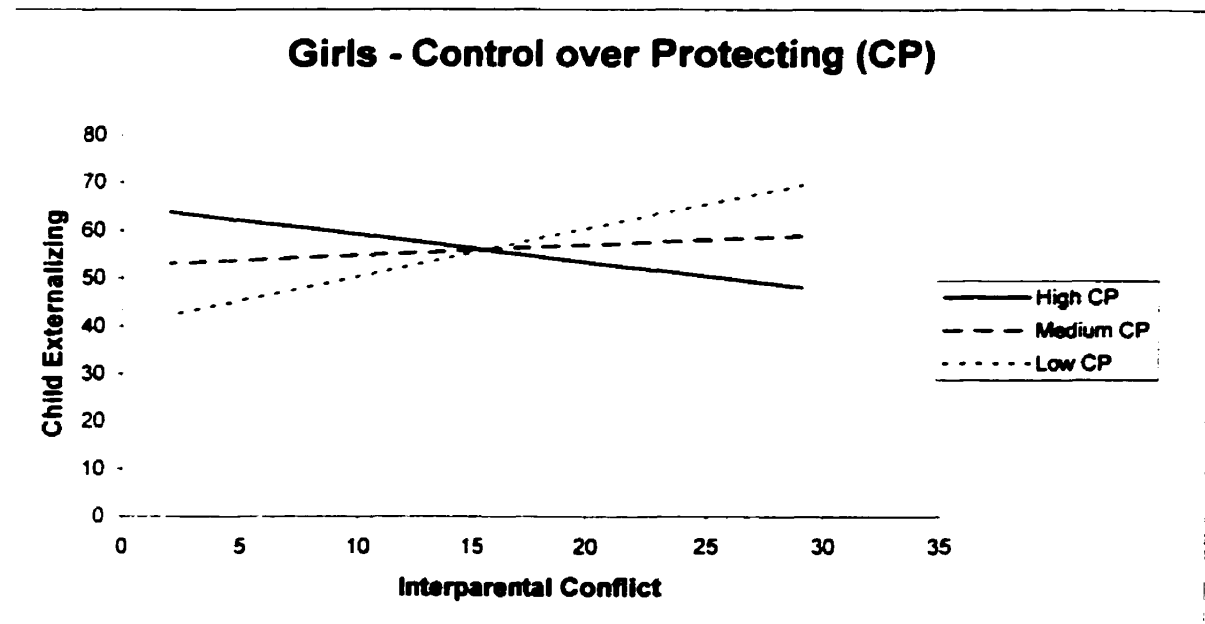
entered in the final step of the regression was found to predict an additional 4.7% of the variance in mother-reported child externalizing (Change $F(1, 92) = 4.99, p = .03$) and raised the R^2 from .094 to .141. Tests of the significance of the moderational effects indicated that moderation was present for girls ($t(92) = -2.35, p = .02$) but not for boys ($t(92) = 0.696, p = .49$). The plotted regression lines indicated that, for boys, mother-reported child externalizing problems increased as exposure to interparental conflict increased at all levels of the moderator (see Figure 7).

Figure 7: Effect of Control Over Protecting Beliefs on the Relationship Between Children's Exposure to Interparental Conflict and Mother-Reported Child Externalizing Problems for Boys



For girls who did not perceive that they had control over protecting actions, mothers reported externalizing problems increased as exposure to interparental conflict increased. However, when girls perceived that they had a high degree of control over protecting, mothers reported fewer child externalizing problems as exposure to conflict increased (see Figure 8).

Figure 8: Effect of Control Over Protecting Beliefs on the Relationship Between Children's Exposure to Interparental Conflict and Mother-Reported Child Externalizing Problems for Girls



Control Over Caretaking Actions as a Moderator of the Relationship Between Exposure to Interparental Conflict and Child Internalizing Problems

Evidence for the moderational effect of children's control over caretaking beliefs on the relationship between children's exposure to interparental conflict and maternal-reported child internalizing problems was not found. The addition of the three way interaction accounted for only 0.1% of additional variance in maternal reports of child internalizing problems and raised the R^2 from .103 to .104 (Change $F(1, 92) = .08, p = .77$). Equally, control over caretaking beliefs did not moderate the relationship between children's exposure to interparental conflict and child-reported anxiety, explaining an additional 0.1% of the variance in that case, as well, and raising the R^2 from .063 to .064 (Change $F(1, 92) = .14, p = .71$). Finally, moderation was not evident in the relationship between children's exposure to interparental

conflict and child-reported depression accounting for 2.0% of the variance in depressive symptomatology and raising the R^2 from .045 to .065 (Change $F(1, 91) = 1.91, p = .17$). At the level of the two way interactions, neither exposure to conflict nor child gender interacted significantly with children's control over caretaking beliefs to predict maternal reports of internalizing (Change $F(3, 93) = .86, p = .47$), child-reported anxiety (Change $F(3, 93) = 1.57, p = .20$), or child-reported depression (Change $F(3, 92) = .95, p = .42$).

Control Over Caretaking Actions as a Moderator of the Relationship Between Exposure to Interparental Conflict and Child Externalizing Problems

Control over caretaking beliefs were not found to moderate the relationship between children's exposure to interparental conflict and child externalizing problems and did not account for any additional variance in child externalizing (Change $F(1, 92) = .009, p = .93$). Stepping back to the two-way interactions, control over caretaking did not interact with either exposure to conflict or child gender to predict child externalizing problems (Change $F(3, 93) = .72, p = .54$).

DISCUSSION

The present study was inspired by the current focus in the research literature on identifying the process mechanisms impacting the relationship between children's exposure to interparental conflict and child adjustment (Cummings, Davies, & Simpson, 1994; Grych & Fincham, 1990). A distinction was drawn between control beliefs and role responsibility beliefs. It is well-known in the family systems and psychodynamic literatures that children often take on roles in the family that serve to buffer conflict between family members (Jurkovic, 1997). Anna Freud (1965) speculated that divorce may create a "role vacuum" in the family that the child attempts to fill. Jurkovic (1997) described "parentification" as a blurring of boundaries between parents and children in which children take on helping roles that may involve protecting or comforting their parents. Role responsibility beliefs relate to parentification in that they reflect the extent to which children believe that they should engage in a parentified role. The present study examined gender differences in the moderational impact of children's control beliefs and role responsibility beliefs, in the context of protector and caretaker roles. In order to address these ideas, the Control and Role Responsibility Scale (CARRS; Patenaude & Kerig, 1997) was developed to measure control beliefs and role responsibility beliefs in the context of protector and caretaker roles for children exposed to interparental conflict.

Results of the factor analyses of the CARRS using Principle Components Analysis with a Direct Quartimin rotation indicated the presence of three factors which were labelled Role Responsibility, Control over Protecting, and Control over Caretaking. Factor scores derived directly from the factor analyses were then examined as potential moderators of the relationship between children's exposure to

interparental conflict and child adjustment. Moderation, as opposed to mediation, was anticipated as exposure to interparental conflict was viewed as affecting children despite their particular beliefs about it, although their beliefs would influence the impact of exposure to interparental conflict on child adjustment. This assumption was further supported by characteristics of the data set given that a correlation between exposure to conflict and the proposed mediators (i.e., children's beliefs) must be present for mediation and this was not found (Baron & Kenny, 1986).

Gender differences in moderational effects were examined. Results of the hierarchical multiple regressions, used to detect moderational effects, indicated that Role Responsibility and Control over Protecting factors acted as moderators for girls, but not for boys. The Control over Caretaking factor was not found to moderate the relationship between exposure to conflict and child adjustment for either gender.

In the development of the CARRS, it was originally anticipated that the Role Responsibility factor would split by role resulting in two factors to be labelled Role Responsibility for Protecting and Role Responsibility for Caretaking. Furthermore, it was expected that Role Responsibility for Protecting would moderate maternal reports of child *externalizing* problems, while Role Responsibility for Caretaking would moderate maternal reports of child *internalizing* problems and *child reports of internalizing* symptoms, such as anxiety and depression. In other words, it was expected that when children strongly believed that they should intervene in marital conflict (i.e., high role responsibility), this would have a negative effect on child adjustment. The present results were complicated by the retention of all Role Responsibility items (i.e., in the context of both protector and caretaker roles) on a single factor, nonetheless, its moderational impact on *internalizing* symptoms was observed as expected. However, Role Responsibility was not found to moderate the

relationship between child exposure to interparental conflict and maternal reports of child *externalizing* problems.

Given that the Role Responsibility factor failed to be differentiated at the level of role (i.e., protector vs. caretaker), gender differences that were originally hypothesized were not anticipated. The present study found that the Role Responsibility factor moderated the relationship between girls' exposure to interparental conflict and maternal reports of internalizing problems, girls' self-reports of anxiety, and girls' reports of depressive symptomatology. However, the pattern of the moderator's impact was surprising; girls who accepted a high level of responsibility for taking a role in interparental conflict had mothers who reported less child internalizing problems, and girls, themselves, reported less internalizing problems, as their exposure to conflict increased. Tests for the moderational effects of the Role Responsibility factor were weak for boys and were only detected in the relationship between exposure to interparental conflict and boys' reports of their internalizing problems (anxiety, $t(92) = 1.68$, $p < .10$; and depression, $t(91) = 1.95$, $p < .10$). In both cases, boys' self-reported internalizing symptoms increased most dramatically as exposure to conflict increased at high levels of role responsibility beliefs. For boys, therefore, parentification was maladaptive, particularly when interparental conflict was more extreme. For girls, the opposite appeared to be true. It appeared that, for girls, perceiving that they had a role to play in their parents' conflict may have helped them to feel a sense of competence or purpose in the situation that acted as a buffer against feelings of helplessness, anxiety, or depression.

Looking to the literature on parentification, it has been proposed that these roles may not necessarily be detrimental for children as long as they are not chronic,

age-inappropriate, crucial to the child's sense of self, or flagrantly violating appropriate parent-child boundaries (Jurkovic, 1997). At least in the short-term, parentification could be beneficial if it aided the child in developing social and empathy skills. Also, if children are able to aid parents in coping with distress it may inadvertently assist them in mastering their own distress (Jenkins, Smith, & Graham, 1989). Block (1983) pointed out that girls tend to be more compliant and strive to act in socially desirable ways, therefore, being viewed as a "helper" by parents may function as an effective strategy to buffer girls against stress. In other words, specific to girls, the congruence between their parentified responsibilities and sex-role expectations may, in fact, bolster girls' self-esteem. It may be that the self-esteem girls experience from their helper orientation buffers the impact of interparental conflict. In support of this idea, Kliewer and Sandler (1992) found that self-esteem buffered the link between stressors and symptomatology, and this effect was only present for girls in their sample.

The CARRS measure focused specifically on children's parentification in relation to their mothers. A parentified role, in this study, may have other subtle benefits for girls such as affording a closer relationship with their mother and, perhaps, through the mother's praise and acknowledgment of their daughter's helping behaviour (Jurkovic, 1997). Parents in conflict with each other will have fewer personal resources available to focus on their relationship with their children, and the parent-child relationship is likely to be perceived by the child as less warm and supportive as a result (Howes & Markman, 1989; Margolin, & John, 1997). Crockenberg and Forgays (1996) suggested that children are most upset by interparental conflict when it appears to block them from a goal, such as receiving attention from a parent. By taking on a parentified role, the child's need for

closeness and connection with the parent may be satisfied, thus contributing to a potential buffering of stress. Also, research has indicated that marital discord tends to be most disruptive to opposite-sex parent-child relationships (Kerig, Cowan, & Cowan, 1993; Osborne & Fincham, 1996). Daughters may be more likely to develop close emotional ties with mothers and to hold ambivalent feelings about fathers. Given that children in this sample resided with their mothers (and the CARRS items specified protecting and caretaking mothers), a parentified relationship with the mother may place daughters in a less difficult position than sons. Boys may struggle with their desire to maintain a relationship with their father, making a parentified role focused on their mother a source of loyalty conflict for them (Block, Block, & Morrison, 1981). For these reasons, a parentified role focused on the mother may be less detrimental for daughters, as was seen in the present sample.

In the present study, girls who accepted role responsibility at high levels of exposure to interparental conflict self-reported lower levels of internalizing problems and their mothers also reported lower levels of child internalizing problems. However, using mothers and children as sources of data regarding child adjustment may have had an impact on the validity of the results. During the data collection, it was informally observed that certain "pseudo-adult" girls, who were viewed by their mothers as stabilizers in the family and who viewed themselves as hyper-mature, tended to self-report limited adjustment difficulties. As Jurkovic (1997) pointed out, parentified girls may make efforts to conceal their distress from parents and others to avoid adding to their parents' burden. Certainly, adding to this burden may have practical implications for a parentified girl given that she must compensate for her parents' distress by overfunctioning. It is equally possible that the adjustment difficulties of parentified girls are under-recognized by parents and other adults.

Jouriles and Norwood (1995) proposed that daughters may, in fact, attempt to be especially well-behaved so as to avoid stressing the already distressed family system and to, possibly, prevent future interparental conflict. Nonetheless, Jurkovic (1997) stated that "...parentified children often suffer from depression, suicidal feelings, shame, excessive guilt, unrelenting worry, social isolation, and other internalizing symptoms..."(pg xiv). The parentified girl's adjustment difficulties may be overlooked by parents, teachers, and other adults, who focus on her pseudo-mature presentation. If girls respond to interparental conflict with uncommonly good behaviour, or with internalizing behaviour problems which are less attention-grabbing than externalizing problems, parental informants may be less likely to recognize such subtle signs as indicators of maladjustment (Emery, 1982). In future research, it may be informative to compare the results of moderational analyses using a variety of different informants of child adjustment data to provide information about the importance of the particular perspective taken. It may also be helpful to include other methods of measurement that may be less biased, such as naturalistic observation or daily logs of child behaviour (O'Hearn, Margolin, & John, 1997).

Another important factor to consider regarding the potential impact of role responsibility beliefs on girls is related to the chronicity of the parentified role. It may be that girls' benefit in the short run by accepting role responsibility in a conflict situation but, in the same way that girls of divorced families tend to function well in latency and act out in adolescence (Hetherington, Stanley-Hagen, & Anderson, 1989; Wallerstein, Corbin, & Lewis, 1988), role responsibility beliefs may initiate a sleeper effect wherein the negative impact is evidenced much later in girls' development. In future research, it would be interesting to follow high role responsibility girls over time to determine what impact their beliefs have on their

adjustment in adolescence. Jurkovic (1997) observed that parentification ultimately teaches children that they should not depend on their parents, therefore, in adolescence, such girls may be more likely to become involved in precocious activities and to reject the guidance of their parents.

Turning now to the Control over Protecting factor, it was hypothesized that such beliefs would moderate the relationship between children's exposure to interparental conflict and child *externalizing* problems. This relationship was detected as anticipated, however it was also expected that *boys* would be more impacted by the protector role and this was not seen. Although, the Control over Protecting factor moderated the relationship between exposure to interparental conflict and maternal reports of child externalizing problems, this effect emerged only for girls. This moderation also had a surprising effect in that girls who believed they held the most control in the protector role had mothers who reported the least externalizing problems when girls' exposure to interparental conflict was high. Maternal reports of externalizing problems for these girls increased as their exposure to interparental conflict decreased.

Rossmann and Rosenberg (1992) studied children's perceptions of direct control beliefs and found that they acted as a vulnerability moderator of the relationship between children's exposure to interparental conflict and perceived competence. They explained this finding by hypothesizing that children who thought they had control in the conflict situation would actually intervene in parents' arguments and the failure of their interventions, because interparental conflict is inherently uncontrollable for children, would result in a reduction in perceived competence. Other researchers have also suggested that using approach strategies to cope with interparental conflict is maladaptive for children (Kerig et al., 1998).

Interestingly, the present study found that, at least for girls who believe that they have a high degree of control over protecting their parent, such beliefs in the face of greater exposure to interparental conflict related to lower levels of child externalizing problems. It may be that girls who held high control beliefs, and yet had mothers who reported low levels of externalizing behaviour at high levels of interparental conflict, were those for whom control did not actually lead to direct intervention. Alternatively, parentified girls who believe they have control over protecting their parents may be more accepted in that role by their parents, who cease fighting when their daughter intervenes. There is evidence in the research literature to suggest that parents are more likely to shield daughters than sons from interparental conflict (Cummings, Davies, & Simpson, 1994). Without experiencing the failure of their control efforts, daughters may be able to maintain the belief that interparental conflict is controllable by them and this may lead to a buffering of stress. In future research, it may be informative to include a measure of children's actual interventions into interparental conflict and to investigate the ability of the CARRS factors to predict children's interventions into interparental conflict.

Finally, the Control over Caretaking factor was not found to act as a moderator for either boys or girls, which was contrary to the expectation that the caretaker role would have more impact on girls and tend to moderate their internalizing symptoms. The addition of the three-way interaction (i.e., gender x exposure to interparental conflict x control over caretaking) was not found to contribute significantly to the prediction of child adjustment, therefore no further analyses could be performed.

Limitations of the CARRS

There were several decisions made in the process of developing the CARRS that must be considered when assessing the results of the present study. For example, decisions regarding the item construction and presentation may have impeded the items loading purely onto the four factors originally anticipated. Each CARRS item was created using a "belief x role" crossed structure. Specifically, each item contained a belief stem (control or role responsibility) related to either a protecting or caretaking action. This format was employed because it was felt that children's assessment of their beliefs would be dependent on the particular role (protector or caretaker) being considered. Factor analyses indicated that the three factors of the CARRS were inter-related, which was expected in the construction of the measure; however, the results of the factor analyses suggested that children were able to successfully distinguish between control and role responsibility beliefs, and between control beliefs in the context of protecting and caretaking. Despite the failure to detect four factors, close examination of the pattern matrix of factor loadings for the CARRS suggests some evidence that the Role Responsibility factor does have two underlying components that are differentiated by role. Specifically, although all Role Responsibility items loaded most highly on the first factor, on the second factor all Role Responsibility for Protecting items loaded in a slightly positive manner on the Control over Protecting factor, whereas all Role Responsibility for Caretaking items loaded in a slightly negative manner on the Control over Protecting factor. This pattern may suggest that the Role Responsibility factor may have split by role, as anticipated in the construction of the CARRS, if a substantially larger sample size had been available.

Another consideration was how to present the CARRS items. Rather than present all control beliefs and role responsibility beliefs in independent blocks, control and role responsibility beliefs pertaining to a particular action were presented in couplets. The order of presentation between control and role responsibility items within the couplets was determined randomly. This presentation format was selected following a pilot of different questionnaire formats and was judged to be preferable because it appeared to be most effective at highlighting the need for children to contrast control beliefs with role responsibility beliefs. Furthermore, to assess children's comprehension of the conceptual distinction between control and role responsibility beliefs, a sample question related to peer conflict was presented and discussed with each child. In other words, the peer conflict example acted as a comprehension check, given that children were then asked to explain the difference between control and role responsibility beliefs in their own words, and the interviewer could assess the child's level of understanding. The success of this approach was demonstrated by the children's ability to differentiate between control and role responsibility beliefs suggested by the fact that items pertaining to these beliefs fell on different factors in the subsequent analyses.

Limitations of the Moderational Analyses

Several issues must be considered when interpreting the results of the hierarchical multiple regressions including the distribution of the children's responses on the CARRS, and characteristics of the sample. Firstly, children's responses on the role responsibility questions were not normally distributed, although the total range of potential responses was used. As expected, the majority of children did not believe they were responsible for taking a role in their parents' conflictual

relationship. Therefore, data from relatively few participants were available to estimate the high moderator line. This may mean that the slope of the line was less accurate and may have been more influenced by extreme scores than if a larger number of respondents had been available. In particular, relatively few girls received high scores for both the moderator (role responsibility) and independent variable (exposure to interparental conflict) suggesting that the slope of the high moderator regression line for girls could be quite influenced by a few individuals. In future research, it will be important to collect a larger sample of children, particularly girls, who endorse high levels of role responsibility beliefs. Given that the literature suggests that parentification is especially common in children exposed to marital violence, it may be worthwhile to repeat these analyses in a population of children that are more likely to hold role responsibility beliefs, that is, children who are exposed to very high levels of interparental conflict and/or violence (Cummings, Pellegrini, Notarius, & Cummings, 1989; Elbow, 1982; Jaffe, Wolfe, & Wilson, 1990; Jurkovic, 1997).

With respect to the sample, range restriction was observed in mothers' reports of children's exposure to interparental conflict. This may have been due to underreporting by mothers, or could have been an artifact of the present sample. Given that families were recruited for the project by offering a support group for children of separated parents, it may be that parents who tend to involve their children in such programs also tend to make concerted efforts to avoid exposing them to interparental conflict. However, it is possible that the use of a community sample, rather than a clinic or women's shelter sample, allowed for the identification of a benefit for girls holding high role responsibility beliefs. Perhaps this benefit would only be seen in a sample in which "high" conflict has not yet reached the

extremes of marital violence. Rather, girls who accept role responsibility in the face of marital violence, as opposed to marital conflict, may not derive any benefit from it and, in fact, do more poorly than girls who feel less responsible to act. In the present study, boys were not found to benefit from high role responsibility beliefs. The research literature has established that there are gender differences in the extent to which parents shield their children from marital conflict, tending to shield girls more than boys (Cummings, Davies, & Simpson, 1994). It may be that girls, who are generally exposed to less extreme conflict than boys, are able to derive benefit from their parentified roles precisely because they experience a less distressing home environment than boys do. In future research, it would be interesting to examine and compare the moderational effects of role responsibility beliefs in a wide range of conflict samples, including children from intact families and those from battered women's shelters.

Exploratory Analyses

The decision to utilize maternal reports of child exposure to interparental conflict as the independent variable likely had a significant impact on the outcome of the moderational analyses. Certainly, mothers and children will possess unique impressions of interparental conflict. Maternal reports were utilized for the present study because a child-report measure of the *amount* of interparental conflict children witness was not available in the literature. Also, research has suggested that the reports of girls and boys may not be equally accurate regarding the level of conflict in the home. Mothers and sons tend to report similar levels of conflict and their reports are predictive of child adjustment outcomes. Daughters' reports of conflict, on the other hand, explain only 5% of the variance in child behavior problems above the

prediction of mothers' reports, and daughter's reports of conflict are not strongly related to either mothers' or sons' reports (Cummings, Davies, & Simpson, 1994). Given the focus on gender differences in the present study, it was deemed important to select a measure of interparental conflict that would be appropriate for both boys and girls. However, a measure of children's perceptions of conflict properties, combining the frequency, intensity, and resolution of interparental conflict (Children's Perceptions of Interparental Conflict; Grych, Seid, & Fincham, 1992), was collected and, for exploratory purposes, this variable was substituted for maternal reports of child exposure to interparental conflict in a re-analysis of the moderational effects. Interestingly, unlike the results of the previous moderational analyses, role responsibility beliefs were not found to moderate the relationship between children's perceptions of conflict properties and mothers' or children's reports of *internalizing* behaviour problems. However, in accordance with the previous results, role responsibility beliefs did not moderate the relationship between children's perceptions of conflict and maternal reports of child *externalizing*. Turning to the Control over Protecting factor, it was found to moderate the relationship between girls' perceptions of the properties of interparental conflict and self-reports of anxiety ($t(92) = 2.41, p = .02$). Girls who held high control over protecting beliefs reported the least anxiety, as compared to girls holding lower levels of those beliefs, when they perceived conflict to be the least extreme and the most anxiety when they perceived conflict to be the most extreme. In contrast to the previous moderational results, control over protecting beliefs did not moderate child externalizing problems when children's perceptions of conflict properties was used as the independent variable. Finally, for the Control over Caretaking factor, there was no evidence of moderational effects which was consistent with the results of the previous

moderational analyses. In summary, the results of the moderational analyses indicated that role responsibility beliefs did not act as a moderator when children's perceptions of conflict properties was used as the independent variable. Evidence was found for the moderational effects of Control over Protecting beliefs on the relationship between exposure to interparental conflict and girls' self-reported anxiety. Finally, no moderational effects were found for the Control over Caretaking factor. In future research, it would be informative to determine how the degree of discrepancy between maternal and child reports of conflict impacts the moderational effects of the CARRS factors. This comparison could not be made for the present study because the maternal report of child exposure to interparental conflict and the children's perceptions of conflict properties were not directly comparable variables.

Directions for Future Research

An important direction for future research will be to investigate the moderational impact of the *interaction* between control beliefs and role responsibility beliefs on the relationship between children's exposure to interparental conflict and child adjustment. It may be that a child who feels compelled to take a role in interparental conflict may be differently affected by holding high or low control beliefs. However, the present study, due to power limitations, could not address this issue directly. Also, in future work with the CARRS measure, it may be important to investigate the impact of the particular parent targeted by the CARRS items. For the present study, all CARRS items referred to protecting or caretaking the mother. It would be interesting to administer the CARRS targeting the father and to determine if the factor structure would remain constant. Ultimately, developing mother-targeted and father-targeted versions of the CARRS would allow for the examination of any

differences in moderational effects resulting from a gender match or mismatch between parent and child. Other variables that might have an impact on the child's need to protect or caretake a parent may include the quality of the relationship between parent and child; which parent has retained physical custody of the child; which parent the child blames for the conflict; as well as, other factors about the parent that would cause the child to view him or her as the most vulnerable and in need of assistance. Finally, longitudinal studies that follow children's control and role responsibility beliefs over time will be important to answer questions about the long-term adaptiveness of parentified roles. As Jurkovic (1997) suggested, chronic parentification may be more detrimental to children than a short-term adoption of such roles during a stressful period in the family. Furthermore, longitudinal studies will allow us to answer questions about causality (Fincham, Grych, & Osborne, 1994; Sandler, Tein, & West, 1994); at present, it is not possible to determine the causal direction of the relationship between maternal reports of children's exposure to interparental conflict, children's beliefs, and child adjustment.

Concluding Remarks

The present study has contributed to our understanding of the potential process mechanisms that may moderate the relationship between child exposure to interparental conflict and child adjustment. The development of the Control and Role Responsibility Scale (CARRS; Patenaude & Kerig, 1997) has suggested that children are able to differentiate between role responsibility beliefs, which are related to children's parentification in the family, and control beliefs. There was also evidence that children can distinguish between control beliefs in different role domains such as protecting a parent during marital conflict, or caretaking a parent after the conflict has

ended. However, there are several limitations to this study that must be considered including an under-representation of girls who had been exposed to a high level of interparental conflict and who held high levels of role responsibility beliefs or high levels of control beliefs. The informant (i.e., mother or child) selected to provide data concerning interparental conflict may have also influenced the moderational effects. Furthermore, the identity of the parent on which the CARRS was focused (i.e., mother versus father) and the gender match between the child and that parent may have had an impact as well. Nonetheless, the present study suggests that it may be important to consider child gender when trying to understand the moderational impact of children's control beliefs and role responsibility beliefs. In the future, more research will need to be done to investigate the psychometric properties of the CARRS, particularly its external validity. However, these initial investigations suggest that there are important distinctions between children's role responsibility beliefs, control over protecting beliefs, and control over caretaking beliefs that may contribute meaningfully to our understanding of the process mechanisms impacting the relationship between marital conflict and child adjustment. Ultimately, this information may be used to advise intervention programs for children exposed to interparental conflict, such as children of separated and divorced families. Attention should be paid to the roles that boys and girls take in the face of interparental conflict, and the influence that these roles have on their adjustment. Although adopting a parentified role over the long-term may be maladaptive for girls, in the short-term it may not be helpful to deny the "helper" role a girl has in her family if it is enabling her to buffer the stress of interparental conflict. Instead, it may be more important to help such girls keep their role within appropriate boundaries and ensure that they do not end up blaming themselves for the conflict. Mothers, on the other

hand, may be guided to praise their daughters for their helping role, without overwhelming their emotional resources or allowing the parentified role to become chronic. In other words, treatment approaches for children exposed to interparental conflict may wish to focus on assisting parents and children to develop adaptive boundaries in their relationships with each other.

REFERENCES

- Achenbach, T.M., & Edelbrock, C. (1986). Manual for the Teacher's Report Form and Teacher Version of the Child Behavior Profile. Burlington, VT: University of Vermont Department of Psychiatry.
- Achenbach, T.M., (1991). Manual for the Child Behavior Checklist/4-18 and 1991 Profile. Burlington, VT: University of Vermont Department of Psychiatry.
- Altshuler, J.L., & Ruble, D.N., (1989). Developmental changes in children's awareness of strategies for coping with uncontrollable stress. Child Development, 60, 1337-1349.
- Amato, P.R., & Keith, B. (1991) Parental divorce and the well-being of children: A meta-analysis. Psychological Bulletin, 110, 26-46.
- Band, E.B., & Weisz, J.R., (1988). How to feel better when it feels bad: Children's perspectives on coping with everyday stress. Developmental Psychology, 24, 247-253.
- Baron, R.M., & Kenny, D.A., (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology, 51, 1173-1182.
- Becvar, D.H., & Becvar, R.J. (1993). Family Therapy: A Systematic Integration. Boston MA: Allyn & Bacon.
- Block, J., (1983). Differential premises arising from differential socialization of the sexes: Some conjectures. Child Development, 54, 1335-1354.
- Block, J.H., Block, J., & Morrison, A. (1981). Parental agreement-disagreement on child-rearing orientations and gender-related personality correlates in children. Child Development, 52, 965-974.
- BMDP (1992). BMDP Statistical Software Manual for Release 7.0 Vol. 2. Berkeley, CA: University of California Press.
- Boszormenyi-Nagy, I. (1965). A theory of relationships: Experience and transaction. In I. Boszormenyi-Nagy & J.L. Framo (Eds.) Intensive Family Therapy: Theoretical and Practical Aspects (pp. 38-86). New York: Harper & Row.
- Brickman, P., Rabinowitz, V. C., Karuza, J., Coates, D., Cohn, E., & Kidder, L. (1982). Models of helping and coping. American Psychologist, 37, 368-384.
- Bryan, J.H. (1972). Why children help: A review. Journal of Social Issues, 28, 87-104.

- Chess, S., Thomas, A., Korn, S., Mittelman, M., & Cohen, H. (1983). Early parental attitudes, divorce and separation and young adult outcome: Findings of a longitudinal study. Journal of the American Academy of Child and Adolescent Psychiatry, 22, 47-51.
- Cicchetti, D. (1993) Developmental psychopathology: Reactions, reflections, projections. Developmental Review, 13, 471-502.
- Compas, B.E., Banez, G.A., Malcarne, V., & Worsham, N. (1991). Perceived control and coping with stress: A developmental perspective. Journal of Consulting and Clinical Psychology, 56, 405-411.
- Compas, B.E., Malcarne, V.L., & Fondacaro, K.M. (1988). Coping with stressful events in older children and young adolescents. Journal of Consulting and Clinical Psychology, 56, 405-411.
- Compas, B.E., Worsham, N.L., & Ey, S. (1992). Conceptual and developmental issues in children's coping with stress. In A La Greca, L.J. Siegel, J.L., Wallander & C.E. Walker (Eds.) Stress and Coping in Child Health (pp.7-24). New York: Guilford.
- Crockenberg, S., & Covey, S.L. (1991). Marital conflict and externalizing behavior in children. In D. Cicchetti & S.L. Toth (Eds.), Rochester Symposium on Developmental Psychopathology. Vol 3: Models and Integrations. (pp. 235-260). Rochester: University of Rochester Press.
- Crockenberg, S., & Forgays, D.K. (1996). The role of emotion in the family: Children's and parents' attributions of happiness, sadness, and anger. Child Development, 58, 985-991.
- Cummings, E.M. & Cummings, J.L. (1988) A process-oriented approach to children's coping with adults' angry behavior. Developmental Review, 8, 296-321.
- Cummings, E.M., Davies, P.T., & Simpson, K.S., (1994). Marital conflict, gender, and children's appraisals and coping efficacy as mediators of child adjustment. Journal of Family Psychology, 8, 141-149.
- Cummings, E.M., Vogel, D., Cummings, J., & El-Sheikh, M. (1989). Children's responses to different forms of anger between adults. Child Development, 60, 1392-1404.
- Cummings, E.M., Zahn-Waxler, C., & Radke-Yarrow, M. (1981). Young children's responses to expressions of anger and affection by others in the family. Child Development, 52, 1274-1282.
- Cummings, E.M., Zahn-Waxler, C., & Radke-Yarrow, M., (1984). Developmental changes in children's reactions to anger in the home. Journal of Child Psychology and Psychiatry, 25, 63-74.

- Cummings, J.S., Pellegrini, D.S., Notarius, C.I., & Cummings, E.M. (1989). Children's responses to angry adult behavior as a function of marital distress and history of interparent hostility. Child Development, 60, 1035-1043.
- Davies, P.T., & Cummings, E.M. (1994). Marital conflict and child adjustment: An emotional security hypothesis. Psychological Bulletin, 116, 387-411.
- Davies, P.T., & Cummings, E.M. (1998). Exploring children's emotional security as a mediator of the link between marital relations and child adjustment. Child Development, 69, 124-139.
- Dumas, J., & Peron, Y. (1992). Marriage and conjugal life in Canada: Current demographic analysis. Ottawa: Statistics Canada.
- Elbow, M. (1982) Children of violent marriages: The forgotten victims. Social Casework, Oct. 465-471.
- Ember, C., (1973). Female task assignment and the social behavior of boys. Ethos, 1, 424-439.
- Emery, R.E. (1982) Interparental conflict and the children of discord and divorce. Psychological Bulletin, 92, 310-330.
- Emery, R.E. (1988) Marriage, Divorce, and Children's Adjustment. Newbury Park, CA: Sage Publications Inc.
- Emery, R.E., Fincham, F.D., & Cummings, E.M. (1992). Parenting in context: Systemic thinking about parental conflict and its influence on children. Journal of Consulting and Clinical Psychology, 60, 909-912.
- Emery, R.E. & O'Leary, D. (1982). Children's perceptions of marital discord and behavior problems of boys and girls. Journal of Abnormal Child Psychology, 10, 11-24.
- Fantuzzo, J.W., McDermott, P.A., Manz, P.H., Hampton, V.R., & Burdick, N.A. (1996). The pictorial scale of perceived competence and social acceptance: Does it work with low-income urban children? Child Development, 67, 1071-1084.
- Finch, A.J., Saylor, C.F., Edwards, G.L., & McIntosh, J.A. (1987). Children's depression inventory: Reliability over repeated administrations. Journal of Consulting and Clinical Psychology, 16, 339-341.
- Fincham, F.D., Grych, J.H., & Osborne, L.N. (1994). Does marital conflict cause child maladjustment? Directions and challenges for longitudinal research. Journal of Family Psychology, 8, 128-140.
- Freud, A. (1965). Normality and Pathology in Childhood. New York: International Universities Press.

- Gjerde, P.F., Block, J., & Block, J.H. (1988). Depressive symptoms and personality during late adolescence: Gender differences in the externalization-internalization of symptom expression. Journal of Abnormal Psychology, 97, 475-486.
- Grych, J.H., & Fincham, F. (1990). Marital conflict and children's adjustment: A cognitive-contextual framework. Psychological Bulletin, 108, 267-290.
- Grych, J.H., & Fincham, F.D. (1993). Children's appraisals of marital conflict: Initial investigations of the cognitive-contextual framework. Child Development, 64, 215-230.
- Grych, J.H., Seid, M., & Fincham, F. (1992). Assessing marital conflict from the child's perspective: The Children's Perception of Interparental Conflict Scale. Child Development, 63, 558-572.
- Hay, D.F., Zahn-Waxler, C., Cummings, E.M., & Iannotti, R.J. (1992). Young children's views about conflict with peers: A comparison of the daughters and sons of depressed and well women. Journal of Child Psychology and Psychiatry, 33, 669-683.
- Hetherington, E.M., Stanley-Hagen, M., & Anderson, E.R. (1989). Marital transitions: A child's perspective. American Psychologist, 44, 303-312.
- Hetherington, E.M., Cox, M., & Cox, R. (1982). Effects of divorce on parents and children. In M.E. Lamb Nontraditional Families: Parenting and Child Development. Hillsdale, NJ: Erlbaum.
- Hodges, W.F. (1991) Interventions for Children of Divorce: Custody, Access, and Psychotherapy, 2 ed., New York: John Wiley & Sons, Inc.
- Howes, P., & Markman, J.J. (1989). Marital quality and child functioning: A longitudinal investigation. Child Development, 60, 1044-1051.
- Jacobvitz, D.B., & Bush, N.F., (1996). Reconstructions of family relationships: Parent-child alliances, personal distress, and self-esteem. Developmental Psychology, 32, 732-743.
- Jaffe, P.G., Wolfe, D.A., & Wilson, S.K. (1990). Children of battered women. Newbury Park: Sage.
- Jenkins, J.M., Smith, M.A., & Graham, P.J. (1989). Coping with parental quarrels. Journal of the American Academy of Child and Adolescent Psychiatry, 28, 182-189.
- Johnston, J.R., Campbell, L.E.G., & Mayes, S.S. (1985). Latency children in post-separation and divorce disputes. Journal of the American Academy of Child Psychiatry, 24, 563-574.

- Jöreskog, K.G., & Sörbom, D. (1993). LISREL 8: Structural equation modelling with the SIMPLIS command language. Hillsdale, N.J.: Lawrence Erlbaum.
- Jouriles, E.N. & Norwood, W.D. (1995). Physical aggression toward boys and girls in families characterized by the battering of women. Journal of Family Psychology, 9, 69-78.
- Jurkovic, G.J., (1997). Lost Childhoods: The Plight of the Parentified Child. New York: Brunner/Mazel Inc.
- Katz, L.F., & Gottman, J.M. (1993). Patterns of marital conflict predict children's internalizing and externalizing behaviours. Developmental Psychology, 29, 940-950.
- Kerig, P.K. (1994). Child Coping Interview. Department of Psychology, Simon Fraser University.
- Kerig, P.K., Cowan, P.A., & Cowan, C.P. (1993). Marital quality and gender differences in parent-child interaction. Developmental Psychology, 29, 931-939.
- Kerig, P.K., Fedorowicz, A.E., Brown, C.A., Patenaude, R.L., & Warren, M. (1998). When warriors are worriers: Gender and children's coping with interparental violence. Journal of Emotional Abuse, 1, 89-114.
- Kliewer, W., & Sandler, I.N. (1992). Locus of control and self-esteem as moderators of stressor-symptom relations in children and adolescents. Journal of Abnormal Child Psychology, 20, 393-412.
- Kovacs, M. (1985). The Children's Depression Inventory. Psychopharmacology Bulletin, 21, 995-998.
- Lazarus, R.S., & Folkman, S. (1984). Stress, appraisal, and coping. New York: Springer.
- Mahler, M.S., & Rabinovitch, R. (1956). The effects of marital conflict on child development. In V.E. Eisenstein (Ed.), Neurotic interaction in marriage (pp.44-56) New York: Basic Books.
- Margolin, G., & John, R.S. (1997). Children's exposure to marital aggression. In G. K. Kantor and J.L. Jasinski (Eds.) Out of the Darkness: Contemporary Perspectives on Family Violence. (pp.90-104). Thousand Oaks, C.A.: Sage Publications.
- Miller, P.M., Danaher, D.L., & Forbes, D. (1986). Sex-related strategies for coping with interpersonal conflict in children aged five to seven. Developmental Psychology, 22, 543-548.
- Minuchin, S. (1974). Families and Family Therapy. Cambridge, M.A.: Harvard University Press

- O'Hearn, H.G., Margolin, G., & John, R.S. (1997). Mothers' and fathers' reports of children's reactions to naturalistic marital conflict. Journal of the American Academy of Child and Adolescent Psychiatry, 36, 1366-1373.
- Osborne, L.A. & Fincham, F.D. (1996). Marital conflict, parent-child relationships and child adjustment: Does gender matter? Merrill-Palmer Quarterly, 42, 48-75.
- Patenaude, R.L., & Kerig, P.K. (1995). Self-blame and control appraisals as moderators of adjustment in children exposed to interparental conflict. Unpublished manuscript.
- Patenaude, R.L., & Kerig, P.K. (1997). The Control and Role Responsibility Scale. Department of Psychology, Simon Fraser University.
- Pierce, K., & Edwards, E.D. (1988). Children's construction of fantasy stories: Gender differences in conflict resolution strategies. Sex Roles, 18, 393-404.
- Porter, B., & O'Leary, K.D. (1980). Marital discord and child behavior problems. Journal of Abnormal Child Psychology, 8, 287-295.
- Reynolds, C.R., (1980). Concurrent validity of what I think and feel: The Revised Children's Manifest Anxiety Scale. Journal of Consulting and Clinical Psychology, 48, 774-775.
- Reynolds, C.R., & Richmond, B.O. (1978). What I think and feel: A revised measure of children's manifest anxiety. Journal of Abnormal Child Psychology, 6, 271-280.
- Reynolds, C.R., & Richmond, B.O. (1979). Factor structure and construct validity of "What I think and feel": The Revised Children's Manifest Anxiety Scale. Journal of Personality Assessment, 43, 281-283.
- Rossmann, B.B.R., & Rosenberg, M.S. (1992). Family stress and functioning in children: The moderating effects of children's beliefs about control over parental conflict. Journal of Psychology and Psychiatry, 33, 699-715.
- Saylor, C.F., Finch, A.J., Jr., Spirito, A., & Bennett, B. (1984). The Children's depression inventory: A systematic evaluation of psychometric properties. Journal of Consulting and Clinical Psychology, 52, 955-967.
- Seber, G.A.F. (1984). Multivariate Observations. New York: John Wiley & Sons Inc. (Sec. 9.2.6)
- Skinner, E.A. (1995). Perceived Control, Motivation, and Coping. Thousand Oaks, CA: Sage Publications Inc.
- SPSS. (1999). SPSS Advanced Statistics 10.0. Chicago: SPSS.

- Staub, E. (1970). A child in distress: The effects of focusing responsibility on children on their attempts to help. Developmental Psychology, 2, 152-154.
- Steiger, J.H. & Lind, J.M. (1980). Statistically based tests for a number of common factors. Paper presented at the annual meeting of the Psychometric Society, Iowa City, IA.
- Wallerstein, J.S., Corbin, S.B., & Lewis, J.M. (1988). Children of divorce: A ten year study. In E.M. Hetherington & J. Arasteh (Eds.) Impact of Divorce, Single-parenting, and Stepparenting on Children. (pp.198-214). Hillsdale, N.J.: Erlbaum.
- Wallerstein, J.S. & Kelly, J.B. (1980). Surviving the Break-Up: How Children and Parents Cope with Divorce. Basic Books: New York.
- Wichstrom, L. (1995). Harter's Self-Perception Profile for Adolescents: Reliability, validity, and evaluation of the question format. Journal of Personality Assessment, 65, 100-116.
- Zahn-Waxler, C. (1993). Warriors and worriers: Gender and psychopathology. Development and Psychopathology, 5, 79-89.
- Zahn-Waxler, C., & Radke-Yarrow, M. (1982). The development of altruism: Alternative research strategies. In N. Eisenberg (Ed.), The Development of Prosocial Behaviour. New York: Academic Press.
- Zahn-Waxler, C., Radke-Yarrow, M., Wagner, E., & Chapman, M. (1992). Development of concern for others. Developmental Psychology, 28, 126-136.

APPENDIX A

Tables

Table 1: Demographic Information

	Mean	Standard Deviation	Range
Mother Age in Years	39.03	5.47	26-52
Child Age in Years	10.55	1.26	8-12

Maternal Annual Gross Income	Frequency/100
\$0-\$5000	13
\$5,001-\$10,000	11
\$10,001-\$20,000	7
\$20,001-\$40,000	43
\$40,001-\$60,000	13
\$60,001-\$80,000	2
\$80,001+	3
Missing	8
Maternal Education	
Grade 1-8	0
Grade 9-12	26
Vocational or some college/university	43
College or university graduate	19
Graduate or professional school	11
Missing	1
Maternal Ethnicity	
Caucasian	81
Asian	9
East Indian	1
First Nations	5
Hispanic	3
Other	1
Break-up with Ex-partner	
Very friendly	6
Somewhat friendly	10
Neither friendly nor angry	22
Somewhat angry	32
Very angry	30
Contact with Non-custodial Parent	
Daily	24
Weekly	58
Monthly	1
Few times a year	9
Once or twice per year	3
Very rarely	3
Never	2

Table 2: Comparison of Items from the Discord Control and Coping Questionnaire and the Control and Role Responsibility Scale

DCCQ (Rossman & Rosenberg, 1992)	CARRS (Patenaude & Kerig, 1997)
Direct Intervention Factor	Protecting
1. Get one of their parents out of a fight situation (0.47)	1. Get mom out of a fight with dad
2. Keep their parents from yelling at each other (0.48)	2. Keep their dad from yelling at their mom.
3. Protect their parents during a fight (0.69)	3. Protect their mom during a fight with their dad.
4. Stop a parents' fight (0.64)	4. Stop their dad from fighting with their mom.
5. Keep their parents from fighting before they start (0.68)	5. Keep their dad from fighting with their mom before he starts
6. Warn one parent that a fight was going to happen (0.62)	6. Warn mom that a fight with dad was going to happen
Self-Calming Factor	Caretaking
1. Make themselves feel better during a parents' fight. (0.58)	1. Help their mom feel better after their parents' fight.
2. Comfort the upset parent after a fight (0.40)	2. Comfort their mom after their parents' fight.
	3. Make their mom happy after their parents' is over.
	4. Keep their mom from crying or feeling bad after their parents' fight.
	5. Cheer their mom up after their parents' fight is over.
	6. Take mom's mind off their parents' fight after it's over

Table 3: Pattern Matrix of a Three Factor Solution of the CARRS Items Using Principle Components Analysis with a Direct Quartimin Rotation for Boys and Girls Separately

BOYS	COMPONENTS		
CARRS Items	RR	CP	CC
RC5	.891	-.116	-.144
RP2	.867	-.098	-.232
RC3	.852	-.045	-.208
RC1	.812	-.088	-.210
RP4	.793	.124	-.103
RC2	.775	-.075	.103
RP1	.719	.217	.360
RP5	.684	.252	.075
RP3	.628	.448	.175
RC4	.448	.029	-.065
CP3	.024	.844	-.047
CP4	-.113	.836	-.019
CP2	-.084	.776	-.099
CP5	.086	.621	-.189
CP1	.272	.527	.121
CC3	.146	.499	-.460
CC5	.030	.085	-.841
CC2	.326	.062	-.671
CC1	.096	.240	-.623
CC4	.194	.369	-.430

GIRLS	COMPONENTS		
CARRS Items	RR	CP	CC
RC5	.868	-.192	-.044
RP2	.630	.142	.189
RC3	.881	-.049	.018
RC1	.825	-.105	-.080
RP4	.675	.146	.012
RC2	.735	.016	.078
RP1	.823	.196	-.129
RP5	.793	.039	.026
RP3	.670	.069	.155
RC4	.810	-.100	-.046
CP3	.282	-.042	.519
CP4	.105	.886	-.126
CP2	.055	.877	.003
CP5	-.114	.640	.258
CP1	-.009	.030	.674
CC3	.130	.144	.523
CC5	.048	.090	.661
CC2	-.155	-.082	.916
CC1	-.081	.216	.683
CC4	.090	-.194	.643

Table 4: Pattern Matrix for a Four Factor Solution of the CARRS Items Using Principle Components Analysis With a Direct Quartimin Rotation

CARRS Items	COMPONENTS			
	1	2	3	4
RC3	.868	-.060	-.133	.029
RC5	.856	-.143	-.030	-.050
RC1	.832	-.079	-.102	.088
RC2	.780	-.022	-.164	.244
RP5	.773	.137	.053	-.046
RP1	.762	.200	.232	-.048
RP4	.709	.147	.021	-.125
RP2	.704	.095	-.137	-.058
RC4	.666	-.201	.015	-.129
RP3	.647	.169	.090	-.271
CP2	.039	.829	-.164	.084
CP4	.032	.777	-.036	-.051
CP5	-.045	.613	-.110	-.300
CC2	.019	-.054	-.851	-.118
CC5	.031	-.008	-.772	-.050
CC1	-.016	.208	-.743	.005
CC3	.166	.204	-.611	-.051
CC4	.041	-.231	-.311	-.756
CP1	.048	.133	-.029	-.656
CP3	.134	.241	-.021	-.643

Table 5: Pattern Matrix for a Three Factor Solution of the CARRS Items Using Principle Components Analysis with a Direct Quartimin Rotation

CARRS Items	COMPONENTS		
	RR	CP	CC
RC5	.873	-.126	-.054
RC3	.864	-.085	-.126
RC1	.823	-.129	-.079
RP5	.775	.159	.063
RP1	.769	.235	.251
RC2	.743	-.147	-.089
RP4	.719	.203	.007
RP2	.701	.110	-.139
RC4	.699	-.145	-.041
RP3	.678	.296	.035
CP4	-.015	.800	.037
CP2	-.035	.782	-.047
CP5	-.052	.744	-.133
CP3	.202	.533	-.187
CP1	.124	.430	-.212
CC2	-.005	-.056	-.907
CC5	-.001	-.036	-.801
CC1	-.068	.158	-.731
CC3	.129	.187	-.612
CC4	.140	.093	-.570

Table 6: Pearson Correlations Among CARRS Factors

	RR	CP	CC
Role Responsibility (RR)		.304**	.372**
Control over Protecting (CP)			.359**
Control over Caretaking (CC)			

** $p < .01$

Table 7: Pearson Correlations of CARRS Factors with Child-Reported Interventions into Interparental Conflict

	RR	CP	CC	Comf.	Int.	P-Solv.	Fight.
Role Responsibility (RR)		.304**	.372**	.354**	-.019	.128	.111
Control over Protecting (CP)			.359**	.134	.198	.281**	.258*
Control over Caretaking (CC)				.373**	.105	.032	.094
Comforter (Comf.)					.060	.074	.022
Interrupter (Int.)						.315**	.429**
Problem-Solver (P-Solv)							.709**
Fighter (Fight.)							

** $p < .01$ * $p < .05$

Table 8: Pearson Correlations of CARRS Factors with Child Age, Child Gender, and Time Since the Child's First Knowledge of the Separation

	RR	CP	CC	A	G	T
Role Responsibility (RR)		.304**	.372**	-.090	.024	.012
Control over Protecting (CP)			.359**	-.079	-.243	-.002
Control over Caretaking (CC)				.012	.012	.016
Age (A)					-.041	.041
Gender (G)						-.163
Time (T)						

** p < .01

*p < .05

Table 9: Means, Standard Deviations, and Ranges of Child Adjustment Variables

	Mean	Standard Deviation	Range
Child Internalizing T (CBCL)	60.41	11.27	33-82
Child Externalizing T (CBCL)	53.77	10.82	30-77
Child Anxiety (RCMAS)	13.39	7.23	1-27
Child Depression (CDI)	8.20	6.67	0-29

Table 10: Summary of the Moderational Effects of the CARRS Factors on the Relationship Between Exposure to Interparental Conflict and Child Adjustment

Moderator Child Adjustment Variables	Girls ‡	Boys ‡
Role Responsibility		
Mother Reported Child Internalizing T (CBCL)	-2.91***	0.66 (n.s.)
Child Reported Anxiety (CMAS)	-3.20***	1.68*
Child Reported Depression (CDI)	-2.02**	1.95*
Control Over Protecting		
Mother Reported Externalizing T (CBCL)	-2.35**	0.67(n.s.)
Control Over Caretaking		
No Significant Findings	---	---

* $p < .10$ ** $p < .05$ *** $p < .005$

Note: Only those child adjustment variables that were significantly moderated by CARRS factors are included.

APPENDIX B

Control and Role Responsibility Scale (CARRS) – Practice Questions

You know...things that you **have to try** to do aren't always things that you **really can** do. Like, for example, you **have to try** to do your homework but sometimes it's **too hard** and you **can't** do it! But it's still your **responsibility to try** to do it, even if you **really can't** do it. Right?

Now listen very carefully!

First, think about a time when two of your friends were having a fight. (Ask them if they have a time in mind)

Okay! Let's begin...

A. Some kids think they can stop their friends from fighting. but other kids don't think that they can stop them. So, how much do you think you really can stop your friends from fighting?

not at all

a little

pretty much

a lot

B. Okay, now, some kids think they have to try to try to stop their friends from fighting, but other kids don't think they have to try to do that (like, maybe they think it's up to the teacher to stop kids from fighting). So, how much do you think you have to try to stop your friends from fighting?

not at all

a little

pretty much

a lot

Okay, let's see if you understand the questions. Some questions ask you whether you think you **really can** do something. Other questions ask if you think that you **have to try** to do something, whether or not you think that you will **really** be able to. Do you get the difference? (see if they can explain)

Control and Role Responsibility Scale (CARRS)

Kids do different things when their parents fight. I want to find out what you do!

cc1. Some kids think they can help their mom feel better after their parents fight. Do you think you really can do that?

 not at all a little pretty much a lot

rc1. Some kids think they have to try to help their mom feel better after their parents fight. Do you think you have to try to do that?

 not at all a little pretty much a lot

rp1 Some kids think they have to try to get their mom out of a fight with their dad. Do you think you have to try to do that?

 not at all a little pretty much a lot

cp1. Some kids think they can get their mom out of a fight with their dad. Do you think you really can do that? ?

 not at all a little pretty much a lot

rc2. Some kids think they have to try to comfort their mom after their parents fight. Do you think you have to try to do that?

 not at all a little pretty much a lot

cc2. Some kids think they can comfort their mom after their parents fight. Do you think you really can do that?

 not at all a little pretty much a lot

cp2. Some kids think they can keep their dad from yelling at their mom. Do you think you really can do that?

 not at all a little pretty much a lot

rp2. Some kids think they have to try to keep their dad from yelling at their mom. Do you think you have to try to do that?

 not at all a little pretty much a lot

cc3. Some kids think they can make their mom happy after their parents' fight is over. Do you think you really can do that?

 not at all a little pretty much a lot

rc3. Some kids think they have to try to make their mom happy after their parents' fight is over. Do you think you have to try to do that?

 not at all a little pretty much a lot

rp3. Some kids think they have to try to protect their mom during a fight with their dad. Do you think you have to try to do that?

 not at all a little pretty much a lot

cp3. Some kids think they can protect their mom during a fight with their dad. Do you think you really can do that?

 not at all a little pretty much a lot

rc4. Some kids think they have to try to keep their mom from crying or feeling bad after their parents fight. Do you think you have to try to do that?

 not at all a little pretty much a lot

rc6. Some kids think they have to try to take their mom's mind off their parents' fight after it's over. Do you think you have to try to do that?

not at all

a little

pretty much

a lot

cc6. Some kids think they can take their mom's mind off their parents' fight after it's over. Do you think you really can do that?

not at all

a little

pretty much

a lot

cp6. Some kids think they can warn their mom that a fight with their dad was going to happen. Do you think you really can do that?

not at all

a little

pretty much

a lot

rp6. Some kids think they have to try to warn their mom that a fight with their dad was going to happen. Do you think you have to try to do that?

not at all

a little

pretty much

a lot

APPENDIX C

Children's Interventions into Interparental Conflict

There are lots of things kids might do when their mom and dad fight. None of them are right, or wrong. We just want to know what you do.

	Do you ever do that?			
	never	a little	pretty much	a lot
a) Some kids ask their mom and dad about the fight after it is over, to find out what was going on, but other kids don't do that. (information seeker)	1	2	3	4
b) Some kids try to comfort their mom or dad after the fight, and try to make them feel better, but other kids don't do that. (comforter)	1	2	3	4
c) Some kids try to keep their mom and dad from fighting by doing something nice or behaving really good (like doing their chores, trying to change the subject to something nice, suggesting the family do something fun together) but other kids don't do that. (positive distracter)	1	2	3	4
d) Some kids try to distract their mom and dad from fighting by misbehaving, or causing trouble (like making noise, making a big mess, getting in a fight with a brother or sister so the parents have to stop fighting and come see what's wrong). But other kids don't do that. (negative distracter)	1	2	3	4
e) Some kids come in the room when their mom and dad are fighting and ask them what is going on, but other kids don't. (interrupter)	1	2	3	4
f) Some kids come in the room when their mom and dad are fighting and try to solve the problem they are fighting about, but other kids don't. (problem-solver)	1	2	3	4
g) Some kids come in the room and get involved in the fight, too (like maybe they try and stick up for one of their parents, or start yelling at their parents). But other kids don't do that. (fighter)	1	2	3	4

Taken from the Child Coping Interview (CCI; Kerig, 1994)

APPENDIX D

Kids In Divorce and Separation Study

Information Sheet For Parents

This sheet is designed to inform parents and children of the purposes and demands of their participation in the Kids in Divorce and Separation (KIDS) Study at the SFU Clinical Psychology Centre. The study is designed to investigate the factors that help children to adjust to separation and divorce. An additional part of the study seeks to evaluate how these factors change as a result of intervention designed for children of divorce.

What will the study involve?

We will ask you and your child to complete questionnaires at a pre-treatment meeting at the C.P.C. which will last approximately one and one half hours. Parents will be asked to request that their child's teacher fill out two questionnaires, at both the beginning and the end of the study, which will concern their child's behaviour in school. To protect your privacy, teachers will only be informed that children are participating in a study of child development at SFU. However, teachers, as participants in the study, will have the right to request copies of the study results. To protect your privacy and confidentiality, teachers who request study results will also receive copies of several other recent studies that have been completed by the Family Relations Laboratory which have involved mothers and children in two-parent intact families. Using this method, teachers will not be aware which particular study the family participated in. Teachers will return the questionnaires using a postage-paid envelope provided by the researchers. Parents have the right to refuse to contact teachers and teachers have the right to decline participating in the project if they wish.

After the pre-treatment meeting, children will be placed in an 8 week group treatment program at the C.P.C. Each weekly session will be one hour in duration. Children will not be included in the treatment phase of the project if the researchers determine that they would not benefit from group treatment. In this instance, parents will be given referrals for more appropriate psychological services in the community.

After the 8 week treatment program is completed, parents and children will be asked to fill out questionnaires at a follow-up assessment at the C.P.C. which will last approximately one and one half hours.

How will my child benefit from the study?

Through this research study, we are pleased to be able to provide children with group treatment free of charge to help them cope with the stresses of separation and divorce.

What are the aims of the treatment?

The intervention that we will provide to children has been used extensively in the past and is currently in use in the community. It was designed to do the following: 1) give children a chance to bring up any questions or concerns they may have about separation and divorce, 2) let children know that growing up in a single-parent or re-formed household is not unusual, 3) help children cope with any special feelings or worries that they may have, and 4) correct mistaken ideas children sometimes have about separation or divorce.

Who will run the groups?

Each group will be co-lead by a male and a female graduate student in the Clinical Psychology program at SFU and will be supervised by a faculty member in the Department of Psychology who is a Registered Psychologist and specializes in the treatment of children.

How will my confidentiality and privacy be protected?

It is important to remember that your participation, and that of your child, at any point in the project (e.g., pre-treatment, treatment, or follow-up), is entirely voluntary and you may elect not to answer any specific question(s) or to leave the study altogether if you wish. Your responses to questionnaires will be completely confidential (identified by number only) and will be kept in a locked, secure location. Information to be kept in the client files at the C.P.C. will pertain only to your child's attendance in the group each week and, in the rare instance, note any disclosures by your child that indicate s/he is in need of protection as required by law in B.C. You will be fully informed if any of these issues arise during the course of the study. The questionnaires to be gathered are for research purposes only and are not suitable for legal purposes. Parents wishing to obtain a clinical evaluation of their child for the purposes of a custody evaluation or other legal proceeding will be given a referral to a more appropriate setting that can provide such an evaluation. Finally, it must be clear that your participation in the Kids in Divorce and Separation (KIDS) Study will not ensure any access, for your child or other family members, to other programs or services offered at the C.P.C.

What else do I need to know?

In this project, you and your child will be asked questions regarding your experiences of conflict in your family, how you handle it, what you think about it, and how it makes you feel. We ask you to think carefully about whether or not you can make the time commitment required for this project, which reaches over a 4 month period and involves 10 visits to the CPC in total. We believe that you will find the project both worth your efforts and a positive experience for your child and yourself! If you have any questions regarding the program or about your potential participation, please contact the project coordinator, Renee Patenaude, M.A., at 291-4099.

Informed Consent Form For Mothers/Guardians

The University and the researchers carrying out this project are dedicated to the ethical conduct of research and to the protection at all times of the interests, comfort, and safety of participants. This form and the information it contains are given to you to ensure your full understanding of the procedures involved in this research, and the benefits of taking part. Your signature on this form will signify that you have received a copy of this form, that you have received an adequate opportunity to consider the information it contains, and that you voluntarily agree to participate in the project.

The focus of this research is to identify what helps mothers and children to cope with the stress of divorce and separation. The purpose of gathering this information is to help us design intervention programmes that will be useful to mothers and children who are faced with this kind of family stress.

I agree to participate by completing questionnaires that describe myself, my child, and my family as part of the Kids in Divorce and Separation Study of Simon Fraser University. I take part in this study with assurance from the researchers that my responses will be completely confidential and anonymous (my name and identifying information will not be included on any of the research materials, which will be identified with a number only). Materials will be kept in a secure location, and any material that could serve to identify me (such as this form) will be destroyed after the completion of the study.

I have read and understood the "Information Sheet for Parents" which explains the procedures of this study in detail.

I take part in this study with the understanding that I may withdraw my participation at any time, and that I may register any complaint with the primary researcher named below, or with Dr. William Krane, Chair of the Psychology Department at Simon Fraser University.

I am aware that I may obtain a copy of the results of this study upon its completion by contacting Dr. Marlene Moretti (291-4099).

NAME (Please print:)

ADDRESS:

SIGNATURE:

WITNESS:

DATE:

A copy of this consent form should be provided to you.

Informed Consent For Minors By Mothers/Guardians

The University and the researchers carrying out this project are dedicated to conducting research ethically, and to protecting the interests and comfort of participants. This form and the information it contains are given to you to ensure your full understanding of the procedures involved in this research. We are committed to conducting research ethically and to protecting the well-being and privacy of our participants. Your signature on this form will indicate that you have received a copy of this form, that you have received an adequate opportunity to consider the information it contains and to consider the possible benefits of participation, and that you voluntarily agree to allow your child to participate in the project if s/he agrees to participate.

My child and I agree to participate by completing questionnaires that describe ourselves and our family as part of the Kids in Divorce and Separation Study of Simon Fraser University. My child and I take part in this study with assurance from the researchers that our responses will be completely confidential and anonymous (our name and identifying information will not be included on any of the research materials, which will be identified with a number only). We understand that materials will be kept in a secure location, and any material that could serve to identify us (such as this form) will be kept separate from the other questionnaires we fill out, and will be destroyed after the completion of the study.

Mothers and children have the right to be treated with respect and consideration, and for their confidentiality to be respected. Any information that is obtained during this study will be kept confidential to the full extent permitted by law. The only exception to a child's or mother's right to confidentiality, as the Child, Family, and Community Services Act in the Province of British Columbia requires, is if there is reason to believe that a child is currently in need of protection. Because of this law, therefore, the researcher may be required to divulge information obtained in the course of this research to a court or other legal body should it concern a child in present danger. Please be assured that we would inform you if anything were said in your child's interview that appeared to be a cause for such concern. Parents should also be aware that teachers, as participants in this study, may request a copy of the results upon completion of the study. If they result these results, teachers will also receive copies of recent studies conducted by the Family Relations Laboratory without identifying either the particular study in which the family participated or any specific information pertaining to the family.

I understand the procedures to be used and have fully explained them to my child. In particular, I have read and understood the "Information Sheet for Parents" which explains the procedures of this study in detail. In particular, my child knows that s/he has the right of privacy, and the right to decline to answer any question, or to withdraw from participation in the project at any time. Any complaint may be registered with the researcher named below, or with Dr. William Krane, Chair of the Psychology Department at Simon Fraser University (291-3354). I may obtain a copy of the results of this study upon its completion by contacting Dr. Marlene Moretti (291-4099).

As mother of (Name) _____ I consent to the above named engaging in the Kids in Divorce and Separation Study at the following time(s): _____ in a project supervised by Dr. Marlene Moretti of the Psychology Department at Simon Fraser University.

MOTHER'S NAME (Please print:) _____

MOTHER'S SIGNATURE: _____

CHILD'S SIGNATURE: _____

WITNESS: _____

DATE: _____

A copy of this consent form should be provided to you.