

**The Role of Children's Coping Self-Efficacy Beliefs in the  
Context of Parental Conflict: Implications for Children's  
Psychological Adjustment**

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## Summary

This thesis presents three studies investigating the differential impact of parental conflict on children's psychological outcomes. Of particular interest is children's personal agency, which can be observed through children's coping self-efficacy beliefs to cope with parental conflict. The studies described in this thesis utilized cross-sectional and longitudinal statistical methods with a large sample of school students in grades 5 and 7. Study 1 consisted of a concurrent sample of 663 school students (299 males, 364 females; 72% White, 20% Asian, 4% Middle Eastern and 4% from other ethnic groups). The aim of the first study was to develop and validate the Parental Conflict Coping Self Efficacy Scale (PCC-SES) through a multi-informant methodology. Exploratory and confirmatory factor analyses supported the three global strategy structure of the PCC-SES, *Proactive Behavior* (problem solving and seeking social support), *Avoiding Maladaptive Cognitions* (avoiding preoccupation, avoiding self-blame and distancing) and *Avoiding Maladaptive Behavior* (avoiding aggression and avoiding overinvolvement). Studies 2 and 3 were based on a longitudinal sample of 593 school students (271 males, 322 females) who participated in the study on two occasions. Study 2 found support for the mediating role of the coping self-efficacy strategies in the relationship between parental conflict and children's psychological maladjustment both through cross-sectional and longitudinal methods. In particular, coping self-efficacy for avoiding maladaptive cognitions mediated the effect of parental conflict and children's internalizing symptoms longitudinally. In Study 3, the results are presented for the moderating role of contextual family factors within the aforementioned longitudinal mediation. These results have important implications for increasing positive coping self-efficacy beliefs in children who live in the context of parental conflict.



## Certification by Candidate

I certify that this thesis has not previously been submitted for a degree nor has it been submitted as part of the requirements for a degree to any other university or institution other than Macquarie University. I also certify that the thesis is an original piece of research and it has been written by me. I certify that all information sources and literature used are indicated in the thesis. The research presented in this thesis was approved by the Macquarie University Human Research Ethics Committee (reference number: 5201100102).

A handwritten signature in black ink, appearing to be 'HBL', is written over a horizontal line.

Heidi Brummert Lennings

Date: 25.06.2014

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## **Chapter 1**

### **General Introduction**

## Thesis Overview

Exposure to parental conflict can negatively affect children's psychosocial development (Cummings & Davies, 2002; Johnson, 2002). It has been found that high levels of parental conflict are associated with increases in children's interpersonal difficulties, internalizing and externalizing symptoms (Grych & Fincham, 1990). Perhaps one reason for the negative impact such conflict can have on children is that they have little, if any, control over its genesis, prolongation and cessation (Brown, Oudekerk, Szewedo, & Allen, 2013). However, not all children experience uniform effects when living with parental conflict as it has been shown that the way in which children deal with parental conflict affects their psychological outcomes (Fosco & Grych, 2008; Grych, Harold, & Miles, 2003). This may help explain the variability in psychological outcomes following parental conflict (Brown et al., 2013; Johnson, 2002)<sup>1</sup>.

In particular, children's coping self-efficacy beliefs about parental conflict may explain the variability of children's outcomes following parental conflict. Coping self-efficacy is defined as children's beliefs and confidence in their own ability to perform the necessary action to confront threatening situations and their perceived ability to draw on resources to achieve better outcomes (Bandura, 1977; Benight & Bandura, 2004). Greater levels of coping self-efficacy beliefs by an individual enable a feeling of control over the situation because if the individual believes in their own ability to produce a result they are more likely to achieve the resultant goal (Bandura, 1997; 2012). As such, children's beliefs in their ability to cope with the parental conflict are examined in this thesis to explain the differential effects of parental conflict on children.

Coping self-efficacy can be understood within Social Cognitive Theory (SCT). SCT proposes a model of triadic reciprocal determinism in which there is a bi-directional relationship between the *environment*, *personal factors* and *behavior* (Bandura, 1997). The

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<sup>1</sup> As this thesis was prepared in a non-traditional thesis by publication format, 'et al.' is used to indicate remaining authors on repeat citations within each chapter, rather than across the thesis as a whole.

socio-cognitive process of coping self-efficacy beliefs is part of the personal factors of the triadic reciprocal causation model mentioned above (Bandura, 1986). This suggests that children themselves may play a role in minimizing the effect of parental conflict on their own psychological maladjustment through their perceived ability to cope with the situation (Grych & Fincham, 1993). Nevertheless, to date there have been no studies which assess children's coping self-efficacy beliefs about parental conflict through a multi-dimensional assessment. Further, there is a lack of empirical evidence for the role of children's coping self-efficacy beliefs in the relationship between parental conflict and children's psychological maladjustment. This thesis examines children's coping self-efficacy beliefs about parental conflict with the aim of suggesting interventions for improving the outcomes of children living with parental conflict.

The present introductory chapter consists of a literature review followed by an outline of the studies reported in this thesis. The literature review commences with a focus on parental conflict and the factors associated with greater levels of parental conflict in a family unit. This is followed by an evaluation of the relationship between parental conflict and children's psychological maladjustment. Particular attention is given to children's age and gender, as these are associated with variations in the severity of children's psychological maladjustment. The introductory chapter provides a review of the relevant theories of both coping and the effect of parental conflict on children. Next, SCT is introduced as a comprehensive theory to address the relevant factors of this thesis<sup>2</sup>, that is, not only the coping self-efficacy process, but also family functioning factors which surround children living with parental conflict. The aims of the three studies presented in this thesis are finally outlined and discussed.

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<sup>2</sup> This thesis is presented as a non-traditional research thesis by publication format as outlined by the Macquarie University Higher Degree Research Unit. This format necessitates the preparation of papers, which may be submitted for publication. The thesis comprised of five chapters consisting of three individual papers prepared for publication and an overall introduction and discussion. As a result, this structure necessitates some repetition across chapters.

## **Parental Conflict and Children's Coping Self-Efficacy Beliefs**

### **Parental Conflict**

Parental conflict is not an uncommon feature of any parental relationship and exists within many families worldwide. It commonly refers to arguments between parents occurring within a family setting (Buehler et al., 1997). Specifically, parental conflict can be defined as any inter-parental difference in attitude, regardless of severity, in which either or both parties feel a degree of emotional frustration, tension or anger (Schermerhorn, Chow, Cummings, & 2010). It is important to note that any given disagreement between parents may not necessarily constitute parental conflict, as disagreements may be possible in the absence of emotional stress. Indeed the assessment of parental conflict is multidimensional and its true evaluation requires the consideration of various factors (Grych, Seid, & Fincham, 1992). For example, in some circumstances, parental conflict poses an opportunity for parents to exemplify problem solving to their children (Cummings & Davies, 2010). On the other hand, parental conflict can also have detrimental effects, typified by physically abusive outbursts and family breakdown (Kinsfogel & Grych, 2004). Notably, the nature and the severity of parental conflict can affect the resolution of the conflict and have implications for the safety of the parents and children (Davies, Forman, Rasi, & Stevens, 2002). Comprehensive cross-cultural and longitudinal research on parental conflict has further suggested that parental conflict can have lasting effects on families (Jennings, Salts, & Smith, 1992; Krishnakumar & Buehler, 2000).

Risk factors for parental conflict range from conflict about the sharing of household duties, parenting methods, infidelity, low levels of commitment, trust and love, amongst many others (Clements, Stanley, & Markman, 2004; Hall & Fincham, 2006). Other risk factors that have been identified include low intimacy levels between the couple and a lack of communication (Schermerhorn et al., 2010). Moreover, there have been some initial findings suggesting that children's behaviors may exert some influence on levels of parental conflict

(Schermerhorn et al., 2010). In a recent study, Schermerhorn et al., (2010) proposed that not only are children affected by parental conflict, but they may also have an influential role towards the maintenance of parental conflict. Economic strain and neighborhood quality have further been considered as contributing factors to the likelihood of parental conflict (Wadsworth & Compas, 2002).

### **The Relationship between Parental Conflict and Children's Psychological Maladjustment**

The effect of parental conflict on children's psychological adjustment is variable. Empirical research has noted that the effects of parental conflict is less negative and may be considered to have positive effects if it enables the modeling of reasoning and the ability of parents to work together to reach a common conclusion (Cummings & Davies, 2010). Witnessing adaptive cooperation between parents, such as conflict resolution and positive affect, can teach children interpersonal and social skills to thrive in future conflict situations (Davies et al., 2002). A recent study by Pendry, Carr, Papp, and Antles (2013), assessed the effect of interparental psychological aggression on children's internalizing and externalizing symptoms. Pendry et al. (2013) found that children exposed to average and high levels of parental conflict were more likely to have higher levels of psychological maladjustment. However, children who were exposed to lower levels of parental conflict did not experience these negative outcomes. Pendry et al. (2013) concluded that the manner in which parents solve disagreements and the severity of parental conflict has an impact on children's psychological maladjustment.

Given the variability in the effect of parental conflict on children's psychological maladjustment, the reported outcomes are far from uniform within this burgeoning literature (Davies et al., 2002; Grych et al., 2003; Harold & Conger, 1997). Past research has found a relationship between parental conflict and both behavioral and emotional maladjustment in children (Emery, 1982). Other research has shown that there can be an improvement of



symptoms at the dissolution of these parental relationships (Cummings & Davies, 2002; Rhoades, 2008). In particular, children whose parents separate can have better psychological outcomes than children who continue to abide in homes with parental conflict (Booth & Amato, 2001; Morrison & Coiro, 1999). This is supported by a study of Papp, Cummings, and Goeke-Morey (2002) which utilized a methodology whereby both parents recorded the details of the conflicts, their emotional response and the perceived cause of the conflict in a diary for 15 days. This study found that parents were more likely to use destructive tactics during parental conflict when their children were in the vicinity. It is therefore possible that children may have better psychological adjustment upon the separation of parents who engage in high levels of conflict. Nevertheless, if there is high acrimony between separated parents and shared care of the children, the negative effects of the parental conflict may continue unabated (McInstosh & Chisholm, 2008).

Children can experience other types of negative consequences when exposed to different levels of parental conflict. The study by Herrenkohl, Kosterman, Hawkins, and Mason (2009) focused on a range of conflict severities and even children who were exposed to 'normative' levels of parental conflict experienced negative consequences. This may occur because parental conflict can create feelings of insecurity and threat in the child regarding their place in the family unit (Davies, Martin, & Cicchetti, 2012). A child's feelings of insecurity may be intensified if children perceive that their attempts to stop the parental conflict have little effect. In this situation children may feel helpless and less agentic (Cummings & Davies, 1994; Davies & Cummings, 1994). This explanation is supported by other research that has found that parental conflict increases children's negative emotionality and insecurity (Cummings & Davies, 1994; Davies, Sturge-Apple, Bascoe, & Cummings, 2013). Davies, Sturge-Apple, Cicchetti, and Cummings (2008) instructed mothers to stage parental conflict in front of their child while pretending to be speaking on the telephone with their partners. The mothers were provided with a scripted dispute and were coached to

communicate it in a stern verbal tone. They found that when children overheard the staged parental conflict their cortisol stress levels increased. In turn, these increases were associated with behavioral and psychological maladjustment and therefore provide evidence that parental conflict can have immediate negative physiological effects on children.

### **Coping and Children's Development**

Although children's use of positive coping strategies is related to the development of resilience, developmental considerations can lend significant insight into children's coping abilities (Compas et al., 2014; Frydenberg, 2014; Rutter, 1990). This is because children's cognitive developmental level can influence the coping strategies they use (Skinner & Edge, 1998). In particular, developmental immaturity may mean that children do not have all the necessary skills to enable them to draw upon a large range of positive coping responses in comparison with their older counterparts. For example, young children may not have developed the cognitive skills needed to appraise the consequences or implications of a stressful situation (Lazarus & Folkman, 1984) or have the forethought to purposely build a surplus of resources in anticipation of threat (Hobfoll, 1989).

As children move from childhood to early adolescence they are more able to problem solve and become more self-reliant (Zimmer-Gembeck & Skinner, 2011). This is evident as it is difficult for children of a young age to personally engage in the seeking of social support if they are not able to facilitate contact with external social support networks without assistance from their parents (Davies, Myers, & Cummings, 1996; Tremblay, Hebert, & Piche, 1999). For example, children in grade 3 are more likely to turn only to their attachment figures when they are in need of support, whereas children in grade 6 are more likely to seek external social support themselves and less likely to rely on their parents during stressful times (Zimmer-Gembeck & Skinner, 2011).

As children progress into adolescence they have greater cognitive abilities that can be used to engage in positive coping strategies such as positive self-talk. They are also

increasingly able to integrate a range of behavioral and cognitive coping strategies into their coping repertoire. Yet, the development of greater cognitive awareness is not always protective because it can lead to an increase of dwelling upon stressful situations (Collins & Dozois, 2008; Frydenberg & Lewis, 2002; Grych & Fincham, 1990). As such, they can be more likely to experience depressive symptomatology because their developing cognitive ability enables them to worry about the future, which in turn, increases rumination and self-blame. This hypothesis is supported by empirical literature as children in late childhood (ages 8-9) have been reported as engaging in less worrying and rumination than early adolescence (ages 10-14) (Zimmer-Gembeck & Skinner, 2011).

### **Children's Coping with Parental Conflict**

Parental conflict can have negative consequences for children given that children's perception of the conflict, appraisals and subsequent actions can affect their psychological outcomes (Folkman, Lazarus, Pimley, & Novacek, 1987; Grych & Fincham, 1990). Children's coping mechanisms may affect the meaning or threat children give to parental conflict (Causey & Dubow, 1992; Davies et al., 2013). Coping responses used by children who are exposed to parental conflict can vary between maladaptive cognitions, maladaptive behaviors and proactive coping. Maladaptive coping is characterized by children's use of avoidance, withdrawal and aggression (Causey & Dubow, 1992; Roubinov & Luecken, 2013). Children may internalize the parental conflict through being preoccupied with the parental conflict and self-blame. In contrast, proactive coping is exemplified by children's attempts to problem solve and seek social support in the face of parental conflict (Frydenberg, 2004; Sandler, Tein, Mehta, Wolchik, & Ayers, 2000). Proactive coping methods are likely to create an opportunity to maximize information and resource gathering for appropriate action in children (Roth & Cohen, 1986).

Past studies have identified coping mechanisms as mediators of the relationship between parental conflict and psychological adjustment (Shelton & Harold, 2008; Wadsworth

& Compas, 2002). In some circumstances exposure to low levels of family conflict or family disagreements around everyday activities (e.g. chores and curfews), may promote prosocial behaviors such as children's sensitivity to social exchanges and the use of adaptive coping (Bradley & Corwyn, 2000; Davies & Cummings, 1998). However, children who feel threatened or emotionally insecure are less likely to use adaptive coping strategies and, more likely to use maladaptive coping strategies associated with poorer child adjustment outcomes (Wadsworth & Compas, 2002). Maladaptive coping strategies can decrease a child's opportunity to process the event (Tremblay et al., 1999). Further, children who live within the context of parental conflict may be at a higher risk of developing negative coping mechanisms if the parents model hostility, anger, poor problem solving and communication styles (Cummings, Goeke-Morey, & Papp, 2003; Cummings, Goeke-Morey, Papp, & Dukewich, 2002; Grych, 1998; Grych & Fincham, 1993).

Children's maladaptive coping has been recognized as a mediator of the relationship between conflict within the family and depression (Roubinov & Luecken, 2013). Roubinov and Luecken (2013) explained that maladaptive coping strategies might be adaptive in the short-term as they require less cognitive resources during the stressor and therefore are easier to adopt in the presence of conflict. However, this coping style has also been linked to psychological maladjustment previously (Connor-Smith et al., 2000). Hence, although not adopting maladaptive coping strategies would require more effort Roubinov and Luecken (2013) concluded that coping through active methods, where the individual attempts to modify the effect of the stressor on themselves, has been linked to better psychological adjustment (Brown et al., 2013).

**Gender differences in children's coping.** Over the last two decades gender differences have also been established as a key influence on children's engagement with proactive and maladaptive coping strategies (Causey & Dubow, 1992). For example, females are more likely to have higher levels of proactive coping and to use maladaptive cognitions

when compared to males (Causey & Dubow, 1992; Frydenberg, 2004). Consistent with this assertion is the evidence that females are more likely to self-blame, use avoidant coping and to cognitively dwell on the details of stressful situations than males (Davies et al., 2002; El-Sheikh & Reiter, 1996; Goeke-Morey, Cummings, Harold, & Shelton, 2003). Moreover, males are more likely to cope with parental conflict by being aggressive towards others and by trying to intervene directly in the parental conflict (Davies et al., 2002; Jaffe, Wolfe & Wilson, 1990; Shelton, Harold, Goeke-Morey, & Cummings, 2006). Conversely some studies that have found no gender differences in children's internalizing or externalizing coping mechanisms (see Cummings, Schermerhorn, Davies, Goeke-Morey, & Cummings, 2006; Kerig, Fedorowicz, Brown, Patenaude, & Warren, 1999). One possible explanation for such findings is that females are more concerned than males about interpersonal relationships. Females may therefore be more likely to use coping strategies that do not explicitly damage the child-parent relationship (Seiffge-Krenke, 2011). This is a possible reason why females are more likely to use maladaptive cognitions compared to males who are more likely to use maladaptive behaviors. However, further exploration is required given that not all coping studies have reoccurring patterns of gender differences.

### **Coping and Parental Conflict Theories**

**Stress and coping.** Relevant to the effect of parental conflict on children is the empirical literature on children's coping abilities. Before discussing children's specific coping with regard to parental conflict a brief review of coping research will be provided. The concept of coping arises from the ability to handle situations of stress (Frydenberg, 2014). In particular, stress emerges from the incongruence between the perceived demands of a situation and a person's assessment of their ability to handle these demands (Lazarus, 1966). Coping has been historically defined as "...constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources in the person" (Lazarus & Folkman, 1984, p.141). Given that parental

conflict can result in different emotions and coping efforts, the coping literature is relevant when examining the effect of parental conflict on children's psychological outcomes (Zimmer-Gembeck, Skinner, Morris, & Thomas, 2012). Although there is a large body of literature on coping, two major theoretical frameworks can be isolated to gain a more in-depth understanding of the topic (Frydenberg, 2014). These include the Transactional Theory of Coping (Lazarus & Folkman, 1984) and the Conservation of Resources Theory (Hobfoll, 1989; 2010). The review of these two theories is followed by the review of two others which are specific to children in parental conflict contexts, the Cognitive-Contextual Model (Fosco & Grych, 2008; Grych, Harold, & Miles, 2003) and the Emotional Security Model (Cummings & Davies, 1996; Waters & Cummings, 2000).

**Transactional Theory of Coping.** The Transactional Theory of Coping asserts that coping is a cognitive operation involving both personal and environmental factors (Lazarus & Folkman, 1984). The coping process is proposed to be one that begins with a primary appraisal of the situation. When a stressful situation arises, the individual is likely to evaluate the potential threat of a situation to their well-being. During this evaluation, the individual may consider the potential loss, level of danger, pain, discomfort and the amount of exertion needed in order to successfully handle the situation. The less threat perceived the less stress attributed to the situation.

Next, if the stressor is considered of significance, the individual engages in secondary appraisal, that is, an assessment of his or her own available coping resources to deal with the stressful situation. During this stage, the individual may try to tease out the best way to reduce undesirable reactions arising from the stressful situation. Both internal (such as self-blame) and external (for example, seeking social support) coping options may be considered. The theory postulates that the individual would then select the least dangerous but most likely option to succeed in the situation given their resources.

Finally, after the coping attempt, there is tertiary appraisal, where the individual evaluates the effect of their coping strategy. This evaluation may be of any coping attempt regardless of whether it leads to mastery or not (Folkman, 2010). For example, if the individual is able to assert mastery over the stressful situation their coping attempt can be categorized as positive, however if mastery is unsuccessful the coping efforts would be classified as negative.

The Transactional Theory of Coping suggests that an individual's appraisal and cognitions can influence coping responses. That is, when individuals change their perception of the stressor, their coping responses change accordingly. Since coping is largely influenced by an individual's cognitions, the Transactional Theory of Coping helps to explain individual differences and flexibility in coping styles (Lazarus & Folkman, 1984). However, there is an apparent interdependence between primary and secondary appraisal (Folkman, 2010). This is highlighted by the fact that an individual's coping abilities (secondary appraisal) may influence the primary appraisal of threat in a situation. That is, primary appraisal as described in this model may not necessarily occur before secondary appraisal because appraisal can be a largely automatic and unconscious process that results from, rather than leads to, the chosen coping strategy (Winkielman & Schooler, 2011).

**Conservation of Resources Theory.** The Conservation of Resources Theory (Hobfoll, 1989; 2010) is an alternative theoretical framework to the Transactional Theory of Coping. The Conservation of Resources Theory is based on the notion that individuals are driven to conserve their resources when they are threatened by stress. Stress occurs when there is a threat to the individual's resources, be it instrumental (material objects, money), psychological (self-esteem) and/or social (support). This theory differs from the Transactional Theory of Coping as it relies less on appraisals, it proposes that appraisals are more in the nature of automatic rather than conscious responses. Instead, the Conservation of Resources Theory has a greater focus on the threat to an individual's reserves. This means that stress is

determined more by the environment in which the stressor occurs rather than how the individual construes the situation (Hobfoll, 2001). To guard against potential losses caused by stressful situations, the Conservation of Resources Theory proposes that individuals attempt to build a surplus of resources (Hobfoll, 1989; 2010; Frydenberg, 2014). This may be achieved by investing in or accumulating resources that may be threatened in stressful situations (such as self-esteem, confidence and mastery experiences). The guiding principle being that resource loss is more salient than resource gain (Hobfoll, 2001).

Indeed, a meta-analysis of 66 studies has provided empirical evidence for this theory by suggesting that resource gain (such as social support) can help individuals deal with threat (e.g. disappointing performances by the individual) because the positive ratio of resources to threats can help overcome difficulties (Park, Jacob, Wagner, & Baiden, 2013). However, resources can have a direct effect on coping over and above the stressor, thereby there is only partial support for the theory (Alarcon, Edwards, & Menke, 2011). Although the Transactional Theory of Coping and the Conservation of Resources Theory both provide the frameworks for understanding coping, the examination of children's coping abilities for parental conflict requires the consideration of additional contextual environmental factors.

**The Cognitive-Contextual Model.** The Cognitive-Contextual Model (CCM; Fosco & Grych, 2008; Grych, et al., 2003) proposes that parental conflict has an effect on children's outcomes through their interpretations of the conflict, which are influenced by their environment (Grych & Fincham, 1990). This framework emphasizes that the environment influences children's appraisals of the frequency, intensity, content and resolution of the parental conflict (Grych, 1998; Grych & Fincham, 1990; Lindahl & Malik, 2011).

Notwithstanding the factors of the parental conflict, environmental factors may increase the perceived threat that the parental conflict poses to the child. The way in which children attribute meaning to the parental conflict can be explained through two processes (Grych & Fincham, 1990). The first process, called primary processing, suggests that once the child has



appraised the parental conflict they try to work out how the parental conflict will affect them. In the next stage called secondary processing, children try to understand the cause of the parental conflict (Grych & Fincham, 1993). Secondary processing is of particular importance as this is where children consider who may be responsible for the conflict and whether they feel that they are adequately resourced to deal with the environment at home. These appraisals are important factors in determining the effects of parental conflict on psychological adjustment and can have even greater implications than witnessing the conflict (Cummings, Davies, & Simpson, 1994; Fosco & Grych, 2007; 2010; Rhoades, 2008). For example, Grych, Fincham, Jouriles and McDonald (2000)'s study proposed that children's cognitive appraisals of threat and self-blame mediated the effect of parental conflict on children's internalizing symptoms.

Support for the CCM has also been found in a study by Shelton and Harold (2008). These researchers conducted a longitudinal study with 252 adolescents. They found that coping through self-blame was associated with overinvolvement in the parental conflict and that this led to internalizing symptoms for the child. Children who perceived the parental conflict to be their fault were more likely to experience psychopathology. Moreover, children who had demonstrated a negative attribution style about the parental conflict were more likely to engage in avoidance behaviors and internalization symptoms. As such, CCM allows for the consideration of not only the coping strategies adopted by children, but also the contextual factors of the parental conflict.

**Emotional Security Theory.** An adjunct alternative theoretical framework for understanding the role that the environment has on the effect of parental conflict on children is Emotional Security Theory (EST; Cummings & Davies, 1996; Waters & Cummings, 2000). EST proposes that when children are involved in parental conflict their sense of security within the family is threatened. Children are likely to have higher levels of psychological and physical difficulties if they live in families in which they do not feel supported (Repetti,

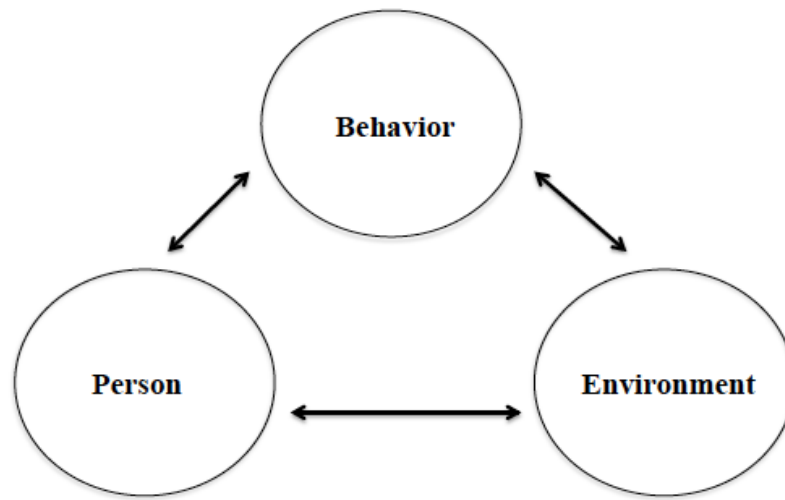
Robles, & Reynolds, 2011). EST complements children's attachment theory by proposing that the effect of parental conflict on children can be influenced by environmental family factors that affect the child's sense of safety within the family unit (Davies, Sturge-Apple, & Martin, 2013). For example, children who live in families in which they do not feel supported can feel threatened by parental conflict, responsible for it and unsafe at home, leading to psychological maladjustment (Shelton & Harold, 2008). However, children coming from a supportive family context are 'protected' from the effect of parental conflict on psychological adjustment, as they may not feel personally threatened (Davies et al., 2002). As such, factors other than the parental conflict itself, according to EST, can have implications for children's coping abilities and their psychological adjustment.

### **Social Cognitive Theory**

This thesis presents a new perspective on children's coping with parental conflict, that is, the role played by children's coping self-efficacy beliefs. Children's coping self-efficacy beliefs are an important progression from the study of coping because they allow the measurement of future oriented coping, changes in coping and are amenable to intervention (Chesney, Neilands, Cambers, Taylor, & Folkman, 2006; Folkman, 2010). Before discussing coping self-efficacy beliefs, a review of Social Cognitive Theory (SCT) will be provided as children's coping self-efficacy beliefs are part of this theoretical framework.

SCT posits that there is a triadic reciprocal relationship between personal, behavioral and environmental factors (see Figure 1; Bandura, 1986). It proposes that human actions can be explained through the bi-directionality of these three interacting determinants (Bandura, 1997; Pajares, 1996). The reciprocal nature of SCT does not assert that each of the three determinants interact in equal strengths. Rather, the prominence of each of the three determinants varies circumstantially according to the situation and to the individual (Bandura, 1997; 2012). Given that each of the three determinants are contributors to human

behavioral patterns, SCT provides an opportunity for targeting intervention strategies at any of its three components (Bandura, 1997).



*Figure 1.* Model of reciprocal determinism between personal, behavioral and environmental determinants (Bandura, 1986).

**Self-efficacy.** SCT is an agentic perspective that postulates that individuals can influence their own outcomes (Bandura, 2006; 2008; 2012). A driving force of agency, which is a fundamental part of the SCT framework, is conceptualized as a person's self-efficacy beliefs in their ability to execute an action (Bandura, 1994). Self-efficacy is considered the most central mechanism of agency that can impact human behavior (Bandura, 1990). It affects goals, outcomes, the perception of difficulties, aspirations, emotional states and the assessment of available resources because it is a self-regulatory process through which individuals can shape their responses to the environment (Bandura, 2012; Pajares, 1996). Individuals can therefore be producers of their social environments through their beliefs about what they are able to achieve. It is not necessarily about the individual's actual ability but rather about their belief in their ability to perform an action (Bandura, 2007; Pajares, 1996).

According to Bandura (1982), self-efficacy beliefs can become habitual through repeated experiences, as individuals do not necessarily judge their self-efficacy on every occasion. However, when there are changes in the demands of the task, the individual may

reappraise their self-efficacy beliefs. The outcomes of an individual's behavior is influenced by what they expect their efforts to yield based on past experience. The maintenance of self-efficacy beliefs is important for perseverance in the face of adversities or unexpected phenomena.

Through its motivational component, self-efficacy can have an effect on a person's choices, resilience and quality of life (Bandura, 1994; 1997). Individuals are more likely to act based on their self-efficacy beliefs because this gives them the confidence to execute a particular action (Bandura, 1997). For example, if an individual does not believe that they can act in a particular situation, it is unlikely that they will be motivated to do so (Bandura, 2000). However, when individuals have high levels of self-efficacy, obstacles are perceived as challenges to persevere through and take control of, rather than threats that can be avoided or dwelled on (Bandura, 1994). Individuals with high levels of self-efficacy are not discouraged from a goal, they are able to recover quickly after disappointments, and have stronger commitment levels to reaching self-goals (Pajares, 1996).

**Coping self-efficacy.** Coping self-efficacy beliefs are an individuals' perceived ability to self-motivate, access cognitive resources and self-confidence in performing the actions required to cope with stressful or threatening situations (Bandura, 1977; Benight & Bandura, 2004; Ozer & Bandura, 1990; Singh & Bussey, 2011). These judgments of coping abilities are part of the intra-personal factors described in the SCT model of triadic reciprocal determinism (Bandura, 1997). Previous studies have found that higher levels of coping self-efficacy beliefs have been linked with less psychological maladjustment and an increase in recovery in the presence of stressors such as experiences of threat, peer victimization, trauma and chronic illness (see Bandura, 1997; Benight & Bandura, 2004; Singh & Bussey, 2011). In turn, it is expected that children who believe in their ability to cope will be better equipped to face stressful situations and reduce negative consequences than children with lower levels of coping self-efficacy beliefs (Bandura, 1997). The processes by which coping self-efficacy

beliefs function include thought control, attention and construal processes and transformative actions (Benight & Bandura, 2004).

***Thought control processes.*** The thought control process of coping self-efficacy refers to an individual's ability to control their cognitions of potentially stressful situations. It can be understood as a person's thought regulation. Interestingly, this type of self-regulation involves both active problem solving and emotional regulation. When an individual is presented with a potentially threatening situation there is an opportunity to interpret the situation as one that they master or as one that is emotionally perturbing. This notion is based on the idea that individuals can control the way in which they think about a new situation and subsequently how they feel about it. Benight and Bandura (2004) have reported that when an individual perceives that they have control over a situation they are more likely to recover from traumatic experiences. A higher sense of control over the stressful situation increases a person's self-efficacy to cope and can therefore lead to less negative thoughts and anxiety (Bandura, 1997; Ozer & Bandura, 1990).

***Attentional and construal processes.*** The second process refers to how threat is appraised from a potentially stressful event given that situations do not have a fixed index of threat (Bandura, 1997). The potential threat is actually the balance of the individual's perceived ability to cope with the presenting environment and the potential harm posed by the environment. The severity of the threat of any given situation depends on the individual's judgment of their ability to master the situation (Bandura, 1997). These processes suggest that individuals with higher levels of coping self-efficacy will be less likely to attribute threat to a situation because they may feel more in control of the situation. Individuals with high self-efficacy may instead focus their *attention* on less threatening and more positive situations. Consequently, individuals who feel more in control of the situation are more likely to cope successfully (Lazarus & Folkman, 1984). Thus an individual's interpretation of threat depends upon their past experiences and self-evaluation of their own coping abilities.

***Transformative action processes.*** Lastly, coping self-efficacy functions through the transformative action process. A person with a higher level of coping self-efficacy is better able to transform a potentially threatening situation to one that is benign when compared to someone with lower levels of coping self-efficacy beliefs. This may be because individuals with higher coping self-efficacy beliefs have more confidence in their coping abilities and may therefore put more effort into transforming a stressful event. These individuals are characterized by being prepared to manage future threats through their coping abilities.

### **Coping Self-Efficacy and Parental Conflict**

What needs to be considered is how the positive attributes of coping self-efficacy beliefs are developed and used by children living within the context of parental conflict. Children who are confident in their ability to take control over threatening situations, such as parental conflict are more likely than their peers to be calm and do what is needed to reduce the negative effects (Bandura, 1997; Benight & Bandura, 2004; Singh & Bussey, 2011). Parental conflict is an imposed environment, one in which children have little direct control. Within this context, children who believe in their ability to cope adaptively with the parental conflict may be able to attain better psychological outcomes by the way in which they respond (Bandura, 2012). For example, a child may be involved in proactive behavior, which may reduce the negative impact of parental conflict on them (Cummings & Schermerhorn, 2003). Thus, high levels of coping self-efficacy beliefs, within the context of parental conflict may influence children's psychological adjustment (Bandura, 2006). Other research has found that children's coping self-efficacy beliefs have acted as a mediator of coping style and child psychological adjustment (Sandler et al., 2000; Shelton & Harold, 2008). Coping self-efficacy beliefs have also been proposed to enhance problem solving and children's ability to cognitively reframe a situation (Sandler et al., 2000; Singh & Bussey, 2009). Rossman and Rosenberg (1992) suggested that children who believed in their ability to control their distress

in the context of parental conflict would show less behavioral problems. As a result, a study on children's coping self-efficacy beliefs about parental conflict is warranted.

**Measurement of coping self-efficacy.** Although the significance of coping self-efficacy has been highlighted, it is of vital importance to accurately conceptualize and capture it by way of appropriate measurement (Bandura, 2007). There is a clear need in the literature to assess self-efficacy through a multidimensional measure of coping which utilizes 'I can' statements as per Bandura's (2006) guidelines for constructing self-efficacy scales. The failure to measure in this way has been a common pitfall of past coping self-efficacy studies.

Firstly, according to Bandura's (2006) guidelines for constructing coping self-efficacy measures, there is no one single measurement of self-efficacy that has relative parity in all contexts. Self-efficacy measures should be domain specific, taking into consideration potential impediments and facilitators to the proposed goal. It is pertinent for the coping self-efficacy measure to be domain specific given that they refer to the perceived ability of an individual and these necessarily vary from context to context.

Secondly, the importance of using 'I can' statements to assess perceived ability, rather than intention statements such as 'I will', cannot be overstated (Bandura, 2006). Bandura (2012) argued that intention statements are theoretically inaccurate to the conceptualization of coping self-efficacy because they do not assess for perceived ability. Other considerations for the measurement of self-efficacy that need to be taken into account are that respondents should be able to respond on an interval scale to various items measuring self-efficacy (see Bandura, 2012). An assessment of coping self-efficacy through interval scales is more sensitive, enables more differentiation between respondents and has greater reliability (Bandura, 2006).

### **Family Functioning Factors**

In addition to children's coping self-efficacy beliefs about parental conflict, some family related factors may also play a role in children's psychological outcomes following

parental conflict. The contextual factors of family functioning incorporate the emotional qualities of family interactions and relationships, and these may play a role in the way children appraise parental conflict (Johnson, Lavoie, & Mahoney, 2001). Good family functioning levels are characterized by high cohesiveness in a supportive and organized environment (Cunningham, 2002). Cohesive families are likely to interact positively with each other and may be more effective at managing parental conflict compared with emotionally distant families (Davies et al., 2013; Johnson, 2002). Further, families with good levels of functioning are more likely to be expressive with each other (Fosco & Grych, 2007). These families are more able to create opportunities for efficacious behavior in their children which can be protective against the negative effects of parental conflict (Davies et al., 2002). Indeed, a variety of factors have previously been used as indicators of family functioning. Some include family emotional expressiveness (Fosco & Grych, 2007), whether there is triangulation of the children, that is, whether the children are implicated in the conflict (Fosco & Grych, 2010), as well as levels of parental psychopathology (Shelton & Harold, 2008).

### **Social Cognitive Theory and Family Functioning**

Family functioning factors can be conceptualized as the environmental factors in SCT (see figure 1; Bandura, 1986). Family functioning factors provide the context through which children give meaning to parental conflict (Bandura, 1986; Fosco & Grych, 2007; Johnson, Lavoie & Mahoney, 2001). These can influence the personal and behavioral factors bidirectionally. If parental conflict occurs within a family with high levels of functioning children may have better outcomes compared to families with low levels of family functioning (Fosco & Grych, 2007). A child in the presence of parental conflict and in tandem with low levels of family functioning, may feel more vulnerable and less able to experience the world (Cummings et al., 2006). This may be because when children are exposed to parental conflict in a context of poor family functioning there may be an aggravation of the negative parental conflict effects on children.



Notably, the quality of the family's inter-personal relationships may influence the variability in children's psychological adjustment following parental conflict (Borrine, Handal, Brown, & Searight, 1991). For example, it has been proposed that in a positive family environment, where expressions of warmth are frequent, parental conflict may be perceived as a one off incident, portraying a parents' passion about a specific issue instead of indicating an overall negative parental relationship (Fosco & Grych 2007). In these situations children are less likely to self-blame for the parental conflict. Even if there is conflict between the parents, children are more likely to view their family as cohesive if the family uses strategies such as open communication and model effective conflict resolution (Cunningham, 2002). Good family functioning, characterized by an environment of overall family satisfaction and a feeling of belonging, can increase children's confidence in their parents' ability to solve disagreements and maintain family harmony (Bandura, Caprara, Barbaranelli, Regalia, & Scabini, 2011; Davies et al., 2002; Perosa & Perosa, 2001; Schrodts, 2005). Thus, children from families with good family functioning and yet who experience parental conflict are likely to have better psychological adjustment than children who have poor family functioning who are also exposed to parental conflict (Davies et al., 2002). In the current thesis, family functioning factors are based on family satisfaction and collective family self-efficacy. These family functioning factors are discussed below.

**Family satisfaction.** Family satisfaction is an individual's sense of contentment when reflecting upon the sense of unity and fulfillment provided by the family. Specifically it includes the satisfaction experienced as a result of the support received from the family, the quality time spent within the family, the way in which problem solving occurs and the independence of individuals fostered by the family unit (Caprara, Pastorelli, Regalia, Scabini, & Bandura, 2005). Previous research has identified family satisfaction as an important indicator of family functioning because it is linked with the family's ability to value each other's opinions and engage in effective communication patterns (Caprara et al., 2005;

Schrodt, 2005). Families with high levels of family satisfaction are cohesive, adaptable and can face challenges as a whole. In accordance with CCM, EST and SCT, high levels of family satisfaction provide a family context in which children feel secure and feel minimal levels of risk. Past research has suggested that family cohesiveness, a characteristic of family satisfaction, is a protective factor from the stress associated with parental conflict (Davies et al., 2002). Children's sense of cohesion to the family, due to high levels of family satisfaction, can reduce insecurity and encourage the use of appropriate coping approaches in the face of parental conflict (Davies et al., 2013). There is also a relationship between self-efficacy beliefs and a greater ability to refrain from escalating family disagreements into conflict (Caprara et al., 2005). However, family satisfaction can be threatened by various factors, including tensions arising from poor work-family balance (Chen et al., 2013). Children from families with parental conflict, in which there is low family satisfaction may not be as equipped as children with high family satisfaction to cope with parental conflict. Their environment may therefore increase the chances of impaired psychological adjustment (Davies et al., 2013).

**Collective family self-efficacy.** Another indicator of a family's functioning is the family's collective self-efficacy. Generally, collective agency is a group's perceived ability to act together to shape their future (Bandura, 2001). Within a family context, collective self-efficacy refers to the common beliefs of the family's ability to achieve common goals. A family's sense of collective self-efficacy may increase the children's chance of adaptive coping responses because they are likely to have better relationships with their parents (Caprara et al., 2004; Pepe, Sobral, Gomez-Fraguela, & Villar-Torres, 2008). Children in families with high levels of collective family self-efficacy have better communication patterns with each other than families with low levels of collective family self-efficacy. A recent study has also found that families who have better communication are more able to manage their

affairs and have greater satisfaction with life than families with poor open communication (Bandura et al., 2011).

Collective family self-efficacy may be an indicator of family functioning, playing a role in children's use of and perceived belief in their ability to use coping mechanisms when faced with parental conflict. Collective family self-efficacy is not the sum of each family member's self-efficacy to achieve a goal, but the family's beliefs to conjointly achieve a common aim (Bandura, 2001). For example, Bandura et al. (2011) found that family collective self-efficacy was central to family functioning, over and above individual measures of self-efficacy. Bandura et al. (2011) suggested that it was the interdependent social system in collective family self-efficacy that predicted family satisfaction rather than the dyadic parent, child and spousal efficacies.

### **The Present Research**

The aim of this thesis is to investigate the role of children's coping self-efficacy beliefs in the relationship between parental conflict and child psychological maladjustment. Three studies are presented which are derived from a large sample of school students and their parents. The participants completed questionnaires, which contained measures of parental conflict, children's coping self-efficacy beliefs, psychological adjustment and other family functioning measures. Children completed the questionnaire in their schools and were supervised by the investigator, research assistants and teachers. The parental questionnaires were taken home by the children to their parents in a sealed envelope and were then posted back to the researcher. Participants were not required to write their names on the questionnaires and anonymity was assured.

It was anticipated that children's coping self-efficacy beliefs play an important role in the relationship between parental conflict and child psychological maladjustment. However, before the assessment of this hypothesis could be undertaken, the creation and validation of a specific coping self-efficacy measure for parental conflict was carried out. There is currently

no comprehensive and specific measure of children's coping self-efficacy beliefs within the context of parental conflict and given the contextual specificity of self-efficacy beliefs, this is an essential step in further understanding this area. As such, Study 1, reported in Chapter 2, presents a new measure, the Parental Conflict Coping Self-Efficacy Scale (PCC-SES) developed by following Bandura's (2006) guidelines regarding the need for specificity in the development of self-efficacy scales. A further aim of the Study 1 was to assess the construct validity of the PCC-SES through multi-informants. The participants of this cross-sectional first study were 663 school students (299 males, 364 females) and their parents.

Studies 2 and 3, presented in Chapters 3 and 4 respectively, were based on an 8-month longitudinal sample of 593 school students (271 males, 322 females) who participated in the study on two occasions. Study 2 aimed to assess the mediating role of children's coping self-efficacy beliefs about parental conflict, by reference to the relationship between parental conflict and child psychological maladjustment. It was expected that there would be a negative relationship between parental conflict and children's coping self-efficacy beliefs and that this would lead to more psychological maladjustment in children.

The aim of the Study 3 was to investigate the role of family functioning factors within the relationship between parental conflict, children's coping self-efficacy beliefs and psychological maladjustment. Family satisfaction and collective family self-efficacy were the family functioning factors expected to moderate the influence of coping self-efficacy beliefs on children's psychosocial outcomes.

Collectively, the three studies were designed to shed light on the importance of children's personal agency in the context of parental conflict. Since children's coping self-efficacy beliefs about parental conflict may be amenable to intervention this thesis also provides targeted suggestions for clinical implementation.

## **Chapter 2**

### **Personal Agency in Children: Assessing Children's Coping Self-Efficacy in the Context of Parental Conflict**

### Abstract

The aim of this study is to develop a multidimensional measure for assessing children's personal agency to handle parental conflict through their coping self-efficacy beliefs. Coping self-efficacy beliefs are defined as an individual's perceived ability to motivate themselves, access cognitive resources and perform the actions required to take control of stressful situations. This study examines the psychometric properties and validation of the newly created Parental Conflict Coping Self-Efficacy Scale (PCC-SES). The study was based on 663 children, in grades 5 and 7 and their mothers. The sample was approximately 72% White, 20% Asian, 4% Middle Eastern and 4% from other ethnic groups. An exploratory factor analysis and confirmatory factor analysis through structural equation modeling supported the structure of the PCC-SES. The PCC-SES's structure was facilitated by three global strategies, which were cognitively and behaviorally based, namely *Proactive Behavior* (problem solving and seeking social support), *Avoiding Maladaptive Cognitions* (avoiding preoccupation, avoiding self-blame and distancing) and *Avoiding Maladaptive Behavior* (avoiding aggression and avoiding overinvolvement). The PCC-SES was shown to be a useful tool for assessing children's personal agency within the context of parental conflict.<sup>3</sup>

**Keywords:** child coping self-efficacy, parental conflict, psychological adjustment

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<sup>3</sup> Manuscript submitted for publication. In subsequent chapters this study is referred to as "Brummert Lennings, H. I. & Bussey, K. (2014) *Personal agency in children: Assessing children's coping self-efficacy in the context of parental conflict*. Manuscript submitted for publication."

## Personal Agency in Children: Assessing Children's Coping Self-Efficacy in the Context of Parental Conflict

Exposure to parental conflict can negatively impact children's psychosocial development (Johnson, 2002; Johnson, LaVoie, & Mahoney, 2001), psychological maladjustment (Emery, 1982; Grych & Fincham, 1990), externalizing behavior (Cummings & Davies, 2002), sleep (El-Sheikh & Kelly, 2011) and their ability to form future romantic relationships (Cui, Fincham, & Pasley, 2008). These negative effects may be exacerbated if parents do not resolve marital conflict or *if they* display hostility and aggression towards each other (Cummings, Goeke-Morey, & Papp, 2003; Pendry, Carr, Papp, & Antles, 2013). One mechanism relevant to children living with parental conflict is their belief in their ability to cope with the parental conflict, that is, their coping self-efficacy beliefs (Bandura, 1997; Frydenberg, 2004). Children's coping self-efficacy beliefs about parental conflict are important because they may influence children's psychological adjustment (Bandura, 2006). Coping self-efficacy beliefs have been previously linked with better psychological adjustment in other contexts such as peer victimization (Singh & Bussey, 2009). It is therefore possible that children's beliefs in their ability to cope with parental conflict may be associated with better psychological outcomes. There are currently no validated, comprehensive coping self-efficacy measures for children in the context of parental conflict that incorporate a range of coping self-efficacy strategies. The aim of the current study is to construct such a scale, the Parental Conflict Coping Self-Efficacy Scale (PCC-SES) and to assess its psychometric properties.

The concept of self-efficacy, within social cognitive theory (Bandura, 1997), refers to an individual's beliefs about their ability to use particular skills if required, for example, in circumstances of a potentially threatening event or behavior. It is based on the agentic model of adaptation where the individual is able to exert influence over their functioning and life circumstances rather than reacting to their vulnerabilities. The way in which a potentially

threatening situation is perceived is determined by the attention and construal processes related to self-efficacy beliefs (Benight & Bandura, 2004). A person's self-efficacy beliefs regulate functioning through cognitive, motivational, affective and decisional processes, which can manifest in self-enhancing or self-debilitating behaviors. Since the core of self-efficacy beliefs is agency, it gives an insight into why some stressors might be threatening for some individuals but benign to others. Individuals who feel confident that they can address certain stressors are likely to be more agentic and have higher levels of self-efficacy beliefs than those who do not. Individuals who believe in their ability to exercise control over a potential threat are likely to remain calm and experience minor distress, compared with those who believe the threat to be unmanageable (Singh & Bussey, 2009). They are also likely to access cognitive resources and perform the actions required to take control of stressful situations, as reported in people's recovery from natural disasters, war, assault and peer victimization (Bandura, 1997; Benight & Bandura, 2004; Singh & Bussey, 2011).

It is apparent that coping self-efficacy beliefs in children are relevant in the study of parental conflict. Although there has been some research in this area, it is constrained by various factors. One of the first constructed measures for coping self-efficacy beliefs in parental conflict was the Coping Efficacy subscale of the Children's Perception of Interparental Conflict questionnaire for children between the ages of 9 and 12 (CPIC; Grych, Seid, & Fincham, 1992). This six-item subscale focused on the concept of coping self-efficacy as a unidimensional construct. Although the responses to the items were on a 3-item scale, an improved measure, consistent with Bandura's (2006) guidelines for constructing self-efficacy scales, would incorporate a broader range of interval ratings scale to increase the potential differentiating information and reliability of the scale. Further, according to Bandura (2006), coping self-efficacy measures should be phrased to assess perceived future ability. Therefore, the wording of the items should target children's beliefs in their ability to use different coping strategies in parental conflict situations. Further issues of concern include



its internal consistency, which has been identified as a weakness, requiring replication and caution in interpretation (Fosco & Grych, 2010).

In the context of divorce, another measure of children's coping self-efficacy beliefs has been developed for children between the ages of 9 and 12 (Sandler, Tein, Mehta, Wolchik, & Ayers, 2000). These authors devised a 7-item scale which assessed children's past *competence* at problem solving. Although other studies have utilized this measure (e.g. Wolchik et al., 2000), a measure specific to parental conflict, assessing children's belief in their ability to use particular coping strategies would have provided an improved measurement of children's coping self-efficacy beliefs (Bandura, 2006; Benight, Ironson, & Durham, 1999). Although the aforementioned studies emphasized the importance of coping self-efficacy beliefs, they also provided the need for the re-development of a coping self-efficacy measure, specific to parental conflict.

Accordingly, the aim of the current study was to develop an improved measure of children's coping self-efficacy beliefs about parental conflict, the PCC-SES, for children between the ages of 8 and 12 years. Children in the concrete operational and early adolescence period of development (i.e. 8-12 years of age) are most reactive to parental conflict as they can make causal connections between parental conflict and its impact on future interactions (Davies, Meyers, Cummings, & Heindel, 1999). They are increasingly able to develop sophisticated hypotheses about the meaning of parental conflict and identify the possible implications for their lives (Cummings & Davies, 2010). During this stage, not only do children foster independence and have more cognitive flexibility, but their coping self-efficacy beliefs can also have more of an affect over their lives than at earlier ages (Skinner & Zimmer-Gembeck, 2009; Zimmer-Gembeck & Skinner, 2011). This may be why the previously mentioned self-efficacy studies have focused on this age range (Grych et al., 1992; Sandler et al., 2000). Therefore, the current study aims to provide information about children's coping self-efficacy beliefs within the 8 to 12 age group.

The development of the PCC-SES follows Bandura's (2006) guidelines for the construction of self-efficacy scales, including the assessment of the multidimensional nature of coping self-efficacy beliefs. Multidimensionality was assessed through the inclusion of specific coping self-efficacy strategies (Bandura, 2006). The specific strategies were chosen based on their prominence in the *distinct but related* area of children's coping and parental conflict (see Causey & Dubow, 1992; Frydenberg, 2004). These specific strategies included problem solving, seeking social support, self-blame, preoccupation, distancing, overinvolvement and aggression.

Although the parental conflict coping literature has emphasized *behavioral* strategies for both proactiveness and maladaptiveness, research in this area has focused on maladaptive *cognitive* strategies such as self-blame, rather than adaptive cognitions (see Grych et al., 1992; Shelton & Harold, 2008). Thus the coping self-efficacy strategies in the current study captured proactive and maladaptive behaviors and maladaptive cognitions. Based on the coping literature, three global strategies were used to thematically group the specific coping strategies described above: *Proactive Behavior*, *Avoiding Maladaptive Cognitions* and *Avoiding Maladaptive Behavior* (Frydenberg, 2004; Roth & Cohen, 1986; Skinner & Zimmer-Gembeck, 2009). These three global strategies emerged from a review of the coping literature as there is no gold standard for the grouping of coping strategies (Maybery, Steer, Reupert, & Goodyear, 2009; Skinner, Edge, Altman & Sherwood, 2003). These three global strategies guided the structure of the PCC-SES.

The first global strategy, proactive behavior, involved children's self-efficacy beliefs about their ability to search for options to minimize the possibility of negative outcomes. These beliefs focused on children's ability to take action to improve stressful situations and to ask for assistance as these specific strategies have been previously noted to protect from psychological maladjustment (Frydenberg, 2004; Sandler et al., 2000). Children who report higher levels of self-efficacy for problem solving may work at a problem or create an

opportunity to help the situation (Causey & Dubow, 1992; Frydenberg, 2004). Similarly, a child's perceived ability to elicit social support from a variety of sources could promote their positive affect and reduce negative reactions to stress. Seeking social support is a proactive behavior because it can equip children with the resources to reduce the psychological impact of parental conflict (Tremblay, Hebert, & Piche, 1999). Children who engage in seeking social support and live in parental conflict homes are likely to have lower externalizing and depression scores than children who do not seek social support (Rogers & Holmbeck, 1997). As such, the specific strategies of coping self-efficacy for *problem solving* and *seeking social support* were included in the global strategy of proactive behavior.

The second global strategy of interest focused on children's self-efficacy beliefs to avoid maladaptive cognitions. Children who cope with stressful situations through maladaptive cognitions may respond by withdrawing from others and experiencing increased anxious symptomology (Causey & Dubow, 1992). Therefore, children may need to avoid specific strategies that have been linked with psychological maladjustment, such as *preoccupation*, *self-blaming* and not *distancing* themselves from the situation. These specific cognitive coping strategies are relevant for the assessment of the avoiding maladaptive cognitions coping self-efficacy global strategy within the context of parental conflict (Sandler, Tein, & West, 1994). Children's preoccupation with parental conflict refers to children's worries about the harmful effects of parental conflict. It has been related to the development of anxiety as children may be concerned about the parental conflict escalating, or that they will become involved in the conflict (Grych et al., 1992). This view is consistent with Grych and Fincham (1990)'s suggestion that as children become more preoccupied with parental conflict, they feel threatened, blame themselves for the situation and can experience more psychological maladjustment. When children perceive themselves as at fault or responsible for aspects of parental conflict, they may develop symptoms such as reduced self-esteem, depressive symptomology and shame (Cunningham & Walker, 1999; Frydenberg, 2004;

Grych & Fincham, 1993). Alternatively, children may cognitively distance themselves from the parental conflict through imaginative and magical thinking (Cummings & Davies, 2002; Sandler et al., 1994). Distancing from the stressor may be adaptive in some situations, particularly in the short-term as it allows the child space from the situation and to emotionally disengage (Forman & Davies, 2005). Children's ability to avoid preoccupation, avoid self-blame and for distancing may prevent cognitive dwelling on the parental conflict and they were therefore included in the global strategy of coping self-efficacy for avoiding maladaptive cognitions (Shelton, Harold, Goeke-Morey, & Cummings, 2006).

Finally, the third global strategy of children's coping self-efficacy beliefs was avoiding maladaptive behavior. This global strategy involved children's perceived ability to resist negative behavioral reactions such as *aggression* and *overinvolvement* (see Causey & Dubow, 1992; Frydenberg, 2004). Children may engage in aggression as a specific coping strategy with parental conflict if they are vigilant to the conflict and if it has a spillover effect on the child-parent relationship (Bradford et al., 2004; Shelton et al., 2006). Coping by avoiding aggression included avoiding throwing objects, and physically hurting other people, as described by Singh and Bussey (2009). Similarly, children's coping self-efficacy to avoid overinvolvement in the parental conflict taps into the child's resistance to be drawn into the conflict or confront their parents. Previous research has noted that children may be motivated to become involved in the parental conflict in an attempt to increase their agency and reduce their emotional insecurity (Cummings & Schermerhorn, 2003). However, children who become overinvolved with the parental conflict may have a poor relationship quality with their parents and are likely to experience internalizing and externalizing symptoms (Davies, Forman, Rasi, & Stevens, 2002; Fosco & Grych, 2010; Shelton et al., 2006).

A further aim of this study was to validate the PCC-SES using a multi-informant method. The validation of the PCC-SES was assessed through the relationship between children's coping self-efficacy beliefs and child psychological adjustment as it was expected

that children who live within the context of parental conflict may experience a range of psychological maladjustment problems. Psychological adjustment was assessed through the measurement of anxiety symptoms (Reynolds & Richmond, 2005), internalization, externalization as measured by the Total Difficulty Index (TDI) and prosocialness as reported by children and their parents (Goodman 1997; Goodman, Meltzer & Bailey, 1998). It was predicted that there would be a negative relationship between coping self-efficacy for proactive behavior, avoiding maladaptive cognitions and avoiding maladaptive behavior, and child psychological maladjustment as reported by children and their parents (Cummings & Davies, 2002; Grych & Fincham, 1990). A positive relationship was expected between the three global strategies and prosocialness based on children's and parents' reports.

Gender differences were expected in children's coping self-efficacy beliefs. It was predicted that girls would have higher levels than boys in self-efficacy for proactive behavior (problem solving and seeking social support) (Causey & Dubow, 1992; Frydenberg, 2004). Based on research findings that girls tend to engage in more internalization than boys, girls were expected to score lower levels of coping self-efficacy beliefs for avoiding maladaptive cognitions than were boys (avoiding self-blame, avoiding preoccupation and distancing) (Davies et al., 2002; El-Sheikh & Reiter, 1996; Goeke-Morey, Cummings, Harold, & Shelton, 2003). Boys were predicted to report lower levels of avoiding maladaptive behavior than girls as boys may be more likely to become involved in the parental conflict (avoiding overinvolvement and avoiding aggression specific strategies) (Davies et al., 2002; Jaffe, Wolfe & Wilson, 1990; Shelton et al., 2006).

## **Method**

### **Participants**

Thirty schools from New South Wales, Australia participated in the current study. Once school principals gave active consent to participate, consent forms were sent to the parents of all grades 5 and 7 students. Six hundred and sixty-three students ( $M = 11.19$  years,

$SD = 1.10$ ), in grade 5 (149 males, 166 females,  $M = 10.17$  years,  $SD = .53$ ) and grade 7 (150 males, 198 females,  $M = 12.11$  years,  $SD = .52$ ), participated. The sample was from middle class suburbs and the ethnic composition was approximately 72% White, 20% Asian, 4% Middle Eastern, and 4% from other ethnic groups. Three hundred and forty-seven mothers also participated in the study ( $M = 43.54$  years,  $SD = 4.87$ ). Parents gave written consent for their children and themselves to participate in the study. Additionally, children gave written consent for their own participation.

### Measures<sup>4</sup>

**Parental conflict coping self-efficacy scale (PCC-SES).** The scale was initially comprised of 34 items, which were developed to measure seven specific strategies of coping self-efficacy in a parental conflict context. The items were converted to self-efficacy questions, following Bandura's (2006) guidelines for constructing such scales. The participants responded on a seven-point scale (1 = *not well at all*, 7 = *very well*) to the stem "*If your parents had an argument, how well can you....*". Furthermore, the items were simplified for a young audience. A high score in each subscale represented a child's belief in their ability to use the specific coping strategy.

*Self-efficacy for problem solving* was assessed by 6 items based on Causey and Dubow (1992)'s coping statements, Davies et al. (2002) Security in the Interparental Subsystem (SIS) Scale and Singh and Bussey (2009)'s Peer Aggression Coping Self-Efficacy Scale for Adolescents (PA-CSES). The 4 items for *self-efficacy for seeking social support* were based on Causey and Dubow (1992)'s coping statements. *Self-efficacy for avoiding preoccupation* was assessed by 5 items adapted from the CPIC (Grych et al., 1992). The 6 items for *self-efficacy for distancing* were based on Causey and Dubow (1992)'s coping statements and the SIS scale (Davies et al., 2002). Five items assessed *self-efficacy for avoiding self-blame* (Causey & Dubow, 1992; Grych et al., 1992). Four items were formed

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<sup>4</sup> Items used in the studies outlined in Chapters 2-4 are shown in Appendix A.

for *self-efficacy for avoiding aggression* (Singh & Bussey, 2009). Finally, the four items for *self-efficacy for avoiding overinvolvement* were based on the overinvolvement scale by Shelton and Harold (2008). When these coping self-efficacy specific strategies were pilot tested with 79 school students ( $M = 9.80$  years,  $SD = .40$ ), the Cronbach's alphas ranged between .76 and .89.

**Strengths and difficulties questionnaire (SDQ).** The self-report version of the SDQ included 25 items, which measured five domains: hyperactivity-inattention, emotional symptoms, conduct problem, peer problems and the prosocialness (Goodman 1997; Goodman, Meltzer & Bailey, 1998). Participants responded on a three-point scale (0 = *not true*, 1 = *somewhat true*, 2 = *certainly true*). The Total Difficulty Index (TDI) experienced by the child, was composed by the sum of the hyperactivity-inattention, emotional symptoms, conduct problems and peer problems scores. The Cronbach alpha for the TDI in this study was .78, and for prosocialness it was .56.

**Revised children's manifest anxiety scale (RCMAS).** The Short Form of Total Anxiety (SF-TOT) of the RCMAS was administered. The SF-TOT of the RCMAS provided an evaluation of the overall anxiety level experienced by a child. This scale consisted of ten self-report items, and was appropriate for ages six and up. The participants responded on a two-point scale (1 = *yes*, 2 = *no*). The short form was used because the study had a 50-minute time restraint in order to minimize disruptions to the school day. The original Cronbach alpha for the SF-TOT of the RCMAS was .82 (Reynolds & Richmond, 2005). The Cronbach alpha in this study was .78.

**Parent questionnaire.** The parent questionnaire included the same psychological adjustment measures as completed by the children, the *SDQ* and the *RCMAS*. Examples items include "*my child thinks things out before acting*" and "*my child is nervous*" from each scale respectively. The Cronbach alpha for the parent-report of the SDQ for TDI was .81; SDQ for prosocialness .74; and .76 for the RCMAS.

## **Missing Data**

Small amounts of data were missing at the item level (range .0 - 2.0%). The single shot Expectation-Maximization imputation procedure was used in SPSS with individual items as predictors. This method is recommended as superior to list-wise deletion, pairwise deletion or means substitution (Allison, 2002; Enders, 2001; Schafer & Graham, 2002).

## **Procedure**

The measures were administered in a self-report questionnaire that took approximately 50 minutes for children to complete in a location specified by the school principal. The position of the measures within the questionnaire was randomized in two versions of the questionnaire to control for any potential order effects. The two versions were administered to approximately equal numbers of students. Research assistants, the investigator and schoolteachers supervised the children in classrooms consisting of about 20 students per group. The supervisors asked the children not to interact with each other during the questionnaires and they were seated away from each other. The children were ensured confidentiality. They were not required to write their names on the questionnaire. The children were given the instructions to generate their own unique code (used for matching the parent and child data), and to write this code on their questionnaire booklet. They were told that there were no right or wrong answers. The children were given an opportunity to speak to the research team or request an appointment with the school counselor if they wanted discuss their responses to the questionnaire. The children were given the parent questionnaires in a sealed reply paid envelope to take home. They were reassured that their parents did not have to write their names on the questionnaire. The children were thanked for their participation and resumed schoolwork.

## **Results**

The results are presented in three sections. The results of the exploratory factor analyses and the confirmatory factor analyses are presented first, followed by the grade and



gender effects on the PCC-SES. Lastly, validation was assessed through the relationship between the PCC-SES and psychological adjustment variables as rated by the children and their mothers.

### **Structure of the Parental Conflict Coping Self-Efficacy Scale (PCC-SES)**

Two subsamples were randomly selected from the total sample. An exploratory factor analysis was conducted on a sample of 334 children and the confirmatory factor analysis on another sample of 329 children.

**Exploratory factor analyses.** Three factor analyses were performed to examine the structure of the PCC-SES. In the first analysis, the 34 items were entered into the exploratory factor analysis with principal axis extraction and an oblimin rotation. The oblimin rotation was used as correlations between the coping factors were expected. The correlation matrix indicated that the factors were correlated between .0 to .45. The scree plot of the exploratory factor analysis suggested seven factors. The 34 items were re-entered into a second exploratory factor analysis and a seven-factor solution was specified. One distancing item and two overinvolvement items were discarded because they failed to load by more than .30 (Costello & Osborne, 2005). The remaining 31 items were entered into a third exploratory factor analysis. Seven factors were again specified. A further four items were removed because they cross-loaded with more than one factor. This final factor analysis resulted in a seven-factor solution that was conceptually meaningful and accounted for 48.53% of the variance. The same seven factors were observed for males, females, grade 5 and grade 7. The factors were named: *self-efficacy for problem solving*, *self-efficacy for seeking social support*, *self-efficacy for avoiding preoccupation*, *self-efficacy for distancing*, *self-efficacy for avoiding self-blame*, *self-efficacy for avoiding aggression* and *self-efficacy for avoiding overinvolvement*.

Internal consistency analyses were computed for the seven factors. Items that resulted in a reduction of the Cronbach alpha for a particular subscale were deleted (Clark & Watson,

1995). One item from the *self-efficacy for problem solving* and one from the *self-efficacy for distancing* were deleted. The PCC-SES consisted of 25 items in total and had an overall Cronbach alpha of .89. See Table 1 for the Cronbach alphas of the PCC-SES subscales and Table 2 for the factor loadings of the final 25 items.

Table 1  
*Cronbach Alphas for the PCC-SES Specific Strategies*

Specific Strategy	Cronbach Alpha	Number of Items
Self-efficacy for problem solving	0.76	4
Self-efficacy for seeking social support	0.88	4
Self- efficacy for avoiding preoccupation	0.72	3
Self-efficacy for distancing	0.79	4
Self- efficacy for avoiding self-blame	0.74	3
Self-efficacy for avoiding aggression	0.75	4
Self-efficacy for avoiding overinvolvement	0.58	3

Table 2  
*Factor Structure and Factor Loadings for Items of the PCC-SES*

Parental Conflict Coping Self-Efficacy subscales and items	Factor Loadings						
	1	2	3	4	5	6	7
If your parents had an argument, how well can you....							
<b>Higher Order Factor: Proactive Behavior</b>							
1. Self-efficacy for Problem Solving							
In a calm and pleasant manner tell them to stop fighting	-0.78						
In a clear and strong voice tell them that you don't like what they are doing	-0.63						
Try to solve the problem for them	-0.58						
Do something to make up for the situation	-0.41						
2. Self-Efficacy for Seeking Social Support							
Ask someone for advice		0.83					
Get help from a friend		0.82					
Ask someone who has been through this what he/she would do		0.78					
Talk to somebody about how it made you feel		0.71					
<b>Higher Order Factor: Avoiding Maladaptive Cognitions</b>							
3. Self-efficacy for Avoiding Preoccupation							
Stop worrying that they might get divorced			-0.53				
Avoid worrying that one of them will get hurt			-0.51				
Avoid worrying about what will happen to you			-0.34				
4. Self-efficacy for Distancing							
Forget the whole thing				0.67			
Tell yourself it doesn't matter				0.67			
Make believe nothing happened				0.60			
Refuse to think about it				0.57			

Parental Conflict Coping Self-Efficacy subscales and items	Factor Loadings						
	1	2	3	4	5	6	7
If your parents had an argument, how well can you....							
5. Self-efficacy for Avoiding Self-Blame							
Avoid thinking that your parents blame you					-0.77		
Avoid being afraid that they will yell at you too					-0.64		
Keep from thinking it is your fault					-0.45		
<b>Higher Order Factor: Avoiding Maladaptive Behavior</b>							
6. Self-efficacy for Avoiding Aggression							
Avoid yelling to let off steam						0.72	
Stop yourself from swearing out loud						0.65	
Avoid getting mad and throwing or hitting something						0.52	
Avoid holding a grudge against them						0.42	
7. Self-efficacy for Avoiding Overinvolvement							
Avoid taking sides with one of them							0.78
Stop trying to protect one parent from the other							0.58
Avoid telling one of them that he/she is wrong.							0.32

**Confirmatory factor analyses.** The ability to replicate the seven-factor solution obtained in the exploratory factor analyses was tested with confirmatory factor analyses. Several descriptive fit indices and chi-squared tests of the model fit were evaluated. Since the chi-square statistic is sensitive to the number of variables in the model, as well as the size of the sample (Hox & Bechger, 2001; Kaplan, 2000) the Comparative Fit Index (CFI), Tucker Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA) were also examined. Hu and Bentler (1999) have proposed that the CFI and TLI at a level of .95 or higher and RMSEA with values of .06 or lower suggest good model fit and Browne and Cudeck (1993) have proposed a good model fit at a value of .08 or less for RMSEA. However, Vandenberg and Lance (2000), recommend cut-off values of higher than .90 for CFI and TLI, and less than .08 for RMSEA. Vandenberg and Lance (2000) have proposed that the Hu and Bentler (1999) criteria has high confidence limits and that their proposed cut-offs were acceptable lower bounds of model fit. Therefore, the Vandenberg and Lance (2000) approach was followed to test the model fit as it has also been used in other studies of coping self-efficacy scales (see Chesney, Neilands, Chambers, Taylor, & Folkman, 2006; Singh & Bussey, 2009). A seven-factor model was specified. The errors of three sets of items were allowed to correlate because they shared the same wording. Failure to allow such residuals correlate can result in errors in the interpretation of the model (Cole, Ciesla, & Steiger, 2007). The seven factors, each representing a specific strategy of coping self-efficacy indicated good model fit,  $X^2 (264, N = 329) = 501.75, p < .001$ , CFI = .92, TLI = .90, RMSEA = .05 (90% C.I. .045 - .059), BCC = 634.26. Although the chi-square value was significant, the other fit indices, which are less influenced by sample size, indicated a satisfactory model fit.

A further analysis was performed to assess the model fit of the seven specific strategies into the three higher order factors of coping, namely, the *Proactive Behavior*, *Avoiding Maladaptive Cognitions* and *Avoiding Maladaptive Behavior* global strategies. A model in which the seven specific coping strategies were grouped into the three higher order

factors of coping, revealed a better model fit than without the categorization,  $X^2 (261, N = 329) = 401.23, p < .001$ , CFI = .95, TLI = .94, RMSEA = .04 (90% C.I. .032 - .048), BCC = 540.25. This structure was therefore maintained for subsequent analyses.

In the next step, the fit of the model, for males and females, and for grade 5 and grade 7 was tested through the assessment of factorial equivalence (Byrne, 2001). In order to have sufficient power, the full sample was used in this step. The unconstrained models were independently fitted to provide a baseline for the two parameters. There was adequate model fit for the gender unconstrained baseline model,  $X^2 (544, N = 663) = 861.59, p < .001$ , CFI = .94, TLI = .93, RMSEA = .03 (90% C.I. .027 - .035), BCC = 1135.37, and for the grade unconstrained model baseline model,  $X^2 (524, N = 663) = 880.06, p < .001$ , CFI = .94, TLI = .93, RMSEA = .03 (90% C.I. .028 - .036), BCC = 1153.64. Next, constraints were applied to both gender and grade such that they were equal for the two groups. The model fit did not vary by gender,  $X^2 (552, N = 663) = 886.04, p < .001$ , CFI = .94, TLI = .93, RMSEA = .03 (90% C.I. .027 - .034), BCC = 1098.98, or by grade,  $X^2 (552, N = 663) = 929.66, p < .001$ , CFI = .93, TLI = .93, RMSEA = .03 (90% C.I. .029 - .036), BCC = 1142.44, (Chen, 2007).

### **Grade and Gender Effects**

As factorial equivalence of the gender and grade models existed, it was appropriate to assess gender and grade effects of the PCC-SES. However, before interpreting the gender and grade effects, preliminary analyses were conducted to examine the potential clustering of responses within the 30 schools. A linear mixed model procedure in SPSS, with gender and grade as fixed factors and school as a random factor, was performed on each subscale of the PCC-SES (Laird, & Ware, 1982). The random factor of school did not reach significance in any of the seven subscales and this was supported by the intraclass correlations which varied from 0 to .04. The clustering of schools was therefore not accounted for in subsequent analyses.

The total score for the PCC-SES was the dependent variable in the Analysis of Variance (ANOVA). The ANOVA revealed that whilst there were no gender,  $F(1, 659) = .44, p = .51$ , or grade main effects,  $F(1, 659) = 1.56, p = .21$ , there was a significant gender and grade interaction,  $F(1, 659) = 4.43, p = .04$ . Post hoc tests revealed no significant difference in levels of coping self-efficacy beliefs between girls in grade 5 ( $M = 4.33$ ) and boys in grade 5 ( $M = 4.22$ ),  $t(659) = 1, p = .32$ . However, boys in grade 7 had significantly higher levels of coping self-efficacy beliefs ( $M = 4.48$ ), than girls in grade 7 ( $M = 4.27$ ),  $t(659) = 1.99, p = .05$ .

The gender and grade effects for each of the seven subscales of the PCC-SES were subsequently analyzed within a MANOVA procedure. This procedure allowed the control of the Type 1 error rate in the analyses. The MANOVA was a 2(gender) x 2 (grade), with each of the seven subscales for coping self-efficacy as the dependent variables. Significant multivariate effects were followed up with separate univariate analyses for each subscale (dependent variables), separately.

A significant multivariate effect for gender was found, Wilks' Lambda = .94,  $F(7, 653) = 5.71, p < .001$ , partial  $\eta^2 = .06$ . The univariate examination of gender, for each of the scales separately, revealed that boys scored higher levels of self-efficacy for avoiding preoccupation ( $M = 4.57$ ), for avoiding self-blame ( $M = 4.76$ ), and for distancing ( $M = 4.11$ ), than did girls (avoiding preoccupation:  $M = 4.20$ ;  $F(1, 661) = 7.52, p = .01$ ), (avoiding self-blame:  $M = 4.44$ ;  $F(1, 661) = 6.48, p = .01$ ), and (distancing:  $M = 3.84$ ;  $F(1, 661) = 5.24, p = .02$ ). However, girls reported higher levels of self-efficacy for seeking social support ( $M = 3.67$ ), than did boys ( $M = 3.11$ ;  $F(1, 661) = 17.23, p < .001$ ). There were no significant gender effects for the children's self-efficacy score of avoiding aggression, ( $F(1, 661) = .68, p = .41$ ), self-efficacy for avoiding overinvolvement, ( $F(1, 661) = 1.70, p = .19$ ), or self-efficacy for problem solving, ( $F(1, 661) = .22, p = .64$ ).

## **The Relationship between the Seven Parental Conflict Coping Self-Efficacy Subscales and Psychological Adjustment**

The construct validity of the PCC-SES was investigated by the correlations of the three coping self-efficacy higher order factors and the psychological adjustment measures, the TDI, prosocialness and symptoms of anxiety. These correlations were performed in SEM given that the variables had various individual indicators. The model fit of the relationship between the PCC-SES and the psychological adjustment measures, to males and females, and to grade 5 and grade 7 were initially assessed by a factorial equivalence procedure (Byrne, 2001) in AMOS. The unconstrained models provided baselines, to which the constrained models assessing gender and grade were compared. The unconstrained baseline model,  $X^2$  (98,  $N = 663$ ) = 207.71,  $p < .001$ , CFI = .95, TLI = .92, RMSEA = .04 (90% C.I. .033 - .049), BCC = 383.23, did not vary by gender,  $X^2$  (119,  $N = 663$ ) = 229.89,  $p < .001$ , CFI = .95, TLI = .93, RMSEA = .04 (90% C.I. .030 - .045), BCC = 361.53. Furthermore, the unconstrained model baseline model,  $X^2$  (98,  $N = 663$ ) = 239.59,  $p < .001$ , CFI = .94, TLI = .90, RMSEA = .05 (90% C.I. .039 - .054), BCC = 415.04, did not vary by grade,  $X^2$  (119,  $N = 663$ ) = 263.17,  $p < .001$ , CFI = .94, TLI = .92, RMSEA = .04 (90% C.I. .036 - .050), BCC = 394.76. Therefore, the correlations between the three higher order PCC-SES factors and the psychological adjustment measures did not control for gender or grade.

A model, based on the child data, which allowed all the PCC-SES factors and psychological adjustment measures to be correlated attained good model fit,  $X^2$  (49,  $N = 663$ ) = 177.86,  $p < .001$ , CFI = .94, TLI = .91, RMSEA = .06 (90% C.I. .053 - .073), BCC = 263.68. Although the three coping self-efficacy high order factors were moderately positively intercorrelated, the magnitude of their correlations varied across the psychological adjustment measures (see Table 3). The three PCC-SES higher order factors were moderately negatively correlated with the TDI and symptoms of anxiety. Higher levels of coping self-efficacy beliefs for parental conflict were associated with lower levels of TDI and lower levels of



anxiety. In addition, the three higher order factors of the PCC-SES were positively correlated with prosocialness.

Another model which allowed all the PCC-SES factors and psychological adjustment (based on the parent data) measures to be correlated also attained model fit,  $X^2 (275, N = 347) = 468.86, p < .001$ , CFI = .92, TLI = .90, RMSEA = .05 (90% C.I. .038 - .052), BCC = 693.06. Based on the parent report of children's psychological adjustment, the three psychological adjustment outcome measures were intercorrelated. The highest correlation in the model was the positive relationship between the TDI and symptoms of anxiety (see Table 3). Further, the three child psychological adjustment measures, as reported by the parent, were positively correlated with the same child psychological adjustment measures, as reported by the child.

Parents' report of children's TDI had a significant negative relationship with coping self-efficacy for proactive behavior and coping self-efficacy for avoiding maladaptive behavior. The higher the level of children's belief in their ability to engage in proactive behavior and avoiding maladaptive behavior, the lower the TDI, as reported by parents. In contrast to child self-report, parental report of prosocialness was related to lower levels of the coping self-efficacy for avoiding maladaptive cognitions.

Table 3  
*Correlations Between Psychological Adjustment and PCC-SES Higher Order Factors*

Variables	1	2	3	4	5	6	7	8	9
<i>Based on Child Self-Report (N=663)</i>									
1. SDQ – Total Difficulty Index (TDI)	-	-.64*	.63*	-.49*	-.53*	-.57*	.49*	-.02	.34*
2. SDQ – Prosocialness		-	-.04	.55*	.14*	.26*	-.23*	.37*	-.07
3. RCMAS – Anxiety symptoms			-	-.29*	-.51*	-.36*	.25*	.11	.23*
4. PCC-SES – Proactive Behavior				-	.41*	.32*	-.19*	.13	.10
5. PCC-SES – Avoiding Maladaptive Cognitions					-	.78*	-.06	-.17*	.03
6. PCC-SES – Avoiding Maladaptive Behavior						-	-.21*	.09	.08
<i>Based on Parent Report (N=347)</i>									
7. SDQ – Total Difficulty Index (TDI)							-	-.41*	.68*
8. SDQ – Prosocialness								-	-.22*
9. RCMAS – Anxiety symptoms									-

*Note.* \* $p < .05$ .

## Discussion

The current study empirically tested a multidimensional and theoretically based measure of children's coping self-efficacy beliefs about parental conflict. The PCC-SES displayed good psychometric properties with children in grades 5 and 7 and its construct validity was demonstrated through its relationship with children's psychological outcomes. The seven specific coping self-efficacy strategies predicted in the current study were confirmed within the context of parental conflict. These specific strategies were *self-efficacy for problem solving, seeking social support, avoiding preoccupation, avoiding self-blame, distancing, avoiding aggression* and *avoiding overinvolvement*. As expected, the specific strategies cohered into one of three conceptually meaningful behavioral and cognitive global strategies, namely, self-efficacy for *proactive behavior*, for *avoiding maladaptive cognitions* and for *avoiding maladaptive behaviors*. The three global strategies of the PCC-SES and their corresponding coping self-efficacy specific strategies are discussed below.

### Coping Self-Efficacy for Proactive Behavior

As predicted, proactive behavior coping self-efficacy was a higher order factor and therefore a categorizing global strategy of both the *problem solving* and *seeking social support* coping self-efficacy specific strategies. Since the specific strategies of *problem solving* and *seeking social support* both loaded on this global strategy, it assessed children's perceived ability to find solutions to the parental conflict and to ask for support (Bandura, 2006, Causey & Dubow, 1992; Frydenberg, 2004).

For proactive behavior, only one of the two specific strategies revealed a gender effect. As predicted, girls reported higher levels of self-efficacy for seeking social support than did boys. This finding is consistent with past research in which girls are more able to engage in positive and approach based coping strategies when compared to boys (Causey & Dubow, 1992; Frydenberg, 2004). Nevertheless, gender differences were not found for the self-efficacy for the problem solving specific strategy. Past coping studies have found greater

gender discrepancies within seeking social support when compared to the gender differences in problem solving (e.g., Eschenbeck, Kohlmann, & Lohaus, 2007). This comparatively smaller variability in the problem solving specific strategy when compared to the seeking social support specific strategy may explain why there were no statistically significant gender differences for problem solving in the current study.

As hypothesized, the global strategy of coping self-efficacy for proactive behavior was validated with the three indices of child psychological adjustment, namely the TDI, anxiety symptoms and prosocialness. Higher levels of self-efficacy for proactive behavior were associated with less anxiety symptomatology and difficulties, such as internalizing and externalizing. In addition, there was a positive relationship between self-efficacy for proactive behavior and children's prosocialness, suggesting that higher levels of self-efficacy for proactive behavior were related to greater levels of prosocial behavior. Furthermore, when the parents' report of the TDI were considered, a negative association between the total number of difficulties and levels of self-efficacy for proactive behavior was found. Thus, the parent report of children's psychological adjustment complemented the child report for self-efficacy for proactive behavior. This supports the validity of the coping self-efficacy for proactive behavior global strategy because it is congruent with past literature that identifies proactive coping as a positive and desirable strategy (Frydenberg, 2004). The personal agency nature of coping self-efficacy beliefs also allows the assessment of children's confidence in utilizing positive coping strategies and may be a useful indicator of resilience.

### **Coping Self-Efficacy for Avoiding Maladaptive Cognitions**

As was expected coping self-efficacy for avoiding maladaptive cognitions was identified as a global strategy that incorporated the specific coping self-efficacy strategies of *avoiding preoccupation*, *avoiding self-blame* and *distancing*. This encapsulation is supported by previous literature, as the specific strategies are prominent within the internalization

coping literature and were therefore reasonably expected in the framework of coping self-efficacy beliefs (Causey & Dubow, 1992).

As hypothesized, boys reported higher levels than girls on the specific strategies; *avoiding preoccupation*, *avoiding self-blame* and *distancing*. This is consistent with past findings that since girls adopt more maladaptive cognitions than boys, they may be less able to believe in their ability to avoid utilizing such specific strategies (Davies et al., 2002; El-Sheikh & Reiter, 1996; Frydenberg & Lewis, 2002; Goeke-Morey et al., 2003).

The coping self-efficacy for avoiding maladaptive cognitions global strategy was validated through the examination of its relationship with children's psychological outcomes as reported by children and their parents. Based on children's reports, the TDI and anxiety symptoms were found to be negatively associated with self-efficacy for avoiding maladaptive cognitions. Higher levels of coping self-efficacy for avoiding maladaptive cognitions were associated with lower levels of anxiety symptoms and difficulties as reported by children. Although prosocialness was positively associated with self-efficacy for avoiding maladaptive cognitions based on children's report, there was a negative relationship between self-efficacy for avoiding maladaptive cognitions and parent reported prosocialness.

This parent-child discrepancy may be due to parents' limited insight into children's beliefs about their ability to avoid maladaptive cognitions. Although parents could observe their children's prosocialness, they may not have been able to fully perceive children's ability to avoid maladaptive cognitions, as it is not an observable behavior (Achenbach, McConoughy, & Howell, 1987). Therefore, it is not surprising that parents' reports may have not replicated the relationship found between coping self-efficacy to avoid maladaptive cognitions and levels of prosocialness, as reported by children. Collectively, within the context of parental conflict, these validating relationships suggest that it would be beneficial for children to increase their coping self-efficacy beliefs for avoiding maladaptive cognitions in order to have lower levels of psychological maladjustment.

### **Coping Self-Efficacy for Avoiding Maladaptive Behavior**

Consistent with the hypotheses, coping self-efficacy for avoiding maladaptive behavior was also a global strategy due to its higher order factor structure. Although past studies have examined the prominence of maladaptive behavior in the context of coping, this global strategy gives insight into children's personal agency because both specific strategies of *avoiding aggression* and *avoiding overinvolvement* coping self-efficacy loaded on this global strategy (Causey & Dubow, 1992; Frydenberg, 2004).

Although it was predicted that boys would endorse lower levels of self-efficacy for avoiding maladaptive behavior this was not found in the current study. In fact, there were no significant gender differences for the specific strategies of *avoiding aggression* or *avoiding overinvolvement* coping self-efficacy. The absence of a gender effect may be due to the greater inconsistencies noted in the literature for boys' and girls' maladaptive behaviors when compared boys' and girls' self-reports of maladaptive cognitions (Shelton et al., 2006). The increased variability in gender effects for maladaptive behaviors, when compared to maladaptive cognitions, may explain why gender differences for avoiding maladaptive behavior were not significant in the current study.

The self-efficacy for avoiding maladaptive behavior global strategy was also validated through its relationship with children's psychological adjustment. A negative relationship was evident between coping self-efficacy for avoiding maladaptive behavior, the child's TDI and anxiety symptomology. When children reported higher levels of self-efficacy for avoiding maladaptive behavior they also reported lower scores on anxiety and difficulties. In addition, children with higher levels of self-efficacy for avoiding maladaptive behavior reported higher prosocialness scores. Similarly, parents' report of TDI was negatively associated with coping self-efficacy avoiding maladaptive behavior. These relationships suggest that self-efficacy for *avoiding* maladaptive behavior is adaptive given previous links between maladaptive behavior, delinquency and antisocial behavior (Cummings & Davies, 2002).

It is important to note that the reliability and validity of the PCC-SES was demonstrated for children in grades 5 and 7, as well as for boys and girls, through model invariance. This lends support to the measure's ability to be utilized with boys and girls of different ages. Given that this novel study assessed children between the ages of 8-12, an age in which children have the ability draw causal relations between parental conflict and their consequences, it would be expected that the PCC-SES would also be relevant for older children (Davies et al., 1999). Although there was no difference in the levels of coping self-efficacy beliefs reported by boys and girls in grade 5, in grade 7, boys' levels of coping self-efficacy beliefs were higher than those of girls. Since research has suggested that boys' coping abilities may be higher than girls' during adolescence, this may explain the gender effects being present in grade 7 but not grade 5 (Davies et al., 1996; Shelton et al., 2006).

The current study encompasses several strengths worthy of mention. Firstly, it relies on a multi-informant methodology from a large number of children and their parents. Secondly, the structure of the PCC-SES was confirmed by two statistical methods, exploratory and confirmatory factor analyses using structural equation modeling. Lastly the construct validity of the PCC-SES was validated with the children's psychological outcomes, as reported by children and their parents.

As with any study, limitations are also noteworthy. Firstly, the sample is a community sample and may not give insight into families with extreme levels of parental conflict. Since the sample was not of clinical levels of parental conflict, the findings are generalizable more broadly to community samples that could benefit from *preventative* interventions. In order to further validate the PCC-SES and assess its generalizability, future studies can assess its psychometric properties through a more ethnically diverse and older sample of children. It would also be useful to include other multi-informants such as the children's schoolteachers and school counselors. Similar to other studies, the internal consistency for the child reported prosocialness measure of the SDQ was comparatively lower than the TDI (Muris, Meesters,

& van den Berg, 2003). This may be explained by the prosocialness subscale's 5-item composition, of lower frequency behavior, when compared to the 20-items included in the TDI.

As the current study has established a link between children's coping self-efficacy beliefs and their psychological adjustment, the next step is to examine the relationship between parental conflict and children's coping self-efficacy beliefs. This is important as parental conflict can affect children's psychological adjustment to varying degrees (Davies, Harold, Goeke-Morey, & Cummings, 2002; Fosco & Grych, 2010). A future study may investigate the mediating role of children's coping self-efficacy beliefs in the relationship between parental conflict and child psychological adjustment. This relationship may be key in guiding future interventions for parental conflict.

In conclusion, the PCC-SES is a psychometrically sound measure. It is the first to conceptually assess children's multidimensional coping self-efficacy beliefs in the specific context of parental conflict by accounting for different coping self-efficacy strategies. It gives the literature insight into a mechanism, amenable to intervention, for reducing the effects of parental conflict on children's psychological outcomes.



### **Chapter 3**

## **The Mediating Role of Coping Self-Efficacy Beliefs on the Relationship between Parental Conflict and Child Psychological Adjustment**

### Abstract

The effect of parental conflict on children's psychological maladjustment and prosocialness is variable. One process that may account for this variability in the relationship between parental conflict and child psychological maladjustment is children's perceived ability to cope with parental conflict. Coping self-efficacy refers to a person's perceived ability to self-motivate and access the required cognitive resources to take control of, or exert their coping efforts in a stressful situation. This longitudinal study investigated the mediating role of children's coping self-efficacy beliefs on the relationship between parental conflict and children's psychological maladjustment. The participants were 663 school students in grades 5 and 7. The ethnic composition of the sample was approximately 72% White, 20% Asian, 4% Middle Eastern and 4% from other ethnic groups. Cross-sectionally and longitudinally coping self-efficacy beliefs partially mediated the relationship between parental conflict and children's psychological maladjustment. Specifically, coping self-efficacy for avoiding maladaptive cognitions mediated the effect of parental conflict and children's internalizing symptoms longitudinally. The results revealed that the higher the level of parental conflict, the lower the levels of children's coping self-efficacy and in turn the higher the levels of psychological maladjustment. These findings suggest that children's coping self-efficacy beliefs mediate the effect of parental conflict on psychological maladjustment and are thereby an important process that ought to be considered in designing and implementing preventative interventions.<sup>5</sup>

*Keywords:* child coping self-efficacy, parental conflict, mediation, psychological maladjustment.

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<sup>5</sup> Manuscript in preparation. In subsequent chapters this study is referred to as "Brummert Lennings, H. I., & Bussey, K. (2014b). *The mediating role of coping self-efficacy beliefs on the relationship between parental conflict and child psychological adjustment*. Manuscript in preparation."

## The Mediating Role of Coping Self-Efficacy Beliefs on the Relationship between Parental Conflict and Child Psychological Adjustment

Children raised in a family environment of parental conflict can develop a range of negative outcomes which include anger, defiant behaviors and sleep problems (Cummings & Davies, 2002; El-Sheikh & Kelly, 2011; Grych & Fincham, 1990). One possible explanation for these outcomes is that parental conflict elicits negative emotions in children, which, in conjunction with a perceived lack of control over the conflict, may lead to psychological maladjustment (DeBoard-Lucas & Grych, 2011; Oudekerk, Brown, Szewedo, & Allen, 2013). However, there is variability in the levels of children's psychological maladjustment when exposed to parental conflict (Davies, Harold, Goeke-Morey, & Cummings, 2002; Folkman, Lazarus, Pimley, & Novacek, 1987; Fosco & Grych, 2008). It has been suggested that one reason for this variability is that the particular coping strategies adopted by children may augment or reduce subsequent levels of psychological maladjustment (Buehler et al., 1997; Grych, Harold, & Miles, 2003). For example, it has been noted that if children are able to elicit social support, and if they perceive parental conflict incidents to be infrequent, they tend to have better outcomes than if they adopt negative coping strategies such as aggression or self-blame (Grych & Fincham, 1993; Rogers & Holmbeck, 1997).

One such process which may enable positive psychological outcomes following a stressor, such as parental conflict, is children's perceived ability to use adaptive coping strategies, that is, their *coping self-efficacy beliefs* (Benight & Bandura, 2004.) These beliefs refer to a child's perceived ability to self-motivate, access cognitive resources and their self-confidence in being able to perform the necessary actions required to cope with stressful or threatening situations (Bandura, 1977; Benight & Bandura, 2004; Ozer & Bandura, 1990; Singh & Bussey, 2010). Even within the coping literature, there has been reference to the importance of coping self-efficacy beliefs for their role in adopting coping strategies selected by individuals (Chesney, Neilands, Cambers, Taylor, & Folkman, 2006; Folkman, 2010;

Folkman & Moskowitz, 2004; Litt, Tennen, & Affleck, 2010). Although coping self-efficacy beliefs assess perceived ability and are future-oriented, they are derived from coping strategies such as problem solving, distancing, and aggression.

Since coping self-efficacy beliefs have been identified as potential mediators of stressful situations and outcomes (Folkman, 2010; Folkman & Moskowitz, 2004), it is expected that children's coping self-efficacy beliefs about parental conflict will play a role in the relationship between parental conflict and child psychological maladjustment. Past research has linked moderate to high levels of parental conflict with lower levels of self-confidence and more internalizing symptoms in children (Pendry, Carr, Papp, & Antles, 2013). One possible explanation for these findings is that when children feel helpless about parental conflict their confidence for using adaptive coping strategies may be impaired (Sandler et al., 1994). Children living within these contexts can feel less empowered and less motivated to adopt positive coping strategies (Davies & Cummings, 1994). In turn, these children may have lower levels of coping self-efficacy beliefs and greater psychological maladjustment (Cummings, Davies, & Simpson, 1994; Lazarus & Folkman, 1984; Sandler, Tein, Mehta, Wolchick, & Ayers, 2000; Wadsworth & Compas, 2002).

Coping self-efficacy beliefs are the cornerstone of the agentic perspective of Social Cognitive Theory (SCT). SCT proposes a reciprocal relationship between personal, behavioral and environmental factors to explain human actions (Bandura, 1997). Under the SCT framework, coping self-efficacy can be conceived as a personal factor. As such, children who believe in their ability to cope with parental conflict may be better able to draw on their own personal resources and skills to cope with that conflict and its deleterious effect (Bandura, 1997). Increasing levels of coping self-efficacy beliefs in individuals is important as they have been found to minimize psychological maladjustment and increase recovery from harmful effects in the presence of stressors such as experiences of threat, peer victimization, trauma and chronic illness (see Bandura, 1997; Benight & Bandura, 2004;

Singh & Bussey, 2010). That is, individuals who believe in their ability to cope are better able to face stressful situations by taking appropriate action to reduce negative consequences (Bandura, 1997).

The relevance of coping self-efficacy beliefs in the context of parental conflict is supported by the recent study of Lacinova, Michalcakova, and Bousa (2013). This study utilized the Children's Perception of Interparental Conflict self-efficacy subscale to show that boys with low levels of self-efficacy had greater general fears than boys with higher levels of coping efficacy. Lacinova et al. (2013) proposed that by increasing children's general self-efficacy expectations, children are likely to be protected against the negative effects of parental conflict. These findings shed light on the possibility of interventions based on children's self-efficacy beliefs within the context of parental conflict. However, children's self-efficacy beliefs in this study were assessed through a general self-efficacy instrument rather than a measure that specifically assessed for the different families of coping strategies. It may be possible that studies which target different coping self-efficacy strategies and which are specific to the particular context examined, in this case, parental conflict, may find stronger associations between children's coping self-efficacy beliefs and psychological outcomes (Bandura, 2012; Gallagher et al., 2013). Therefore the study of self-efficacy could be quite useful in guiding future clinical interventions.

Related research in the divorce arena reinforces the hypothesis that coping self-efficacy plays a significant role in the relationship between parental conflict and psychological maladjustment. In Sandler et al. (2000)'s study, children who scored higher on levels of self-efficacy beliefs in the face of parental divorce had lower internalizing problems. Further, Sandler et al. (2000) indicated that coping self-efficacy beliefs mediated the relationship between the coping strategies used and child psychological adjustment. A purpose built 7-item scale of coping self-efficacy was used which was worded to measure children's satisfaction with the way they had handled difficulties in the past and what they

might do in the future. More recently, Bandura (2006; 2012) has stressed the importance of wording such scales to assess perceived ability and the different strategies of coping.

To further examine the role of coping self-efficacy for children living with parental conflict, a recent study by Brummert Lennings and Bussey (2014a) proposed a multi-dimensional measure of children's levels of coping self-efficacy for parental conflict. The Parental Conflict Coping Self-Efficacy Scale (PCC-SES) included three global strategies, namely, coping self-efficacy for proactive behavior, for avoiding maladaptive cognitions and for avoiding maladaptive behaviors. Each global strategy was made up of specific coping self-efficacy strategies (Brummert Lennings & Bussey, 2014a). The first global strategy, coping self-efficacy for proactive behavior was composed of two specific coping self-efficacy strategies, *problem solving* and *seeking social support*. The second global strategy, coping self-efficacy for avoiding maladaptive cognitions, was comprised of *avoiding preoccupation*, *avoiding self-blame* and *distancing*. The third global strategy, coping self-efficacy for avoiding maladaptive behaviors, included the specific strategies of *avoiding aggression* and *avoiding overinvolvement*. The PCC-SES has good psychometric properties and was based on parent and child report (Brummert Lennings & Bussey, 2014a). In the current study it was anticipated that there would be a mediational link between each of the three global strategies within the relationship of parental conflict and children's psychological maladjustment.

Coping self-efficacy for proactive behavior was one of the three potential mediators, assessed in the present study, of parental conflict and child psychological maladjustment. High levels of this global strategy encapsulated children's perceived ability to use positive coping and their ability to persevere towards a solution (Frydenberg, 2004). Higher levels of coping self-efficacy for proactive behavior are related to lower levels of difficulties experienced by children, lower levels of anxiety symptomatology, and higher levels of children's prosocialness (Brummert Lennings & Bussey, 2014a). Therefore, children who report low levels of coping self-efficacy beliefs for proactive behavior are expected to have

higher levels of psychological maladjustment and to be less prosocial than children with higher levels of the same coping self-efficacy beliefs.

Coping self-efficacy for avoiding maladaptive cognitions was another mediator to be assessed. Its specific strategies assessed children's ability to prevent cognitively dwelling on the parental conflict (Brummert Lennings & Bussey, 2014a). Overall, coping self-efficacy for avoiding maladaptive cognitions was associated with lower levels of anxiety symptoms, less difficulties experienced by the children and an increase of children's prosocialness (Brummert Lennings & Bussey, 2014a). Thus, children with lower levels of coping self-efficacy for avoiding maladaptive cognitions were predicted to score higher on levels of psychological maladjustment.

Children's coping self-efficacy for avoiding maladaptive behaviors is another potential mediator of parental conflict and psychological maladjustment assessed in this study. This strategy has been associated with higher levels of prosocialness, and lower levels of anxiety symptoms and difficulties experienced by children (Brummert Lennings & Bussey, 2014a). Children who report low levels of their ability to avoid maladaptive behaviors within the parental conflict context may be more likely to have higher levels of psychological maladjustment than children with high levels of coping self-efficacy.

By employing a two-wave longitudinal design, the current study aims to assess the indirect effect of parental conflict on child psychological maladjustment through children's coping self-efficacy beliefs (Farrington, 1991). The psychological maladjustment measures, internalizing and externalizing, and proactiveness were selected based on their link with the coping self-efficacy global strategies of the PCC-SES and with parental conflict (Brummert Lennings & Bussey, 2014a; Shelton & Harold, 2008). The indirect effects are assessed through longitudinal mediations because the direct effects between parental conflict and psychological maladjustment have been shown to vary longitudinally (Cummings, Schermerhorn, Davies, Goeke-Morey, & Cummings, 2006; Harold et al., 1997, 2004). In the

current longitudinal study, all variables are controlled by their initial level to reduce the potential of confounding or insignificant direct effects (see Harold, Fincham, Osborne, & Conger, 1997; Grych et al., 2003).

Finally, gender and age differences are considered. Previous studies have found that females are more likely to report internalizing symptoms and prosocialness, whereas males are more likely to report externalizing symptomology (Davies, Forman, Rasi, & Stevens, 2002; El-Sheikh & Reiter, 1996; Goeke-Morey, Cummings, Harold, & Shelton, 2003). In addition, females report higher levels of coping self-efficacy beliefs for seeking social support than males, although males report higher levels of coping self-efficacy beliefs for avoiding maladaptive cognitions than females (Brummert Lennings & Bussey, 2014a). Further, as children mature developmentally, their ability to use positive coping abilities can improve. For example it has been reported by a recent meta-analysis that children who are in grade 6 are more able to seek social support from external resources when compared to children in grade 3 (Zimmer-Gembeck & Skinner, 2011). However, there is also evidence to suggest that children approaching adolescence are more likely to engage in self-blame and rumination than children in late childhood, given their increase in cognitive ability and forethought (Zimmer-Gembeck & Skinner, 2011).

Noting these gender and age differences the current study aimed to assess for the mediational link between parental conflict, children's coping self-efficacy beliefs and psychological maladjustment. Given that Brummert Lennings and Bussey (2014a) asserted that the reliability and validity of the PCC-SES was equally applicable regardless of gender and grade, it was expected that the relationship between the variables would remain the same regardless of gender and age. Similarly, past studies with hypothesized models of parental conflict and child psychological outcomes have not varied by gender or age (see Cummings et al., 2006; Nikolas, Klump, & Burt, 2013). It was therefore predicted that there would be an



overall negative relationship between parental conflict and coping self-efficacy beliefs, and again between coping self-efficacy beliefs and psychological maladjustment.

## Method

### Participants

At Time One (T1) 663 non-government school students from New South Wales, Australia ( $M = 11.19$  years,  $SD = 1.104$ ) participated in the study. The students were from 30 schools and were in grade 5 (149 males, 166 females,  $M = 10.17$  years,  $SD = .53$ ) and grade 7 (150 males, 198 females,  $M = 12.11$  years,  $SD = .52$ ). Due to children being absent from school or migration of the sample, 593 school students completed the questionnaire 8 months later at Time Two (T2) (271 males and 322 females,  $M = 11.17$  years,  $SD = 1.10$ ). In grade 5, there were  $n = 138$  males,  $n = 151$  females, and in grade 7,  $n = 133$  males,  $n = 171$  females. Independent sample t-tests did not reveal any demographic differences between the samples at T1 and T2, gender ( $t(661) = .91, p = .37$ ), grade ( $t(661) = .82, p = .41$ ) and age ( $t(661) = .75, p = .45$ ). The attrition rate was moderate, at 11%, when compared to the attrition rates of other studies within a school context (see Fosco & Grych, 2010). The sample was approximately 72% White, 20% Asian, 4% Middle Eastern and 4% from other ethnic groups. Parents gave written consent for their children to participate in the study.

### Measures

**Parental conflict coping self-efficacy scale (PCC-SES).** Coping self-efficacy was assessed through the PCC-SES (Brummert Lennings & Bussey, 2014a) which measures a child's belief in their ability to adopt different coping strategies in the context of parental conflict. The PCC-SES is divided into three global strategies, namely, proactive behavior, avoiding maladaptive cognitions and avoiding maladaptive behaviors. The three global strategies were composed of seven specific coping self-efficacy subscales with good internal consistencies. Proactive Behavior Self-Efficacy included eight items made up of the *self-efficacy for problem solving scale* (e.g., "In a calm and pleasant manner tell them to stop

fighting”; Cronbach’s alpha of .76), and the *self-efficacy for seeking social support* scale (e.g., “Get help from a friend”; Cronbach’s alpha of .88). Self-efficacy for avoiding maladaptive cognitions included ten items made up of the *self-efficacy for avoiding preoccupation* scale (e.g., “Stop worrying that they might get divorced”; Cronbach’s alpha of .72), the *self-efficacy for distancing* scale (e.g., “Forget the whole thing”; Cronbach’s alpha of .79), and the *self-efficacy for avoiding self-blame* scale (e.g., “Avoid thinking that your parents blame you”; Cronbach’s alpha of .74). Self-Efficacy for avoiding maladaptive behaviors included seven items made up of the *self-efficacy for avoiding aggression* scale (e.g., “Avoid yelling to let off steam”; Cronbach’s alpha of .75), and the *self-efficacy for avoiding overinvolvement* scale for avoiding maladaptive behaviors (e.g., “Avoid taking sides with one of them”; Cronbach’s alpha of .58). The stem for the coping self-efficacy items was “If your parents had an argument, how well can you....”. The participants responded on a seven-point scale (1 = *not well at all*, 7 = *very well*). The means of the subscales served as the scores for each particular coping strategy.

**Children’s perception of interparental conflict (CPIC).** The students’ report of the parental conflict in their family was assessed through the conflict properties subscales of the Children’s Perception of Interparental Conflict questionnaire (CPIC; Grych, Seid, & Fincham, 1992). This subscale was composed of 19 items which assess *frequency*, *intensity* and *resolution* of interparental conflict as reported by children between the ages of 8 and 12. The conflict properties subscale was selected as it conceptualizes the severity of conflict on the frequency, intensity and resolution dimensions. Each item was rated on a three-point scale (1 = *true*, 2 = *sort of true*, 3 = *false*). The alpha reliability for the overall scale was .92. The mean reliability in the original scale was .78 (Grych et al., 1992).

**Strengths and difficulties questionnaire (SDQ).** The self-report version of the SDQ included 25 items which assessed five domains; hyperactivity-inattention, emotional symptoms, conduct problem, peer problems and prosocialness on a three-point scale (0 = *not*

*true*, 1 = *somewhat true*, 2 = *certainly true*; Goodman 1997; Goodman, Meltzer & Bailey, 1998). The internalizing symptoms experienced by the child were made up of the emotional symptoms and peer problems subscales (Goodman, Lamping, & Ploubidis, 2010). The externalizing symptoms experienced by the child were composed of the hyperactivity-inattention and conduct problems subscales. The Cronbach's alpha for the overall scale was .79. The mean reliability in the original scale was .73 (Goodman, 2001).

**Revised children's manifest anxiety scale (RCMAS).** The Short Form of Total Anxiety (SF-TOT) of the RCMAS was administered. The SF-TOT of the RCMAS gave an evaluation of the overall anxiety levels experienced by a child based on a two-point scale (1 = *yes*, 2 = *no*). The SF-TOT consisted of ten self-report items and is appropriate for children over the age of six years. The original Cronbach's alpha for the SF-TOT of the RCMAS was .82 (Reynolds & Richmond, 2005). The Cronbach's alpha in this study was .78.

**Scale order.** The position of the scales within the questionnaire were randomly ordered to create two versions of the questionnaire. These were allocated to the students randomly within grade and gender.

### **Missing Data**

Attrition between T1 and T2 was due to children being absent from school or having changed schools on the dates of testing. Small amounts of data were missing at the item level (range .0 to 2.0%). A single shot Expectation-Maximization imputation procedure was used in SPSS with individual items as predictors. This method is recommended as superior to list-wise deletion, pairwise deletion or means substitution (Allison, 2002; Enders, 2001; Schafer & Graham, 2002).

### **Procedure**

The participants completed the questionnaires in term one and again, 8 months later, in term three of the school year. The self-report questionnaires took approximately 50 minutes to complete in a location specified by the school principal. Research assistants, the

investigator and schoolteachers supervised the students in classrooms consisting of about 20 students. The supervisors asked the students not to interact with each other during the questionnaire administration and they were seated away from each other. The students were ensured confidentiality. They were not required to write their names on the questionnaire. The students were given instructions to generate their own unique code (used for matching the data at T1 and T2) and to write this code on their questionnaire booklet. They were told that there were no right or wrong answers. The students were given the opportunity to request an appointment to discuss their responses with the research team or the school counselor by writing their name on a separate page at the end of the questionnaire. They were thanked for their participation and resumed schoolwork.

### **Results**

The results are presented in three sections. The correlations between the measures at T1 and at T2, and combined T1 and T2 (in the measurement model) are presented first. The second section presents the results of testing the hypothesized mediation model cross-sectionally at each of the time points, T1 and T2. The final section presents the hypothesized mediation longitudinally, following the steps proposed by Cole and Maxwell (2003). Such mediational analyses allow the comparison of the constructs within each time point and across time and therefore allow the observation of discrepancies between cross-sectional and longitudinal mediation (Maxwell et al., 2011).

Since the data for this study are nested (within schools), preliminary analyses were conducted to examine the potential clustering of responses within the 30 schools. A linear mixed model procedure in SPSS, with gender and grade as fixed factors and school as a random factor, was performed on each of the variables of the study (Laird, & Ware, 1982). The random factor of school did not reach significance for any of the measures. This was supported by the intraclass correlations ranging from 0 to .04. The clustering of schools was therefore not included in subsequent analyses.

## **Structural Equation Modeling (SEM)**

The hypothesized mediational pathways included multiple mediators (the three coping self-efficacy global strategies) and dependent variables for psychological adjustment. The mediations were tested in AMOS through maximum-likelihood estimation, to test the fit of a hypothesized model to the observed variance-covariance matrix.

Due to the chi-square statistic being sensitive to the number of variables in the model, and sample size (Hox & Bechger, 2001; Kaplan, 2000) the Comparative Fit Index (CFI), Tucker Lewis Index (TLI) and Root Mean Square Error of Approximation (RMSEA) were also examined. Hu and Bentler (1999) proposed that the CFI and TLI at a level of .95 or higher and RMSEA with values of .06 or lower suggest good model fit. However, Browne and Cudeck (1993) have suggested a good model fit at a value of .08 or less for RMSEA. Since Vandenberg and Lance (2000), recommend cut-off values of higher than .90 for CFI and TLI, as well as less than .08 for RMSEA. Vandenberg and Lance (2000) have proposed that the Hu and Bentler (1999) criteria have high confidence limits and that the proposed cut-offs were acceptable lower bounds of model fit. Therefore, the Vandenberg and Lance (2000) suggestions for model fit were used in the current study.

**Concurrent correlations among measures.** Correlations among the measures were performed in AMOS, within each time point, by allowing all the latent variables to covary. The latent variable for PCC-SES was that described by its confirmatory analysis using structural equation modeling (Brummert Lennings & Bussey, 2014a), whilst the subscales of the parental conflict and psychological adjustment measures were the observed variables for their respective latent variables. Most variables were significantly and modestly to moderately correlated with each other within each time point. An examination of the correlations (see Table 1) revealed similar patterns within each time point. Parental conflict at T1 and T2 was positively moderately associated with psychological maladjustment at T1 and T2 respectively,

and moderately negatively associated with the PCC-SES at T1 and T2. The PCC-SES at T1 and T2 was moderately negatively associated with psychological maladjustment at T1 and T2.

Table 1

*Concurrent Correlations Among Measures within T1 and T2*

Variables	1	2	3	4	5	6	7	8
1. Parental conflict	-	.42*	.38*	-.15*	.34*	-.31*	-.31*	-.32*
2. SDQ–Internalizing	.38*	-	.66*	-.13	.95*	-.43*	-.52*	-.40*
3. SDQ–Externalizing	.48*	.60*	-	-.51*	.42*	-.36*	-.32*	-.54*
4. SDQ–Prosocialness	-.18*	-.07	-.59*	-	-.05	.56*	-.09	-.26*
5. RCMAS–Anxiety	.30*	.88*	.44*	-.06	-	-.29*	-.57*	-.33*
6. PCC-SES–Proactive Behavior	-.28*	-.34*	-.37*	.36*	-.35*	-	.41*	.31*
7. PCC-SES–Avoiding Maladaptive Cognitions	-.39*	-.58*	-.40*	.04	-.55*	.47*	-	.76*
8. PCC-SES–Avoiding Maladaptive Behaviors	-.44*	-.39*	-.54*	.21*	-.37*	.36*	.77*	-

*Note.* Correlations for T1 variables are presented above the diagonal; correlations for T2 variables are below the diagonal.

\* $p < .05$ .

**Measurement models across T1 and T2.** Before carrying out the mediation analyses, the measurement model for the latent variables in the analysis were developed and tested to examine whether the variables were related to each other as expected. The model contained the variables, PCC-SES, parental conflict, anxiety (as measured by the RCMAS) and the SDQ measures for internalizing, externalizing and prosocialness at T1 and T2. The latent construct of the PCC-SES was represented by three global strategies; proactive behavior, avoiding maladaptive cognitions and avoiding maladaptive behaviors as described in Brummert Lennings and Bussey (2014a). For parental conflict, the frequency, intensity and resolution subscales were used as the latent variable indicators. For anxiety, the composite score of the RCMAS was used as an indicator. The indicators for SDQ internalizing, externalizing and prosocialness index were their corresponding subscales as described in the

method. The measurement model had good fit,  $X^2 (333, N = 593) = 517.10, p < .001$ , CFI = .98, TLI = .97, RMSEA = .03 (90% *C.I.* .025 - .036), BCC = 930.13. The indicators loaded significantly on their corresponding construct (see Table 2). The correlations between each measure assessed at the two time points varied from .56 to .90.

Lastly, the factorial equivalence of the measurement model for gender and grade were assessed in AMOS (Byrne, 2001). The unconstrained models provided a baseline, to which a model constrained to apply equally to gender and grade was compared. The unconstrained baseline model,  $X^2 (666, N = 593) = 861.64, p < .001$ , CFI = .98, TLI = .97, RMSEA = .02 (90% *C.I.* .018 - .026), BCC = 1740.66, did not vary by gender,  $X^2 (761, N = 593) = 1015.62, p < .001$ , CFI = .97, TLI = .97, RMSEA = .02 (90% *C.I.* .020 - .028), BCC = 1680.52. Furthermore, the unconstrained baseline model,  $X^2 (666, N = 593) = 876.72, p < .001$ , CFI = .98, TLI = .97, RMSEA = .02 (90% *C.I.* .019 - .027), BCC = 1754.84, did not vary by grade,  $X^2 (761, N = 593) = 985.21, p < .001$ , CFI = .98, TLI = .97, RMSEA = .02 (90% *C.I.* .018 - .026), BCC = 1649.43. Therefore, the correlations between the parental conflict measure, the PCC-SES and the psychological adjustment measures did not control for gender or grade in subsequent models.

Table 2  
*Correlations of the Measurement Model Across T1 and T2*

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Parental conflict T1	-	.41*	.38*	-.16*	.34*	-.30*	-.31*	-.32*	.84*	.37*	.38*	-.13*	.30*	-.28*	-.33*	-.37*
2. SDQ–Internalizing T1		-	.65*	-.17*	.94*	-.43*	-.53*	-.39*	.29*	.60*	.46*	-.15*	.67*	-.37*	-.44*	-.35*
3. SDQ–Externalizing T1			-	-.54*	.42*	-.36*	-.33*	-.54*	.29*	.42*	.74*	-.38*	.33*	-.33*	-.31*	-.41*
4. SDQ–Prosocialness T1				-	-.04	.55*	-.09	-.26*	-.15*	-.15*	-.47*	.90*	-.09	.38*	-.02	.21*
5. RCMAS–Anxiety T1					-	-.29*	-.58*	-.33*	.22*	.70*	.35*	-.08	.73*	-.26*	-.47*	-.27*
6. PCC-SES–Proactive Behavior T1						-	.41*	.30*	-.23*	-.28*	-.36*	.35*	-.23*	.65*	.25*	.21*
7. PCC-SES–Avoiding maladaptive cognitions T1							-	.76*	-.21*	-.42*	-.23*	.01	-.38*	.35*	.59*	.40*
8. PCC-SES–Avoiding maladaptive behaviors T1								-	-.27*	-.24*	-.47*	.19*	-.22*	.21*	.43*	.56*
9. Parental conflict T2									-	.39*	.48*	-.18*	.30*	-.28*	-.39*	-.45*
10. SDQ–Internalizing T2										-	.62*	-.11	.89*	-.35*	-.59*	-.40*
11. SDQ–Externalizing T2											-	-.55*	.43*	-.38*	-.38*	-.53*
12. SDQ–Prosocialness T2												-	-.07	.38*	.03	.22*
13. RCMAS–Anxiety T2													-	-.35*	-.55*	-.37*
14. PCC-SES–Proactive Behavior T2														-	.47*	.37*
15. PCC-SES–Avoiding maladaptive cognitions T2															-	.78*
16. PCC-SES–Avoiding maladaptive behaviors T2																-

*Note.* \* $p < .05$ .



### The mediating role of parental conflict coping self-efficacy cross-sectionally.

Cross-sectional mediation for the latent variables was tested in AMOS through SEM by following the Baron and Kenny (1986) steps. The total effects were estimated first, followed by the relationship between the independent variable, the mediator and the dependent variable. Finally, the indirect effect was assessed to test for the significance of the mediation. The total effects (i.e. the effects between the causal and the outcome variables) were assessed by a model that specified the paths between parental conflict and the outcome measures, namely anxiety, internalizing, externalizing and prosocialness. The model of total effects attained good model fit, for T1,  $X^2 (17, N = 593) = 18.84, p = .34, CFI = 1, TLI = 1, RMSEA = .01$  (90% C.I. 0 - .041), BCC = 75.81, and for T2,  $X^2 (17, N = 593) = 14.58, p = .63, CFI = 1, TLI = 1, RMSEA = 0$  (90% C.I. 0 - .032), BCC = 71.55 (see Table 3). Both models suggested significant total effects of parental conflict on all outcome measures.

Table 3

*Standardized Betas of the Total Effects for T1 and T2*

Independent Variable	Dependent Variable	Time One	Time Two
Parental Conflict	RCMAS–Anxiety	.34**	.30**
Parental Conflict	SDQ–Internalizing	.40**	.39**
Parental Conflict	SDQ–Externalizing	.37**	.48**
Parental Conflict	Prosocialness	-.14*	-.18**

*Note.* \* $p < .05$ . \*\* $p < .01$

Standardized beta estimates are shown for each path.

**Cross-sectional mediation at T1.** Paths were allowed from parent conflict to the three global strategies of the PCC-SES measure (proactive behavior, avoiding maladaptive cognitions and avoiding maladaptive behaviors). Paths were also directed from PCC-SES to each of the four psychological adjustment outcomes measures. The modification indices were examined and only those paths that were supported by research or were theoretically grounded were included (Cole, Ciesla, & Steiger, 2007). The mediational model at T1

attained good model fit,  $X^2 (83, N = 593) = 229, p < .001$ , CFI = .95, TLI = .93, RMSEA = .06 (90% C.I. .046 - .063), BCC = 338.13. A Bonferroni adjustment was used to interpret the significance of the mediations through the three PCC-SES factors. Six T1 mediations were found (see Figure 1).

Parental conflict was associated with lower levels of self-efficacy for proactive behavior which then led to lower levels of internalization and externalization. This suggests that self-efficacy for proactive behavior mediated the relationship between parental conflict and both internalizing and externalizing. The indirect effects for this model were examined by establishing whether there was a significant effect (as tested by Sobel's test) between parental conflict and psychological adjustment through the mediating variable (Baron & Kenny, 1986). The indirect effects of parental conflict, through self-efficacy for proactive behavior, to internalizing ( $\beta = .09, z = 3.68, p < .001$ ) and externalizing ( $\beta = .12, z = 3.68, p < .001$ ) were significant.

Self-efficacy for avoiding maladaptive cognitions mediated the relationship between parental conflict and both anxiety and internalizing. The indirect effects for anxiety ( $\beta = .22, z = 4.74, p < .001$ ) and internalizing ( $\beta = .14, z = 3.54, p < .001$ ) were also significant. Lastly, self-efficacy for avoiding maladaptive behaviors mediated the relationship between parental conflict and both externalizing and prosocialness. The indirect effects for externalizing ( $\beta = .13, z = 2.35, p = .02$ ) and prosocialness ( $\beta = -.10, z = -2.35, p = .02$ ) reached significance. The direct effect is the effect of the exogenous variable (the independent variable) on the endogenous variable (the dependent variable) (Schreiber, Nora, Stage, Barlow, & King, 2006). The direct effects of parental conflict to anxiety, internalizing and externalizing remained significant in the mediation model, indicating partial mediation. The effect of parental conflict on prosocialness was completely mediated by self-efficacy for avoiding maladaptive behaviors.

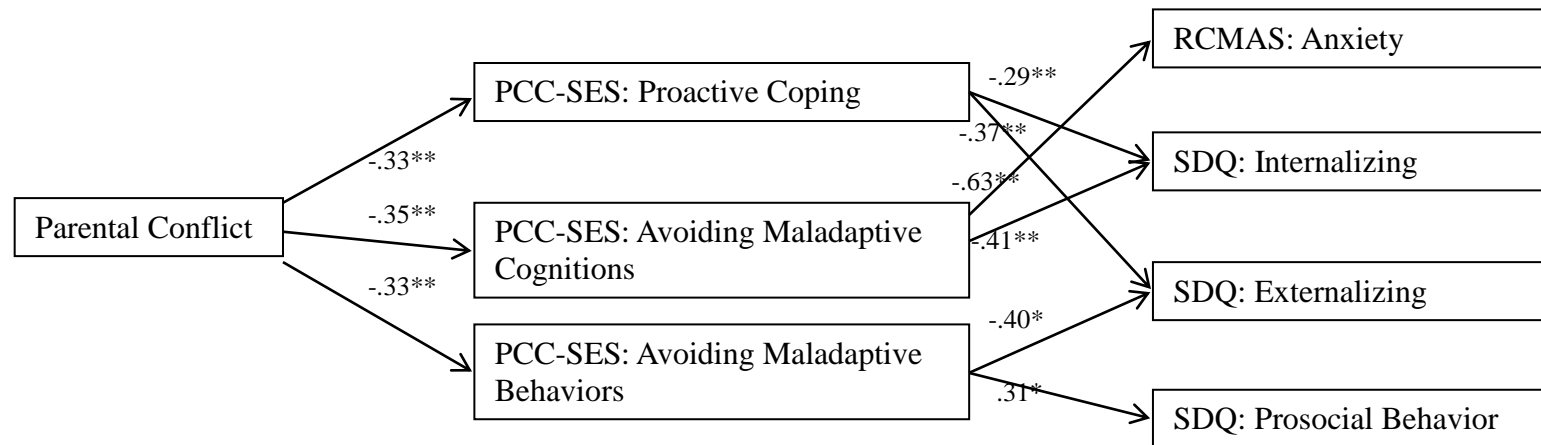


Figure 1. The final model for the mediating role of the PCC-SES at T1

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

Standardized beta estimates are shown for each path.

**Cross-sectional mediation at T2.** The same methodology as T1 was followed to assess mediation at T2. The model also attained adequate fit,  $X^2(85, N = 593) = 227.62, p < .001$ , CFI = .96, TLI = .95, RMSEA = .05 (90% C.I. .045 - .062), BCC = 332.63, and produced eight T2 mediations (see Figure 2). Self-efficacy for proactive behavior mediated the relationship between parental conflict and anxiety, internalizing, externalizing and prosocialness, with significant indirect effects,  $\beta = .13, z = 3.45, p < .001$ ;  $\beta = .19, z = 3.45, p < .001$ ;  $\beta = .39, z = 3.96, p < .001$ ;  $\beta = -.25, z = -3.89, p < .001$ , respectively. Self-efficacy for avoiding maladaptive cognitions mediated the relationship between parental conflict and internalizing and prosocialness,  $\beta = .23, z = 5.28, p < .001$ ;  $\beta = .14, z = 3.29, p < .001$ , respectively. Finally, self-efficacy for avoiding maladaptive behaviors mediated the relationship between parental conflict and externalizing and prosocialness,  $\beta = .18, z = 3.67, p < .001$ ;  $\beta = -.15, z = -2.97, p = .01$ , respectively. The direct effects of parental conflict to externalizing and prosocialness remained significant in the mediation model, indicating partial mediation. However, the effects of parental conflict on anxiety and externalization were completely mediated by self-efficacy for proactive behavior and self-efficacy for avoiding maladaptive behavior.

**The longitudinal mediating role of parental conflict coping self-efficacy.** Although mediation was found in the cross-sectional data, a longitudinal design was essential to account for the stability of the constructs over time. A more stringent test of two-wave longitudinal mediation was used to control for the levels of measurement at T1 (Cole & Maxwell, 2003; Cummings et al., 2006). The Cole and Maxwell (2003) series of steps for longitudinal mediation include the provision of a path between the independent variable at T1 to the mediator variable at T2, then a path between the mediator variable at T1 to the dependent variable at T2. These steps were performed while controlling for the autoregressive effects. This type of mediational analysis is considered optimal for two time points of data (Cole & Maxwell, 2003).

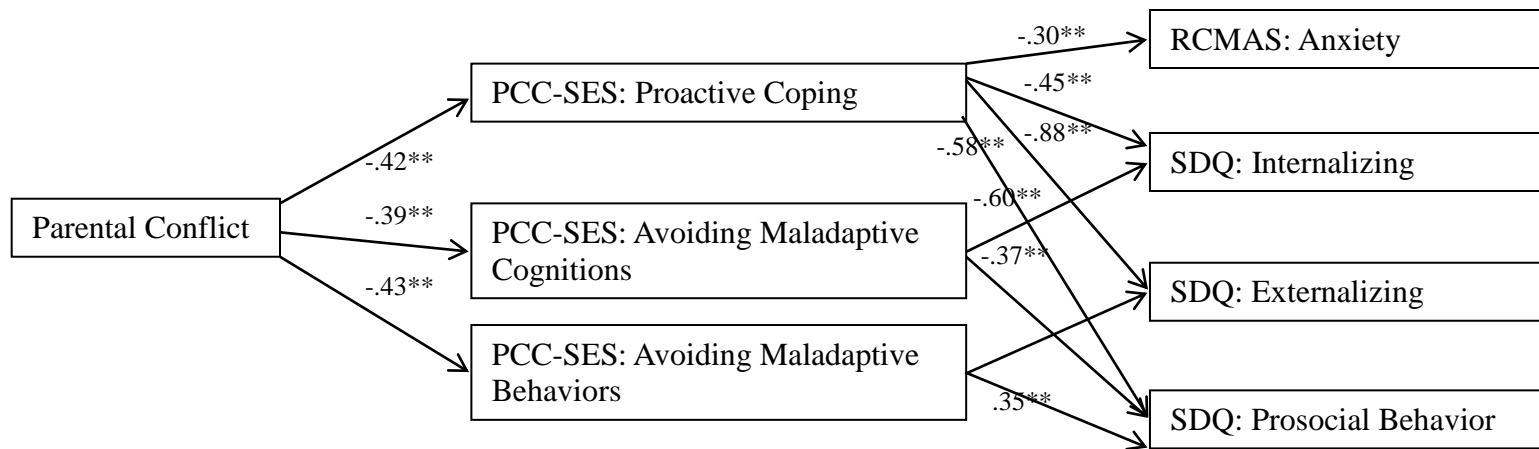


Figure 2. The final model for the mediating role of the PCC-SES at T2

Note. \* $p < .05$ . \*\* $p < .01$

Standardized beta estimates are shown for each path.

-.43\*\*

The total effects were assessed in a model where paths were specified between parental conflict at T1 and the psychological adjustment measures at T2 (anxiety as measured by the RCMAS and the SDQ measures for internalizing, externalizing and prosocialness). All of the psychological adjustment measures at T2 controlled for their autoregressive paths. Whilst good model fit was attained,  $X^2 (60, N = 593) = 100.53, p = .01, CFI = .99, TLI = .98, RMSEA = .03$  (90% *C.I.* .022 - .045), BCC = 223.86, anxiety and prosocialness were not significant over time. They were subsequently deleted from the model. A reduced total effects model in which internalizing and externalizing served as the outcome variables of parental conflict attained good model fit,  $X^2 (33, N = 593) = 59.67, p = .01, CFI = .99, TLI = .98, RMSEA = .37$  (90% *C.I.* .021 - .052), BCC = 127.03. Therefore, internalizing and externalizing were used as the outcomes variables for subsequent analyses.

All the measures of the longitudinal mediation model had autoregressive paths. There were cross-paths from parental conflict at T1 to the PCC-SES at T2 and the PCC-SES at T1 to child psychological adjustment at T2. Furthermore, within each time point, correlations were allowed between the latent variables as suggested by Cole et al. (2007). Modification indices were examined for suggestions of additional paths, but only those supported by research or which were theoretically meaningful were included. The model had adequate fit,  $X^2 (295, N = 593) = 532.27, p < .001, CFI = .97, TLI = .96, RMSEA = .04$  (90% *C.I.* .031 - .041), BCC = 756.70. There was no significant direct effect from parental conflict T1 to the proactive self-efficacy global strategy at T2 after controlling its autoregressive T1 path. Furthermore, there were no significant effects from the proactive behavior self-efficacy T1 to internalizing and externalizing at T2 (as measured by the SDQ). The proactive behavior self-efficacy global strategy of PCC-SES was therefore deleted from the model.

The final model attained adequate model fit,  $X^2 (209, N = 593) = 351.79, p < .001, CFI = .98, TLI = .97, RMSEA = .03$  (90% *C.I.* .028 - .040), BCC = 541.82, and accounted for 44% of the variance in internalizing and 55% in externalizing. All of the autoregressive paths

were positive in direction and significant. A Bonferroni adjustment was made to interpret the significance of two mediations assessed. Parental conflict at T1 predicted parental conflict at T2, which was associated with lower levels of self-efficacy for avoiding maladaptive cognitions at T2, leading to more internalization at T2. Therefore, the cognitive global strategy of the PCC-SES, coping self-efficacy for avoiding maladaptive cognitions, mediated the relationship between parental conflict and internalizing (see Figure 3). Furthermore, the indirect effect of parental conflict to internalizing symptoms (as measured by the SDQ) was significant,  $\beta = .04$ ,  $z = 2.06$ ,  $p = .04$ . The direct effect of parental conflict at T1 and internalizing at T2 remained significant in the mediation model, indicating partial mediation. Self-efficacy for avoiding maladaptive behavior did not mediate the relationship between parental conflict and internalizing or externalizing.

Group analyses were conducted to test whether the mediation model maintained adequate fit across gender and grade. The unconstrained baseline model,  $X^2(418, N = 593) = 563.19$ ,  $p < .001$ , CFI = .98, TLI = .97, RMSEA = .02 (90% C.I. .019 - .029), BCC = 961.14, did not vary by gender,  $X^2(460, N = 593) = 636.78$ ,  $p < .001$ , CFI = .98, TLI = .97, RMSEA = .03 (90% C.I. .021 - .030), BCC = 979.53. Furthermore, the unconstrained model baseline model,  $X^2(418, N = 593) = 581.87$ ,  $p < .001$ , CFI = .98, TLI = .97, RMSEA = .03 (90% C.I. .021 - .031), BCC = 979.53, did not vary by grade,  $X^2(460, N = 593) = 631.34$ ,  $p < .001$ , CFI = .98, TLI = .97, RMSEA = .03 (90% C.I. .020 - .030), BCC = 937.24.

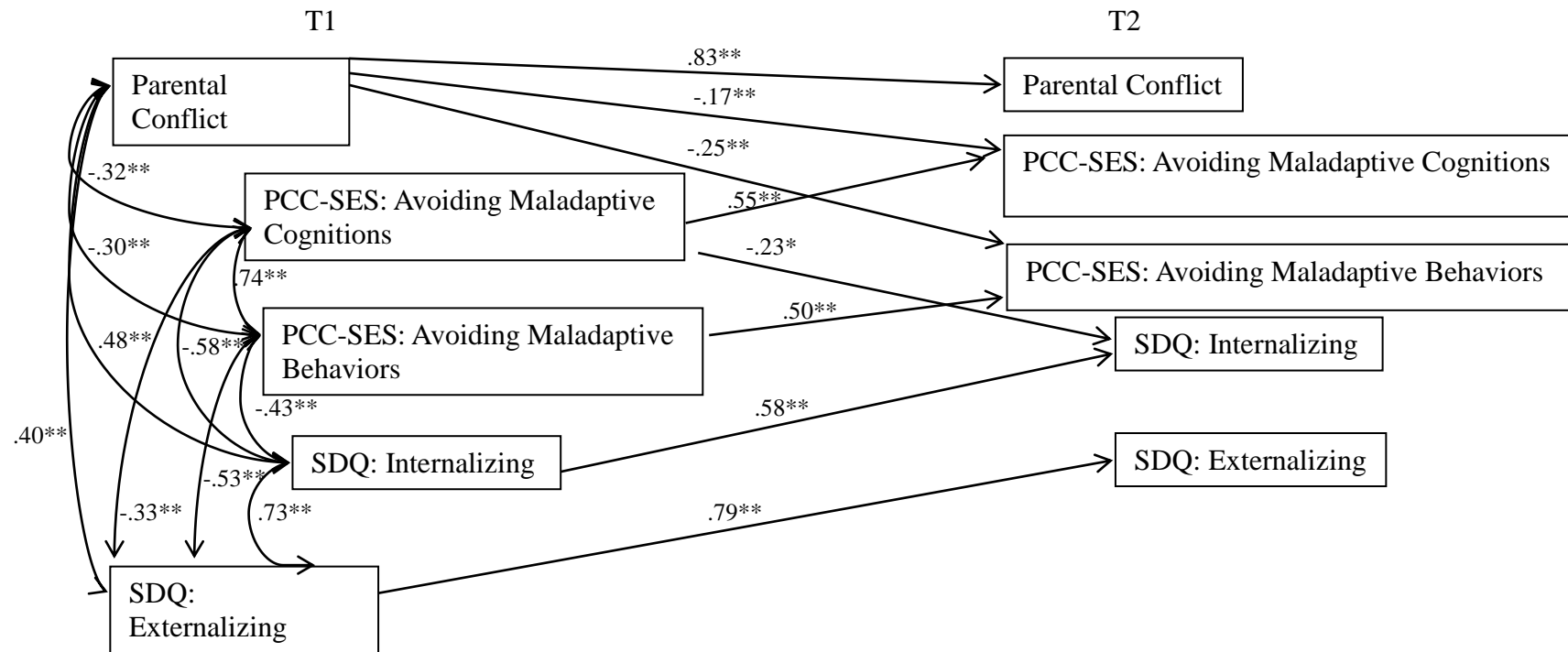


Figure 3. The final longitudinal mediation model for the mediating role of the PCC-SES

Note. \* $p < .05$ . \*\* $p < .01$

Standardized beta estimates are shown for each path.



## Discussion

A series of cross-sectional and longitudinal mediations were found in the current study. These mediators were present between the relationship of parental conflict and psychological maladjustment. Across both time points, there was a general trend where higher levels of parental conflict were associated with lower levels of children's coping self-efficacy beliefs about parental conflict. Furthermore, lower levels of coping self-efficacy beliefs led to greater child psychological maladjustment. As such, the results of this study support the hypothesis that children's perception of their ability to cope is important in understanding the effect of parental conflict on children's psychological maladjustment (Benight & Bandura, 2004).

Similar cross-sectional mediations were found at T1 and T2. At T1, self-efficacy for proactive behavior mediated the relationship between parental conflict and internalizing and externalizing symptoms. Self-efficacy for avoiding maladaptive cognitions mediated parental conflict and symptoms of anxiety and other internalizing symptoms. In addition, self-efficacy for avoiding maladaptive behaviors mediated the relationship between parental conflict and externalizing symptoms and prosocialness. Similarly, at T2, self-efficacy for proactive behavior mediated parental conflict and internalizing, externalizing, anxiety and prosocialness. Self-efficacy for avoiding maladaptive cognitions mediated the association between parental conflict and internalizing and prosocialness. Lastly, self-efficacy for avoiding maladaptive behaviors mediated the relationship between parental conflict and externalizing and prosocialness. The results of the cross-sectional mediations are reported in the current study to allow comparisons with other cross-sectional studies in the literature as has been done by Spinrad et al. (2006).

Although the cross-sectional mediations mentioned above support the hypothesis that coping self-efficacy is associated with the variability in children's psychological adjustment, the result of one cross-sectional mediation was not as expected. The relationship between self-

efficacy for avoiding maladaptive cognitions and prosocialness was negative. That is, the less children believed that they could avoid maladaptive cognitions, the more prosocialness they reported.

Previous studies of children in the age range of the current study have found a relationship between high levels of coping through maladaptive cognitions and prosocial behavior (Rothbart, Ahadi, & Hershey, 1994; Rydell, Berlin, & Bohlin, 2003). Eisenberg, Spinard and Morris (2002) found that although children who coped through maladaptive cognitions strategies had less *attention control*, suggesting that they found it difficult to regulate their emotional states, they were also less impulsive when compared to control children and children who coped through maladaptive behaviors. Being less impulsive may help children who engage in maladaptive cognitions be more empathetic which is characterized through cooperation and caring about others' feelings (Lonigro, Laghi, Baiocco, & Baumgartner, 2014). Indeed, the relationship between empathic responses and concerns for others has been linked with prosocial behaviors in children (Eisenberg et al., 1989). However, children's prosocial behaviors reduce if empathic related responses reach levels of personal distress, that is, when children are involved in vicariously feeling others' emotions at uncomfortable levels (Eisenberg, Eggum, & Di Giunta, 2010). Therefore, the link between children's maladaptive cognitions and proactive behaviors may have resulted from children's excessive empathic responsiveness (within a context where there was little they could do to prevent the conflict) (Eisenberg et al., 2010).

Interestingly, although 14 mediations were significant cross-sectionally, only one was significant longitudinally. Coping self-efficacy for avoiding maladaptive cognitions mediated the relationship between parental conflict and children's internalizing as measured by the SDQ. This cognitive mediator was comprised of the specific coping self-efficacy strategies of avoiding self-blame, avoiding preoccupation and of distancing. This result remained even when using Maxwell et al. (2011)'s methodology that requires the control of autoregressive

effects. One possible explanation may be that the study's short time frame captured little change in the levels of parental conflict. Given that only 8 months had elapsed between T1 and T2, it is possible that any new stressors did not confront the families. Therefore, it was not surprising that there was moderate to high stability in the parental conflict variable. Indeed, past studies of longitudinal mediation have noted the limitations presented by high stability where changes to the family context are unable to be induced (Cummings et al., 2006). For example, Spinard et al. (2006) noted that high stability of the variables of interest over time decreased the power of the study, thereby reducing the significance of mediational relationships.

The findings from the current study may have implications for clinical practice. Potential interventions can focus on increasing children's levels of personal agency to consequently reduce the negative effects of parental conflict. Further, these concepts can be introduced into a socio-cognitive framework. For example, self-efficacy for avoiding maladaptive cognitions is a socio-cognitive construct and is therefore more likely to be responsive to clinical interventions (Legerstee, Garnefski, Jellesma, Verhulst, & Utens, 2010). These interventions would aim to increase children's self-efficacy beliefs to avoid self-blame, avoid preoccupation and for distancing. Moreover, beneficial interventions for increasing children's levels of coping self-efficacy could be achieved by emphasizing children's mastery and vicarious experiences, verbal persuasion and awareness about their physiological states (Bandura, 1997). These processes have been linked with increasing levels of self-efficacy in the past (Ozer & Bandura, 1990). Targeting specific treatment at developing these skills would therefore be of great benefit in parental conflict situations.

Mastery experiences can provide opportunities for children to succeed in different situations. Children could be given the opportunity, through real experiences and/or role-plays, to increase their self-efficacy beliefs about distancing and avoiding self-blame and distancing. As found in the current study, it would be expected that children who believe that

they are less likely to use maladaptive cognitions will have better psychological outcomes than children with lower levels of self-efficacy for avoiding maladaptive cognitions.

Moreover, children's vicarious experiences can aid the development of coping self-efficacy beliefs through the child's observation of others' successful attempts at coping with parental conflict. In addition, verbal persuasion by family members, clinicians and significant others, can be helpful when specific motivating feedback is given to children. Finally, providing children with the skills necessary to correctly interpret their own emotional and physiological states may strengthen their personal agency. Such feedback is particularly important given that individuals relate their emotional and physiological experiences with authorship over their actions (Wegner, 2003).

The limitations of the current study include the high stability of the parental conflict variable. There was decreased variability within the longitudinal design in the absence of any parental conflict stressor (Cummings et al., 2006). Future studies should re-confirm the current results with children who have experienced parental-separation or after significant stressors in the family, as this may increase the variability of the parental conflict variable. Prospective studies could also examine factors which moderate the relationship between coping self-efficacy for avoiding maladaptive cognitions and parental conflict. These may aid the implementation of a comprehensive intervention to boost children's levels of adaptive coping self-efficacy strategies.

The strengths of the current study include its ability to demonstrate the importance and relevance of children's levels of coping self-efficacy beliefs within the context of parental conflict. Not only were mediations significant cross-sectionally, but coping self-efficacy for avoiding maladaptive cognitions remained significant longitudinally even when assessed with stringent tests of mediation (Maxwell et al., 2011). Lastly, based on a large number of children, the results of the mediations applied equally to males and females in grades 5 and 7, as suggested by model invariance.

In conclusion, the results of this study demonstrate that coping self-efficacy beliefs play a pivotal role in influencing children's psychological adjustment in the context of parental conflict. Greater levels of parental conflict led to lower levels of coping self-efficacy beliefs and higher levels of psychological maladjustment. Thus, increasing personal agency through adaptive coping-self efficacy beliefs may decrease psychological maladjustment in children living with parental conflict.

## **Chapter 4**

# **The Effect of Family Functioning on the Mediation of Parental Conflict and Children's Psychological Maladjustment: A Longitudinal Moderated Mediation Model**

### Abstract

This study examined the effect of parental conflict on children's psychological maladjustment through a longitudinal moderated mediation model. In this model children's *coping self-efficacy beliefs* were considered mediators and family functioning factors potential moderators. A stringent methodology was used where all variables were controlled for their autoregressive effects. The participants of the study were 593 Australian school students from grades 5 and 7. The ethnic composition of the children was approximately 72% White, 20% Asian, 4% Middle Eastern, and 4% from other ethnic groups. Children's coping self-efficacy beliefs for avoiding maladaptive cognitions was a significant longitudinal mediator of the relationship between parental conflict and child psychological maladjustment. Family functioning, comprised of *family satisfaction* and *collective family self-efficacy beliefs*, was a significant moderator of the longitudinal relationship between parental conflict and children's coping self-efficacy beliefs for avoiding maladaptive cognitions. However, controlling for the levels of family conflict, family satisfaction and collective family self-efficacy beliefs individually moderated the aforementioned relationship to a greater degree. Family satisfaction was found to be the strongest moderator, strengthening the negative relationship between parental conflict and children's coping self-efficacy beliefs for avoiding maladaptive cognitions. That is, when there were higher levels of family satisfaction, children were more likely to report higher levels of self-efficacy for avoiding maladaptive cognitions. Implications for the inclusion of family functioning components in interventions aimed at increasing children's coping self-efficacy levels are discussed.

**Keywords:** child coping self-efficacy, parental conflict, family functioning

## The Effect of Family Functioning on the Mediation of Parental Conflict and Children's Psychological Maladjustment: A Longitudinal Moderated Mediation Model.

Exposure to parental conflict in the family home may hinder children's psychosocial development leading to a reduction in psychological wellbeing, greater internalizing and externalizing difficulties (Cummings & Davies, 2002; Davies, Harold, Goeke-Morey, & Cummings, 2002; Fosco & Grych, 2007; Pendry, Carr, Papp, & Antles, 2013; Rhoades, 2008). Not all children develop negative outcomes to the same extent, however, with some children experiencing greater levels of psychological maladjustment compared to others (Davies et al., 2002; Fosco & Frych, 2008). Factors such as children's coping strategies have been suggested to influence this variability (see Davies, Sturge-Apple, & Martin, 2013; Folkman, Lazarus, Pimley, & Novacek, 1987; Grych & Fincham, 1990). Importantly, children who are exposed to parental conflict, and who can engage in adaptive coping strategies tend to have better psychological outcomes than children who engage in maladaptive coping (Davies et al., 2002). Thus, children's coping strategies can influence the relationship between parental conflict and child psychological outcomes (Shelton & Harold, 2008; Wadsworth & Compas, 2002).

To extend the literature on the effect of parental conflict on children, Brummert Lennings and Bussey (2014b) showed that children's perceived coping abilities play an important role in the relationship between parental conflict and children's psychological maladjustment. Coping self-efficacy beliefs are an individual's perceived ability to utilize different coping strategies when faced with a stressful situation. Coping self-efficacy beliefs are grounded in the personal factors of Social Cognitive Theory (SCT; Bandura, 1997) and work through cognitive, motivational, affective and decisional processes. In particular, Brummert Lennings and Bussey (2014b) found that children's *coping self-efficacy beliefs for avoiding maladaptive cognitions* mediated the relationship between parental conflict and children's psychological maladjustment longitudinally. Higher levels of parental conflict were



associated with lower levels of coping self-efficacy for avoiding maladaptive cognitions which was associated with higher levels of internalization symptoms over time. Interestingly, the relationships between the variables did not vary by gender and grade. To further understand the processes involved in increasing children's coping self-efficacy beliefs in an intervention, other factors which promote higher levels of children's coping self-efficacy require consideration. The aim of the current study is to investigate whether family factors influence the relationship between parental conflict and self-efficacy for avoiding maladaptive cognitions.

The family contextual factors of parental conflict can be understood within SCT (Bandura, 1997). SCT proposes a triadic model of reciprocal causation between personal, behavioral and environmental factors. In particular, within the context of parental conflict, a reciprocal relationship is posited between environmental (e.g. family factors), personal (e.g. coping self-efficacy beliefs) and behavioral (e.g. psychosocial outcomes) factors (Bandura, 1997). Family functioning is an environmental factor that incorporates the emotional qualities of family interactions and relationships, and may therefore influence how children appraise parental conflict (Johnson, Lavoie, & Mahoney, 2001). This contextual factor influences children's appraisals of the parental conflict, and given that appraisals can have outcome implications for children (Cummings, Davies, & Simpson, 1994), it may play a significant role in children's coping self-efficacy beliefs about parental conflict.

The characteristics of good family functioning include evidence of high cohesiveness in a supportive and organized environment (Cunningham, 2002). Since cohesive families can interact positively with each other, higher levels of family functioning may lead to higher levels of coping self-efficacy beliefs and less psychological maladjustment in children when compared to emotionally distant families (Davies et al., 2013). Cohesive families are reported to be more effective at managing parental conflict, resulting in lower levels of children's externalizing behavior when compared to families with poor functioning (Johnson, 2002).

Good family functioning can increase children's confidence in their parents' ability to solve disagreements and maintain family harmony as it reduces children's insecurities and can encourage the use of adaptive coping strategies (Davies et al., 2002, Davies et al., 2013).

Family functioning can have an effect on children's psychological outcomes if it influences the relationship between parental conflict and children's coping self-efficacy. For example, Fosco and Grych (2007) found that if a family is cohesive and expressive then even in the presence of conflict children are less likely to self-blame. Therefore, it is hypothesized that the level of family functioning can influence the relationship between parental conflict and children's coping self-efficacy beliefs (Bandura, 1997). In turn, family functioning was anticipated to moderate the relationship between parental conflict and children's coping self-efficacy beliefs.

Notably, families that face difficulties in a harmonious way can provide vicarious experiences for their children, increasing their self-confidence and teaching them to avoid maladaptive coping strategies (Davies et al., 2013). Cohesive and adaptive families not only create opportunities for efficacious behavior but also help the children's social and cognitive development (Bandura, 1994; Olson, Larsen, & McCubbin, 1982). In these families there is likely to be high levels of family satisfaction and this may be protective against the negative effects of parental conflict (Davies et al., 2002). According to Grych and Fincham (1993) children who live with parental conflict and have high levels of family satisfaction may perceive the parental conflict as less threatening than children with low levels of family satisfaction. A possible explanation is that families with high levels of satisfaction are likely to have higher levels of family expressivity and communication (Bandura, Caprara, Barbaranelli, Regalia, & Scabini, 2011). Family satisfaction was therefore one of the family functioning variables assessed in the current study (Caprara, Pastorelli, Regalia, Scabini, & Bandura, 2005).

The family's collective sense of self, namely their *collective family self-efficacy beliefs* may also be an indicator of family functioning because they can reflect the family's ability to work together as a whole (Shelton & Harold, 2008). This concept has been linked to better communication patterns between family members and a greater sense of unity (Bandura et al., 2011; Perosa & Perosa, 2001). Collective family self-efficacy describes the levels to which a family believes that they are able to function together in the family environment (Caprara, Regalia, Scabini, Barbaranelli, & Bandura, 2004). Families with higher levels of these beliefs are supportive of each other, believe they can react better to stressors and are more likely to use adaptive coping strategies (Cunningham, 2002). For example, adolescents with high levels of family collective self-efficacy report being able to manage relationships with their parents and have efficient communication patterns (Bandura et al., 2011). In addition, Bandura et al. (2011) found that family collective self-efficacy was central to family functioning over and above individual self-efficacy systems, for example the dyadic parent, child, or spousal efficacies. This suggests that both family satisfaction and family collective efficacy may be indicators of family functioning. Both processes create the family context, which can play a key role in influencing children's outcome following parental conflict (Lindahl & Malik, 2011). The role of family functioning, through the possible moderators of family satisfaction, and collective family self-efficacy is examined in the current study within the context of the aforementioned mediation.

In addition, the levels of parent-child conflict, *family conflict*, are considered in the current study's assessment of family functioning. Family conflict involves parent-child arguments over chores, peer relationships, pocket money and child behavior as used in Smetana (1989). Parental conflict can have a spillover effect on the relationship between parent and child (Bradford et al., 2004; Erel & Burman, 1995). High levels of family conflict can be a contributing factor to children's negative appraisals of parental conflict and may lead to more negative effects when compared to lower levels of family conflict (Grych & Fincham,

1990). Family conflict was therefore also considered a potential moderator of the relationship between parental conflict and children's coping self-efficacy beliefs.

The current study aimed to assess the moderating role of family functioning, assessed through family satisfaction, collective family self-efficacy, and family conflict, on the relationship between parental conflict and children's coping self-efficacy for avoiding maladaptive cognitions. It is hypothesized that higher levels of family functioning will increase a child's sense of personal agency and therefore lead to lower levels of psychological maladjustment. Specifically, it was expected that children who have low levels of family functioning and higher levels of family conflict may report lower levels of coping self-efficacy beliefs and therefore more psychological maladjustment (Cummings, Goeke-Morey, & Papp, 2003; Cummings, Goeke-Morey, Papp, & Dukewich, 2002; Grych, 1998; Grych & Fincham, 1993).

Although gender and grade effects have been previously noted in the coping literature within the context of parental conflict (Davies, Forman, Rasi, & Stevens, 2002; El-Sheikh & Reiter, 1996; Goeke-Morey, Cummings, Harold, & Shelton, 2003), these were not expected to be significant in the relationships between the variables in the longitudinal moderated mediation model. Other studies, which have tested similar models, have not found significant moderations by gender or grade (see Brummert Lennings & Bussey, 2014b; Cummings et al., 2006; Nikolas, Klump, & Burt, 2013). Therefore, it was not expected that the moderated mediation assessed in the current paper would differ by gender and grade.

## **Method**

### **Participants**

At Time One (T1) 663 non-government school students ( $M = 11.19$  years,  $SD = 1.10$ ) from New South Wales, Australia, participated in the current study. The students were from grade 5 ( $n = 149$  males,  $n = 166$  females,  $M = 10.17$  years,  $SD = .53$ ) and grade 7 ( $n = 150$  males,  $n = 198$  females,  $M = 12.11$  years,  $SD = .52$ ). Eight months later, at Time Two (T2),

271 male and 322 female ( $M = 11.17$  years,  $SD = 1.10$ ) school students, participated in the study. In grade 5, there were  $n = 138$  males,  $n = 151$  females, and in grade 7,  $n = 133$  males,  $n = 171$  females. Follow up analyses revealed no significant demographic differences between the samples at T1 and T2 for gender ( $t(661) = .91, p = .37$ ), grade ( $t(661) = .82, p = .41$ ) and age ( $t(661) = .75, p = .45$ ). The 11% attrition rate was due to students being absent from the school on the day of testing or having changed schools. This attrition rate was not high when compared to other studies conducted in school settings (see Fosco & Grych, 2010). The ethnic backgrounds of the sample were 72% White, 20% Asian, 4% Middle Eastern, and 4% from other ethnic groups, approximately. Parents gave written consent for their children to participate in the study.

## Measures

**Children's perception of interparental conflict (CPIC).** Children's perception of the levels of parental conflict within their family was measured by the *frequency*, *intensity*, and *resolution* subscales of the Children's Perception of Interparental Conflict questionnaire (CPIC; Grych, Seid, & Fincham, 1992). The 19-items were suitable for children aged 8 to 12. These items were rated on a 3-point scale, (1 = *true*, 2 = *sort of true*, 3 = *false*). The original mean reliability for this scale was .78 (Grych et al., 1992). In the current study, the Cronbach alpha was .92.

**Collective family self-efficacy.** The collective family self-efficacy measure was based on the 20 original items from the Perceived Collective Family Efficacy Scale (Caprara et al., 2004). Ten items were selected for the current study after a pilot study with 79 school students ( $M = 9.80$  years,  $SD = .40$ ) and by comparing the loadings with the highest reported in Caprara et al. (2004). The selected 10 items were simplified for children, for example, "get family members to share household responsibilities" was reworded to "share the house work". The 10 items were measured on a seven-point scale (1 = *not well at all*, 7 = *very well*) with the stem "How well can your family work together to ...". The Cronbach's alpha in the pilot

study was .93, in the current study it was .90.

**Family satisfaction.** Children's satisfaction with family life was assessed by the 14-item Family Satisfaction Scale (Olson & Wilson, 1982). The Family Satisfaction Scale was based on items targeting cohesion and adaptability, for example, "*How satisfied are you*"... "...with how close you feel to the rest of your family", "...how fair the criticism is in your family" and "...your family's acceptance of your friends". The respondents answered on a 5-point scale (1 = *very dissatisfied*, 5 = *extremely satisfied*). Previously, the coefficient alpha for the overall scale had varied between .76 and .92 with a 5-week test-retest correlation of .75. (Lightsey & Sweeney, 2008; Olson et al., 1989). The Cronbach's alpha in this study was .90.

**Family conflict.** Children rated the level of conflict between themselves and their parents with the Family Conflict measure, which was based on the scale by Smetana (1989). The stem of the scale was "*During the past year my parents and I have had arguments ...*". The 7-item measure was rated on a seven-point scale (1 = *not at all*, 7 = *several times a day*) and assessed the frequency of arguments between children and their parents about chores, schoolwork, behavior, and relationships with friends. The Cronbach's alpha previously ranged between .76 and .83 (Tucker, McHale, & Crouter, 2003). The Cronbach's alpha in this study was .81.

**Parental conflict coping self-efficacy scale (PCC-SES).** Children's levels of coping self-efficacy beliefs about parental conflict were measured by the Parental Conflict Coping Self-Efficacy Scale (PCC-SES; Brummert Lennings & Bussey, 2014a). The PCC-SES is comprised of three domains, *Proactive Coping Self-Efficacy*, *Self-Efficacy for Avoiding Maladaptive Cognitions* and *Self-Efficacy for Avoiding Maladaptive Behavior*, which are comprised of 7 coping self-efficacy strategies, self-efficacy for problem solving, seeking social support, distancing, avoiding preoccupation, avoiding self-blame, avoiding aggression, and avoiding overinvolvement. The students were asked to respond on a seven-point scale (1 = *not well at all*, 7 = *very well*) to the stem of "*If your parents had an argument, how well can*

*you....*”. The Cronbach alpha for the overall scale was .89.

**Strengths and difficulties questionnaire (SDQ).** The 25-items assessed conduct problems (externalizing), hyperactivity-inattention (externalizing), peer problems (internalizing), emotional symptoms (internalizing), and prosocial behavior on a 3-point scale (0 = *not true*, 1 = *somewhat true*, 2 = *certainly true*) (Goodman 1997; Goodman, Lamping, & Ploubidis, 2010; Goodman, Meltzer, & Bailey, 1998). The original overall reliability scale was .73 (Goodman, 2001), for the current study it was .79.

### **Missing Data**

Imputation using the Expectation-Maximization algorithm was conducted with the individual items as predictors for the small amounts of missing data at item-level (range .0 - 2.0%). This method was used as it has been recognized as superior to list-wise and pairwise deletion, or means substitution (Allison, 2002; Enders, 2001; Schafer & Graham, 2002).

### **Procedure**

The students completed the questionnaires in a location specified by the school principal within the school grounds. The measures within the questionnaire were randomly ordered to create two versions of the questionnaire. These two versions were then allocated within gender and grade during the classroom administration of the questionnaires. Classrooms consisted of about 20 students. The questionnaires took approximately 50 minutes to complete and research assistants, the investigator and schoolteachers supervised the sessions. The students were asked not to interact with each other during the questionnaire administration. They were assured anonymity, as they were not required to write their names on the questionnaire booklets. The students were given the opportunity to talk to the research team or school counselor if they wanted to discuss their answers. Finally, they were thanked for their participation and resumed schoolwork.

## Results

The data were analyzed through moderated mediation using Structural Equation Modeling in AMOS. The moderations by the observed variables 1) family satisfaction, 2) collective family self-efficacy, and 3) family conflict were assessed in the longitudinal mediation of parental conflict (independent variable) and child internalization symptoms (outcome variable) by coping self-efficacy to avoid maladaptive cognitions (mediator). Specifically, moderation was assessed in the relationship between parental conflict at T1 and coping self-efficacy for avoiding maladaptive cognitions at T2 (see Figure 1, Preacher, Rucker, & Hayes, 2007). Since the model incorporated a longitudinal mediation the variables at T2 were controlled for their own T1 autoregressive effects (Cole & Maxwell, 2003). Lastly reduced moderated mediation sub-models were assessed.

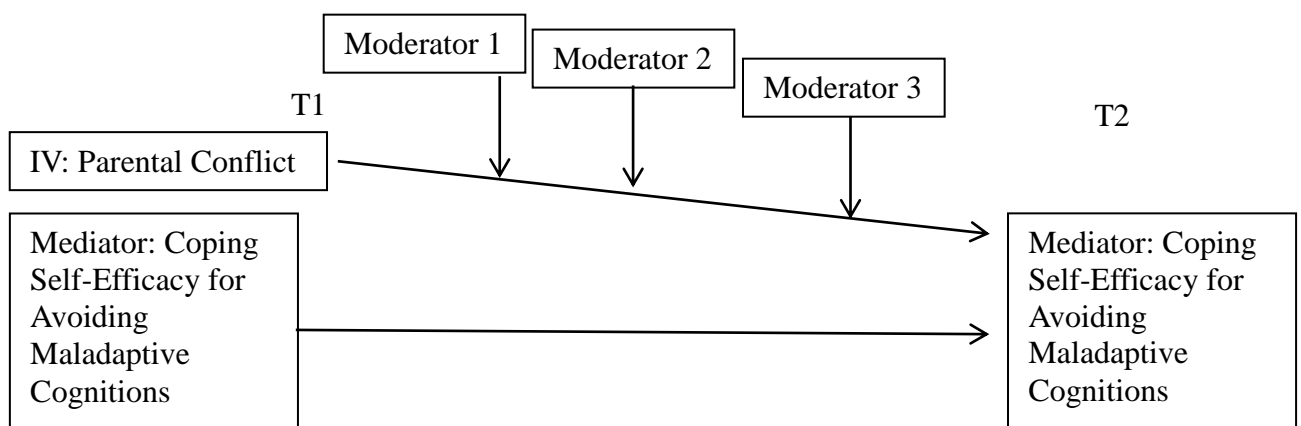


Figure 1. Conceptual diagram of moderation

Standardized versions of the moderator variables known as Z-score transformations were created and used throughout the analysis (Cohen, Cohen, West, & Aiken, 2003; Marsh, Wen, Hau, K, Little, Bovaird, & Widaman, 2007; Wen, Marsh, & Hau, 2010). The cross-product of each observed moderator, *family satisfaction*, *collective family self-efficacy* and *family conflict*, and the each of the indicators of the latent variable for parental conflict, *frequency*, *intensity* and *resolution*, served as the indicators of the latent moderator variables *family satisfaction X parental conflict*, *collective family self-efficacy X parental conflict* and



*family conflict X parental conflict* (see Cummings, Schermerhorn, Davies, Goeke-Morey & Cummings, 2006; Little, Bovaird, & Widaman, 2006).

Firstly, the hypothesized latent moderator variables were simultaneously entered into a model. *Family satisfaction X parental conflict*, *collective family self-efficacy X parental conflict* and *family conflict X parental conflict* were allowed to co-vary as they all interacted with parental conflict. Furthermore, each latent moderator variable was allowed to co-vary with their components, for example, *family satisfaction X parental conflict* was allowed to co-vary with *family satisfaction* and *parental conflict*. Although this model achieved acceptable model fit,  $X^2 (517, N = 593) = 1123.93, p < .0005$ , CFI = .95, TLI = .94, RMSEA = .05 (90% C.I. .041 - .048), BCC = 1441.79, *family satisfaction X parental conflict* ( $\beta = -.09, p = .27$ ), *collective family self-efficacy X parental conflict* ( $\beta = -.05, p = .54$ ), and *family conflict X parental conflict* ( $\beta = -.10, p = .11$ ) were not significant moderators.

As there was a moderate correlation between *family satisfaction* and *collective family self-efficacy*,  $r = .67$ , these were treated as indicators to a higher order latent variable named *family functioning* to assess for their joint moderating effect. Product terms of the indicators of parental conflict and family functioning were computed to create the latent moderator higher order variable of *family functioning X parental conflict*. In this model, family functioning was a significant moderator ( $\beta = -.16, p = .04$ , see Table 1), although *family conflict X parental conflict* ( $\beta = -.09, p = .16$ ) was not,  $X^2 (526, N = 593) = 1159.34, p < .0005$ , CFI = .95, TLI = .94, RMSEA = .05 (90% C.I. .042 - .049), BCC = 1458.01.

Table 1.  
*Unstandardized Betas for Family Functioning Moderation*

	Unstandardized Betas	P value
Parental Conflict	-0.58	0.004
Family Functioning	0.05	0.618
Family Functioning X Parental Conflict	-0.16	0.043

As the *family functioning* higher order latent variable moderator had been significant in the previous model, each of its indicators were entered into separate models to assess whether the significance of the moderators were stronger on their own, given their conceptual differences. *Collective family self-efficacy* was removed from the first model. The hypothesized model which assessed whether family satisfaction and family conflict moderated the relationship between parental conflict and the children's coping self-efficacy for avoiding maladaptive cognitions achieved good model fit,  $X^2 (402, N = 593) = 905.07, p < .0005$ , CFI = .95, TLI = .94, RMSEA = .05 (90% C.I. .042 - .050), BCC = 1171.95. *Family satisfaction* ( $\beta = -.18, p = .01$ ) was a significant moderator, see Table 2. However, *family conflict* ( $\beta = -.11, p = .09$ ) was not a significant moderator. The correlation between family conflict and family satisfaction ( $r = -.34$ ) was weak, hence co-linearity was not of concern. Simple slopes analysis of the relationship between parental conflict and avoiding maladaptive cognitions coping self-efficacy were tested by centering the moderating variable, *family satisfaction*, one standard deviation above and below its mean. At one standard deviation below the mean, *family satisfaction* ( $\beta = -.16, p = .03$ ) moderation remained significant, retaining its negative direction. Similarly, at one standard deviation above the mean, the moderation ( $\beta = -.40, p < .005$ ) remained significant, demonstrating its robustness.

Table 2.  
*Unstandardized Betas for Family Satisfaction Moderation*

	Unstandardized Betas	P value
Parental Conflict	-0.71	<.005
Family Satisfaction	0.04	0.491
Family Satisfaction X Parental Conflict	-0.18	0.006

Next, *family satisfaction X parental conflict* was removed from the original model to assess the moderating effects of *collective family self-efficacy* and *family conflict*. This model also attained good model fit,  $X^2 (412, N = 593) = 1006.38, p < .0005$ , CFI = .94, TLI = .93,

RMSEA = .05 (90% C.I. .046 - .053), BCC = 1252.08. *Collective family self-efficacy* ( $\beta = -.12$ ,  $p = .03$ ), was a significant moderator (see Table 3) yet *family conflict X parental conflict* ( $\beta = -.09$ ,  $p = .14$ ) was not. The correlation between family conflict and collective family self-efficacy ( $r = -.29$ ) was weak and therefore co-linearity was not concerning. A follow up analysis was conducted to test whether the direction and significance of the moderator remained one standard deviation above and below its mean. At one standard deviation below the mean, the *collective family self-efficacy X parental conflict* ( $\beta = -.11$ ,  $p = .10$ ) moderator remained negative but not significant, however, at one standard deviation above the mean, the *collective family self-efficacy X parental conflict* ( $\beta = -.22$ ,  $p = .01$ ) moderator remained significant and negative.

Table 3.

*Unstandardized Betas for Collective Family Self-Efficacy Moderation*

	Unstandardized Betas	P value
Parental Conflict	-.65	<.005
Collective Family Self-Efficacy	-.02	.760
Collective Family Self-Efficacy X Parental Conflict	-.12	.027

In the last model assessed, *family conflict* was omitted from the first hypothesized model. This model assessed the moderating effects of *collective family self-efficacy X parental conflict* and *family satisfaction X parental conflict*. Although the model achieved good fit,  $X^2 (399, N = 593) = 867.60$ ,  $p < .0005$ , CFI = .96, TLI = .95, RMSEA = .05 (90% C.I. .040 - .049), BCC = 1140.83, neither of the moderators, *collective family self-efficacy* ( $\beta = -.02$ ,  $p = .80$ ), *family satisfaction X parental conflict* ( $\beta = -.09$ ,  $p = .29$ ) were significant.

In conclusion, two moderating effects were found. The first of these effects revealed that when controlling for family conflict, higher family satisfaction strengthened the negative relationship between parental conflict and coping self-efficacy for avoiding maladaptive cognitions (see Figure 2). The other effect showed that when controlling for family conflict,

higher collective family self-efficacy strengthened the negative relationship between parental conflict and coping self-efficacy for avoiding maladaptive cognitions (see Figure 3). When family satisfaction and collective family self-efficacy served as indicator variables to the latent variable *family functioning* it became a significant moderator, suggesting that they are related constructs. However, since both family satisfaction and collective family self-efficacy are conceptually different but related concepts, they were found to be stronger moderators on their own, while controlling for family conflict.

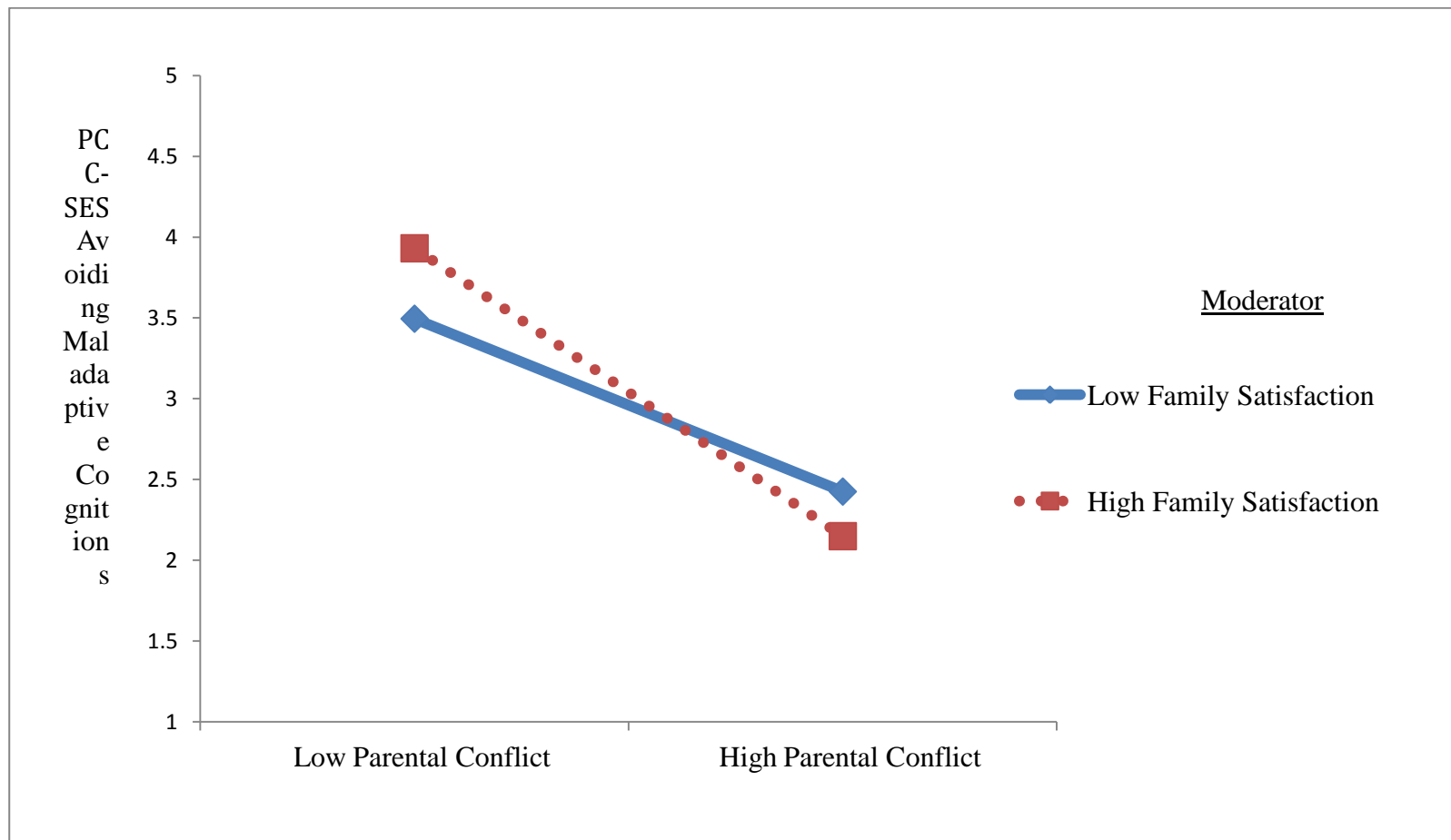


Figure 2. Moderation by family satisfaction

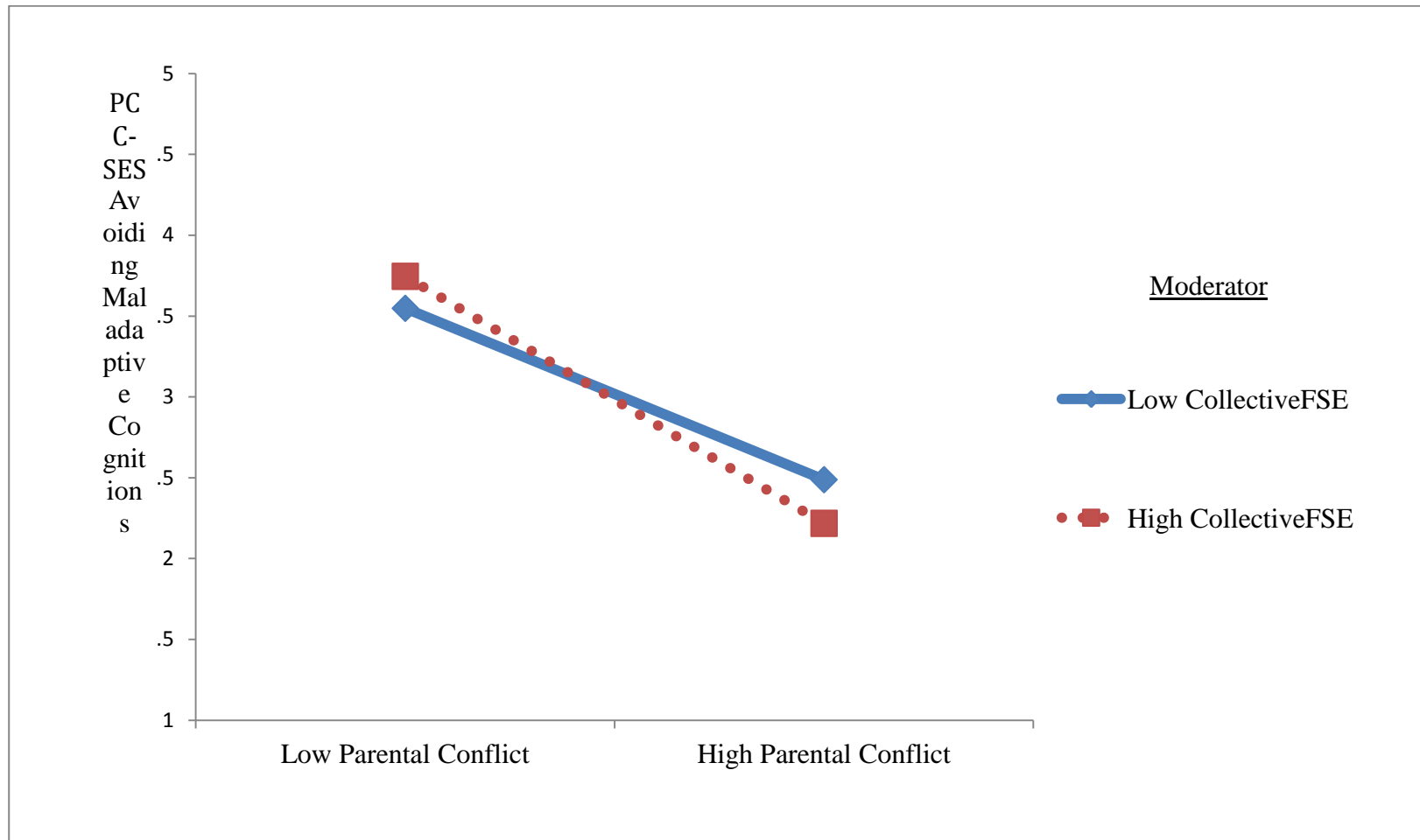


Figure 3. Moderation by collective family self-efficacy (CollectiveFSE)

## Discussion

The current study proposed that family functioning moderated the longitudinal mediation. Specifically, coping self-efficacy for avoiding maladaptive cognitions mediated the relationship between parental conflict and children's internalization symptoms. Further, family functioning moderated the relationship between parental conflict and children's coping self-efficacy beliefs. As predicted, the hypothesized moderated mediation model was significant longitudinally, with a large child sample, using stringent methods of analysis (Cole & Maxwell, 2003). This suggests that family functioning can have a strengthening effect on children's coping self-efficacy beliefs when children face parental conflict.

Consistent with Brummert Lennings and Bussey (2014b) a longitudinal mediation involving children's coping self-efficacy for avoiding maladaptive cognitions was found in the relationship between parental conflict and children's psychological maladjustment. The higher the levels of parental conflict, the lower the levels of children avoiding maladaptive cognitions self-efficacy beliefs. Children with lower levels of avoiding maladaptive cognitions self-efficacy reported higher levels of psychological maladjustment, namely internalization symptoms.

Family functioning was found to be a significant moderator, providing a buffering effect for the relationship between parental conflict and coping self-efficacy beliefs. Such findings are supported in the literature and the theoretical framework of SCT. Family functioning provides the environmental context for parental conflict. As such, in families with high levels of family functioning children are more likely to have higher levels of coping self-efficacy beliefs. On the other hand, if children live in a family which displays low levels of functioning they can feel threatened by the parental conflict, responsible for it, or unsafe (Shelton & Harold, 2008). These findings are also consistent with the Cognitive-Context Model (CCM; Grych & Fincham, 1993) and Emotional Security Theory (EST; Cummings & Davies, 1996; Waters & Cummings, 2000) because not only are the coping self-efficacy

strategies adopted important in predicting children's outcomes, there is also a role for environmental situational factors. According to CMM, family functioning factors can influence children's interpretation of the parental conflict. Further, EST posits that family functioning can influence children's emotional vulnerabilities and hence their psychological outcomes. In light of these theories, higher levels of family functioning may attenuate the negative effects of parental conflict because they are factors which influence the context of parental conflict and subsequent effects of children.

As hypothesized, family functioning was a mechanism composed of related constructs *family satisfaction* and *collective family self-efficacy*. The results of the current study provide support for the separation of these constructs given that they had stronger moderating effects on their own. Family satisfaction was the strongest moderator in the moderated mediation model. This finding is supported by the study of Caprara et al. (2005), which suggested that family satisfaction, as measured by the same assessment tool used in this study, was a global and important variable of family functioning. In particular, family satisfaction strengthened the negative relationship between parental conflict and children's coping self-efficacy to avoid maladaptive cognitions. That is, when higher levels of family satisfaction existed, children reported being more able to cope through adaptive cognitions. In a model which controlled for the levels of family conflict, taking into account the spillover effect of parental conflict to parent-child conflict (Bradford et al., 2004), the family satisfaction moderator remained significant even when it was assessed below and above its mean score. This emphasized the robustness of the family satisfaction moderator. Indeed good family functioning can increase children's confidence in their parents' ability to solve conflict and maintain family harmony because there is likely to be open communication between the family members and therefore higher levels of family satisfaction (Bandura et al., 2011; Davies et al., 2002; Perosa & Perosa, 2001; Schrodtt, 2005).



As predicted, collective family self-efficacy was also a significant moderator of the parental conflict mediational model. Similar to family satisfaction when controlling for family conflict, collective family self-efficacy strengthened the negative relationship between parental conflict and children's coping self-efficacy beliefs for avoiding maladaptive cognitions. Higher levels of collective family self-efficacy created an environment in which children believed that they were able to use adaptive cognitions when faced with parental conflict. The direction of this finding was maintained when collective family self-efficacy was assessed below and above its mean score. It should be noted that this moderator was not statistically significant when assessed at one standard deviation below its mean. One possible explanation is that the stringent design of the longitudinal moderated mediation for controlling all autoregressive effects may have reduced the strength of the collective family self-efficacy moderator. A similar reduction of strength has been noted in the literature during longitudinal models of mediation (see Spinard et al., 2006). Nevertheless, overall collective family self-efficacy was a significant moderator in the current study. Such finding is in accordance with past literature, which has found that children with high levels of collective family self-efficacy have better relationships with their parents and therefore better psychological outcomes (Caprara et al., 2004; Pepe, Sobral, Gómez-Fraguela, & Villar-Torres, 2008).

The current study encompasses various strengths. First, it included the simultaneous longitudinal examination of moderated mediation. This assessment was conducted through structural equation modeling, utilizing latent variables, and controlling for autoregressive effects. A large sample of children from families with variable levels of parental conflict participated in the study over two waves of data collection.

Limitations of the current study are also noted. Although the current study proposes an elaborate model for understanding the effects of parental conflict on children's psychological adjustment, the results are based on a non-clinical sample. That is, the children who

participated in the study did not come from populations with severe levels of parental conflict. Although the results have implications for a community sample in reducing the negative effects of parental conflict on children, a future study involving children living with high levels of parental conflict is necessary to verify the relationships posited in the current study. It is predicted that such a sample would increase the variability of the parental conflict variable. Nevertheless, the results of the current study are especially pertinent given that parental conflict may be a risk factor for children's psychological maladjustment in all families (Amato & Booth, 2001; Cowan, Cowan, & Schulz, 1996).

The results of the current study highlight the complexity of the effects of parental conflict on children and the need for specific intervention programs. A holistic intervention is proposed. Not only should interventions focus on increasing children's levels of coping self-efficacy beliefs (Brummert Lennings & Bussey, 2014b), they should also aim to improve family functioning. Interestingly, focusing on family satisfaction, through the adaptability and cohesiveness of a family, and collective family self-efficacy beliefs, can increase family functioning. Interventions can also consider the level of parent-child conflict as family conflict may have a bilateral relationship with the parental conflict itself and may therefore be an additional way to minimize the negative effects of parental conflict on child psychological adjustment (Bradford et al., 2004). These aims may be achieved through increasing the communication skills between family members as this can lead to a higher collective sense of unity, an ability to function as a whole, manage their own affairs and therefore greater family satisfaction (Perosa & Perosa, 2001). The current study contributes to fulfilling the gap in the literature for parental conflict preventative interventions (Cummings, Faircloth, Mitchell, Cummings, & Schermerhorn, 2008).

In conclusion, the current study extends the literature on the effects of parental conflict on children's psychological maladjustment. The study assessed moderation within the relationship between parental conflict and children's coping self-efficacy for avoiding

maladaptive cognitions. As hypothesized, these findings suggest that family functioning is an important factor in the moderation of the parental conflict and coping self-efficacy beliefs for avoiding maladaptive cognitions. Within family functioning, family satisfaction and collective family self-efficacy were stronger moderators on their own. Family conflict is also important to consider when evaluating the buffering effects of the moderators as the levels of parental conflict can spillover to the parent-child relationship (Bradford et al., 2004). These findings provide an empirical basis for the inclusion of family functioning factors in interventions aimed at increasing children's coping self-efficacy beliefs.

## **Chapter 5**

### **General Discussion**

### **Introduction to General Discussion**

The findings from this thesis emphasize the important role of children's coping self-efficacy beliefs about parental conflict for children's psychological adjustment. In a series of studies, the psychometric properties and validation of the Parental Conflict Coping Self-Efficacy Scale (PCC-SES) were established. Children's higher levels of coping self-efficacy beliefs about parental conflict were associated with lower levels of psychological maladjustment. The findings also demonstrated that children's coping self-efficacy beliefs mediated the relationship between parental conflict and children's psychological maladjustment. In particular, it was shown through cross-sectional and longitudinal methods that high levels of parental conflict were associated with lower levels of coping self-efficacy beliefs, which in turn were associated with higher levels of psychological maladjustment in children. The influence of family functioning was further shown to coping self-efficacy beliefs about parental conflict. Overall, these results showed that children who reported lower levels of coping self-efficacy beliefs experienced more psychological maladjustment than children with higher levels of these beliefs.

### **The Significance of Children's Coping Self-Efficacy Beliefs**

The empirical evidence presented in this thesis suggests that children's *coping self-efficacy beliefs* partially explain the variable effects experienced by children who live within the context of parental conflict. The findings of the presented research suggest that higher levels of coping self-efficacy are associated with lower levels of psychological maladjustment in children. Since self-efficacy is amenable to interventions, this innovative research provides an avenue for reducing children's psychological maladjustment.

Past literature has not yet established a child friendly, comprehensive, multi-dimensional and psychometrically valid coping self-efficacy instrument for parental conflict. Study 1, presented in Chapter 2 was dedicated to fill this gap. The PCC-SES was based on the coping strategies relevant to parental conflict as well as Bandura (1986)'s Social Cognitive

Theory (SCT). This research provided support for each of the three global strategies of the PCC-SES. The support for the three global strategies, *self-efficacy for proactive behavior*, *for avoiding maladaptive cognitions*, and *for avoiding maladaptive behaviors*, is consistent with past research on maladaptive and proactive behavioral coping strategies and maladaptive cognitive coping strategies (see Grych, Seid, & Fincham, 1992; Shelton & Harold, 2008). As predicted, proactive behavior self-efficacy incorporated the specific coping self-efficacy strategies for *problem solving* and *seeking social support*. Coping self-efficacy for avoiding maladaptive cognitions integrated the specific coping self-efficacy strategies of *avoiding preoccupation*, *avoiding self-blame* and *distancing*. Lastly, coping self-efficacy for avoiding maladaptive behavior entailed the specific coping self-efficacy strategies of *avoiding aggression* and *avoiding overinvolvement*. In addition to devising the PCC-SESS, Chapter 2 further extended the existing empirical evidence for the thematic joining of the specific coping self-efficacy strategies within the global coping self-efficacy structure (Frydenberg, 2004; Roth & Cohen, 1986; Skinner & Zimmer-Gembeck, 2009). This is significant as there is no current gold standard for the categorization of coping self-efficacy strategies (Maybery, Steer, Reupert, & Goodyear, 2009; Skinner, Edge, Altman & Sherwood, 2003).

Through the validation of the PCC-SES, Chapter 2 provided support for the relationship between coping self-efficacy beliefs about parental conflict and children's psychological outcomes (Cummings & Davies, 2002; Grych & Fincham, 1990). Overall, there was good construct validity for the three global strategies of the PCC-SES using a multi-informant methodology. For example, there was a negative relationship between self-efficacy for proactive behavior and anxiety symptomatology and difficulties experienced by the child. Children who reported higher levels of self-efficacy for proactive behavior also reported higher levels of prosocialness. Coping self-efficacy for avoiding maladaptive cognitions and behaviors were also validated in the same manner evidencing a negative relationship with anxiety symptomatology and total number of difficulties experienced by the child. In

addition, higher levels of coping self-efficacy for avoiding maladaptive cognitions and behaviors were associated with higher levels of prosocialness.

The direction of the mediations presented in Chapter 3 were consistent with existing theories and past research suggesting that coping self-efficacy plays a key role in the relationships between stressful situations and psychological adjustment (Bandura, 1997; Benight & Bandura, 2004). The results further indicated that the three global strategies of the PCC-SES partially mediate the relationship between parental conflict and children's psychological maladjustment. The overall trends for these mediations were that higher levels of parental conflict were related to lower levels of children's coping self-efficacy beliefs and these were associated with greater psychological maladjustment. Specifically at T1 and at T2 self-efficacy for proactive behavior mediated the relationship between parental conflict, and internalizing and externalizing symptoms. Self-efficacy for avoiding maladaptive cognitions mediated parental conflict and symptoms of anxiety and internalizing symptoms at T1, and prosocialness and internalizing symptoms at T2. Lastly, self-efficacy for avoiding maladaptive behaviors mediated the relationship between parental conflict and externalizing symptoms and prosocialness.

In addition, coping self-efficacy for avoiding maladaptive cognitions mediated the relationship between parental conflict and children's internalizing, as measured by the SDQ, longitudinally. It should be noted that although the three mediators were significant cross-sectionally, as described above, only coping self-efficacy for avoiding maladaptive cognitions remained significant longitudinally. One possible explanation for this finding is that coping self-efficacy for avoiding maladaptive cognitions was the strongest mediator, and therefore remained significant when controlling for its T1 measurement. Similar longitudinal limitations in the restriction of significant mediators have been noted in other studies (Cummings, Schermerhorn, Davies, Goeke-Morey, & Cummings, 2006; Spinard et al., 2006). Thus, future interventions should aim to increase children's coping self-efficacy beliefs about

parental conflict with a particular focus on building children's confidence in their ability to avoid maladaptive cognitions.

In order to better understand the factors that contribute to children's coping self-efficacy beliefs and to inform future interventions, the moderating role of family functioning factors in the aforementioned longitudinal mediation were examined in Chapter 4. Since parental conflict occurs within a family context, it was expected that children who live in an environment of good family functioning would have higher levels of coping self-efficacy beliefs. In these situations it was expected that the effect of parental conflict on psychological maladjustment would be less aversive. Consistent with this expectation, family functioning had an attenuating effect on the negative consequences of parental conflict for children. Specifically, children reported being more able to use adaptive cognitions in the presence of higher levels of family satisfaction and collective family self-efficacy. The role of family functioning on children's coping self-efficacy beliefs was as expected. It is possible that families who are able to face difficulties harmoniously can provide vicarious experiences to their children, thereby increasing children's self-confidence and promoting their adaptive coping strategies (Davies, Sturge-Apple, Bascoe, & Cummings 2013). The results highlight the importance of incorporating family functioning facets into potential interventions aimed at increasing children's coping self-efficacy beliefs about parental conflict.

### **Theoretical Implications**

First, the importance and relevance of SCT is supported by the current findings as children's coping self-efficacy beliefs enable children to gain some control over the effect that parental conflict has on their psychological outcomes (Bandura, 1997). Past studies have noted that positive self-efficacy beliefs are beneficial to individuals in overcoming difficult solutions, such as in victimization, panic attacks and trauma (Benight & Bandura, 2004; Gallagher et al., 2013; Singh & Bussey, 2009). The current thesis contributes to the SCT framework by enabling the accurate assessment of children's coping self-efficacy beliefs



within the context of parental conflict. Prior to this research there was no multi-dimensional psychometrically sound measure of children's agency specific to parental conflict. As such the role of coping self-efficacy beliefs, a personal factor of SCT, could not be empirically assessed. Given that the PCC-SES had good psychometric properties and that it was related to both parental conflict and psychological maladjustment, it enabled the empirical assessment of the self-efficacy mechanism of SCT.

The importance of domain specific scales has been previously emphasized in other contexts because it is a common limitation in the self-efficacy literature (Bandura, 2012). Since the scales need to be context specific, it is common for studies to have purpose built self-efficacy scales without the opportunity to assess their validity. For example, Gallagher et al. (2013) devised a domain specific scale for panic disorder in order to assess the role of self-efficacy for overcoming panic symptoms in individuals with Panic Disorder but were unable to validate the purpose-built scale. It is important to validate self-efficacy scales due to inconsistency regarding its conceptualization in various studies (see Bandura, 2007; Cahill, Gallo, Lisman, & Weinstein, 2006). Therefore the research reported in Chapter 2 not only assessed the reliability and validity of PCC-SES, providing support for SCT, but also extended knowledge in the parental conflict literature regarding the link between children's coping self-efficacy beliefs and psychological outcomes as reported by children and their parents.

Further support for SCT is provided by the research presented in this thesis with the finding that children's coping self-efficacy beliefs were identified as mediators to the relationship between parental conflict and child psychological maladjustment. This showed that children's coping self-efficacy beliefs, a personal factor of SCT, has a role in influencing children's outcomes of parental conflict. Therefore, SCT provides a valuable framework for understanding parental conflict and its influence on children.

This thesis also explored the role of environmental factors, from the SCT perspective, on the relationship between parental conflict and child psychological maladjustment. In particular, support was found for considering family functioning factors in the understanding of the relationship between parental conflict and children's coping self-efficacy beliefs. The study presented in Chapter 4 found that family satisfaction and collective family self-efficacy strengthened the relationship between parental conflict and coping self-efficacy beliefs. That is, when higher levels of these factors existed, children reported being more able to use adaptive cognitions. This research was the first to conjoin these related yet disparate concepts to investigate family functioning variables that may increase children's coping self-efficacy beliefs about parental conflict. Thus, evidence was produced for the interplay of SCT's reciprocal model of causation (Bandura, 1997).

Although the findings from the studies presented in this thesis support SCT, they are also consistent with the Cognitive Contextual Model (CCM; Fosco & Grych, 2008; Grych, Harold, & Miles, 2003) and Emotional Security Theory (EST; Cummings & Davies, 1996; Waters & Cummings, 2000). In particular the findings from Chapter 4 presented that family satisfaction and collective family self-efficacy were both moderators of the relationship between parental conflict and children's coping self-efficacy beliefs. SCT, CCM and EST propose that the child's environment creates the context in which parental conflict is interpreted, for example whether the child believes that their emotional security is threatened. Thus, when there is parental conflict in a family with overall family satisfaction and high levels of collective family self-efficacy, children may report higher levels of coping self-efficacy beliefs. Higher levels of coping self-efficacy beliefs are linked with lower levels of psychological maladjustment. Correspondingly, this complex interplay supports the existing theoretical bases of SCT, CCM and EST.

### **Implications for Intervention**

The current research provides a significant contribution to parental conflict interventions. There was congruent evidence throughout Chapters 2 and 4 regarding the critical role of children's coping self-efficacy beliefs about parental conflict. The mediating role of children's coping self-efficacy beliefs in the relationship between parental conflict and child psychological maladjustment emphasizes the necessity of evaluating children's beliefs regarding their ability to cope with parental conflict. This mediating role can aid in understanding the variable effects of parental conflict on children. Moreover, if a child lives in a home with parental conflict, their levels of coping self-efficacy beliefs can subsequently guide and assess the effectiveness of *interventions* aimed at particular coping strategies (Chesney, Neilands, Cambers, Taylor, & Folkman, 2006).

There is a need for preventative interventions targeted to children who live with parental conflict (Cummings, Faircloth, Mitchell, Cummings, & Schermerhorn, 2008). The relevance of SCT in explaining the mechanisms by which coping self-efficacy works presents an exciting avenue for self-efficacy parental conflict interventions. These interventions would aim to decrease children's self-blame, involvement in the conflict and encourage them to avoid becoming aggressive. Interventions aimed at increasing children's coping self-efficacy beliefs about their prosocial behavior, avoiding maladaptive behavior or avoiding maladaptive cognitions could be accomplished by following Bandura's (1997) guidelines. This may be achieved through creating mastery experiences about dealing with parental conflict, providing vicarious experiences, verbal persuasion and providing feedback about physiological states. To further illustrate, these implications are discussed subsequently.

#### **Mastery Experiences**

Children's coping self-efficacy beliefs can be increased through mastery experiences. These experiences work through changing children's beliefs about their competence (Pajares, 1996). Children experience enactive mastery when they are able to succeed in a situation

(Margolis & McCabe, 2006). The facilitation of mastery experiences for children provides evidence that they can overcome the stressful situation (Bandura, 1997). This is powerful learning and although families with greater levels of cohesiveness have been noted to be more facilitating in creating mastery opportunities, thereby helping their children's social and cognitive development, children can also engage in mastery experiences outside of the family unit (Olson, Larsen, & McCubbin, 1982). Children who live within the context of parental conflict can be taught through role-plays to engage in adaptive coping strategies in response to parental conflict. In accordance with the findings of this research, they can practice avoiding self-blame or dwelling on the conflict. Children can obtain substantial gains from watching or hearing themselves succeed in these stressful situations. That is, through enactive experience children are more likely to believe they are capable of performing the behavior, thereby boosting their self-efficacy beliefs.

### **Providing Vicarious Experiences**

Children's levels of coping self-efficacy beliefs may be increased through vicarious experiences. Vicarious experiences are defined as modeling provided by others that can influence a person's perceptions of his or her own competence (Pajares, 1996). Positive vicarious experiences can be persuasive and can increase the belief in an individual's abilities to use a particular coping strategy (Bandura, 1994). If children identify with a social model, be it a peer, or fictional character, they are more likely to emulate that model, and this can facilitate vicarious learning. The more similar the model is to the child, the more that self-efficacy beliefs can be boosted. This modeling can increase children's self-efficacy beliefs about their ability to perform in similar situations and can help to build children's cognitive skills (Bandura, 1997). As such, children may benefit from vicarious experiences in which adaptive coping strategies are used.

## **Verbal Persuasion**

Through verbal persuasion children can be encouraged to use adaptive coping strategies. It has been asserted that evaluative feedback that emphasizes children's capabilities may increase their coping self-efficacy beliefs (Bandura, 1997). However, the evaluative feedback should be specific to the children's current abilities rather than being composed of artificial praise (Pajares, 1996). In addition, constructive feedback can be used to rehearse adaptive coping until it is mastered and to track accomplishments over time (Bandura, 2000). This can be done through verbal feedback when children role-play their reactions to parental conflict situations. Such may increase children's motivation to use adaptive coping strategies when the feedback is given by someone who is authoritative.

## **Physiological States**

Children's coping self-efficacy beliefs can be enhanced through awareness of their physiological states. Teaching children to correctly attribute bodily states to the stress associated with parental conflict can help them to feel more in control in difficult situations (Pajares, 1996). This may be achieved by children monitoring their physiological states, such as their pulse before, during and after the parental conflict and learning to attribute these correctly to the parental conflict. Children may also be taught to use relaxation techniques to reduce their physiological arousal when exposed to parental conflict.

The aforementioned factors can be utilized together to boost coping self-efficacy beliefs (Bandura, 1997). Given that coping self-efficacy for proactive behavior, for avoiding maladaptive cognitions and avoiding maladaptive behavior were mediators of parental conflict and child psychological maladjustment, increasing these may make a difference in improving children's psychological outcomes. In addition, if the levels of family satisfaction and collective family sense of self-efficacy can be boosted within a family then this may enhance the effectiveness of future interventions.

The cognitive nature of coping self-efficacy for avoiding maladaptive cognitions makes it particularly suitable to a clinical setting. There is a link between self-efficacy beliefs and Cognitive Behavior Therapy (CBT; Bandura, 1997). Gallagher et al., (2013) suggested that self-efficacy could be incorporated in CBT as it can include *mastery experiences* and *verbal persuasion*. These two methods of increasing self-efficacy are present in the later stages of CBT, through *guided mastery* and the *acknowledgement of successes*. Prescribed mastery experiences in CBT allow individuals a sense that they are able to effectively cope with potentially difficult situations (Bandura, 1997). Discussions with the therapist and encouragement of the individual's ability to deal with negative symptoms function as the *verbal persuasion* mechanism of increasing self-efficacy. Indeed, other clinical studies have found that CBT increases individuals' self-efficacy to deal with pain in Fibromyalgia Syndrome (Bernardy, Füber, Köllner, & Häuser, 2010) and that children's self-efficacy to overcome Obsessive Compulsive Disorder symptoms can improve their clinical outcomes (Merlo et al., 2010). Verbal persuasion, monitoring of physiological states, and mastery and vicarious experiences, are provided through CBT's enabling approach (Bandura, 1997). As such, CBT may be an avenue for increasing children's coping self-efficacy beliefs.

### **Strengths of the Present Research**

The current thesis has various strengths worthy of mention. The series of studies presented in this thesis are novel in their assessment of coping self-efficacy beliefs about parental conflict. The opportunity was taken to create and assess the construct validity of PCC-SES, by following Bandura's (2006) guidelines for developing self-efficacy scales. This was fundamental as it allowed a strong foundation for accurately assessing the role of children's coping self-efficacy beliefs within the parental conflict context.

The mediating role of children's coping self-efficacy beliefs remained significant using stringent statistical analyses. Not only were cross-sectional partial mediations significant, but their strength was further manifested longitudinally. In addition, the constructs

examined in the thesis were assessed as latent variables. This allowed for the variables to encapsulate a variety of measures and to more precisely assess the concept of coping self-efficacy.

A further strength of the current thesis was that it drew upon, and subsequently supported SCT to find influential factors involved in the link between parental conflict and child psychological maladjustment. Once children's coping self-efficacy beliefs about parental conflict were established as an important factor, further environmental factors were identified to assess whether these impacted upon children's coping self-efficacy beliefs. It was through these further analyses, presented in Chapter 4, that the strengthening role of family satisfaction and collective family self-efficacy were found in increasing children's coping self-efficacy beliefs. As such, the current research presented a multi-dimensional approach that considered the factors important for boosting children's coping self-efficacy beliefs. Lastly, the use of multi-informants is evident in the large number of children and their parents who participated in the research.

### **Limitations of the Present Research**

The current research presented important findings, yet it was not without limitations. First, extreme clinical levels of parental conflict were not the norm in the participating community sample. It is therefore unknown whether children's coping self-efficacy beliefs would still be the mediating process for clinical risk levels of parental conflict and child psychological maladjustment.

Similar to Spinard et al. (2006)'s study, there was relative high stability in parental conflict over the two waves of data. This may have reduced the variability of the parental conflict and therefore reduced the strength of the mediation in the current study. Coping self-efficacy for avoiding maladaptive cognitions was the most cognitively based global strategy. Given its internal cognitive nature this particular coping self-efficacy strategy may have developed over the 8 months between data collection points as children developed in their

cognitive competences (Causey & Dubow, 1992). This may have caused greater variability in this cognitive strategy in compared with other less cognitively based coping self-efficacy strategies. It is possible that this may partly explain why only one mediation existed longitudinally. Indeed, in the absence of stressors or other methods that can induce and alter levels of parental conflict, there can be high stability in the variable of interest even in longitudinal designs (Cummings et al., 2006).

### **Future Directions**

In this thesis the effect of parental conflict on children's psychological maladjustment was examined longitudinally. Future studies should focus on replicating the results through a longitudinal design in which children are assessed with a larger time interval between data collection points. It is expected that if children were assessed in Grades 5, 7, 9 and 11, then there would be more variability in the reported levels of parental conflict. If this was the case, it is possible that more mediational relationships could be established longitudinally. It would be interesting to investigate the mediational relationships in such a study.

Future studies could also investigate coping self-efficacy beliefs in children living in families with extremely high levels of parental conflict. It has been found that some children's symptoms alleviate when parents separate and children are no longer living in parental conflict situations (Booth & Amato, 2001; Morrison & Coiro, 1999). However, if parents share custody of the children and still engage in conflict post separation, children may continue to suffer from negative psychological outcomes (McIntosh & Chisholm, 2008). Thus although shared care may be a better outcome post parental separation, it can create and maintain parental conflict and this can be detrimental to children. The role of children's agency should be assessed in parents who have separated, yet still engage in parental conflict.

### **Summary and Conclusions**

Parental conflict can have a detrimental effect on children's psychological maladjustment yet not all children develop uniform effects. This thesis examined the effect of



parental conflict on children's psychological maladjustment. The findings showed that children's coping self-efficacy beliefs, especially, for avoiding maladaptive cognitions, had an important role for children's psychological outcomes when they were exposed to parental conflict. The research reveals that effective intervention programs can focus on increasing children's coping self-efficacy beliefs about parental conflict. Self-efficacy is a personal factor, which works in concert with the other factors of SCT, namely the environmental and behavioral factors (Bandura, 1997). Thus the most effective interventions would also aim to increase children's family satisfaction and collective family self-efficacy beliefs as these play a role in increasing children's adaptive coping self-efficacy beliefs. It would be expected that interventions targeting the three factors of SCT would improve children's outcomes when living with parental conflict.

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## **Appendices**

**Appendix A**  
**Items Used in Chapters 2-4 and Changes**  
**from Original Scales**

*If your parents had an argument, how well can you...*

[illegible]



	Not well at all 1	2	Not too well 3	4	Pretty well 5	6	Very well 7
34. In a clear and strong voice tell them that you don't like what they are doing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Pre-existing Measures Used in this Research with Changes from Original Scales Indicated in Italics**

**The Conflict Properties Subscale of the Children's Perception of Interparental Conflict questionnaire (CPIC; Grych, Seid, & Fincham, 1992)**

In every family there are times when the parents don't get along. When their parents argue or disagree, kids can feel a lot of different ways. We would like to know what kind of feelings you've had when your parents have had arguments or disagreements over the **past year**. If your parents didn't live together in the same house as you, think about the times they were together when they didn't agree or about times when both of your parents lived in the same house.

	Sort of		
	True 1	True 2	False 3
1. I never see my parents arguing or disagreeing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. When my parents have an argument they usually work it out	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. My parents get really mad when they argue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. They may not think I know it, but my parents argue or disagree a lot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Even after my parents stop arguing they stay mad at each other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. When my parents have a disagreement they discuss it quietly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. My parents are often mean to each other even when I'm around	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I often see my parents arguing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. When my parents disagree about something, they usually come up with a solution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. When my parents have an argument they say mean things to each other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. My parents hardly ever argue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. When my parents argue they usually make up right away	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. When my parents have an argument they yell a lot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. My parents often nag and complain about each other around the house	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. My parents hardly ever yell when they have a disagreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. My parents have had an argument about something during an argument	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	True 1	Sort of True 2	False 3
17. After my parents stop arguing, they are friendly toward each other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. My parents have pushed or shoved each other during an argument	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. My parents still act mean after they have had an argument	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**The Strengths and Difficulties Questionnaire – Child Version  
(SDQ; Goodman 1997; Goodman, Meltzer, & Bailey, 1998)**

Please answer all the items as best you can even if you are not absolutely certain. Please give your answers based on how things have been for you over the **last six months.**

	Certainly True 1	Somewhat True 2	Not True 3
1. I try to be nice to other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I am restless, I cannot stay still for long	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I get a lot of headaches, stomach-aches or sickness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I usually share with others, for example CDs, games, food	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I get very angry and often lose my temper	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I would rather be alone than with people of my age	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I usually do as I am told	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I worry a lot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I am helpful if someone is hurt, upset or feeling ill	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I am constantly fidgeting or squirming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I have one good friend or more	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I fight a lot. I can make other people do what I want	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. I am often unhappy, depressed or tearful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Other people my age generally like me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. I am easily distracted, I find it difficult to concentrate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. I am nervous in new situations. I easily lose confidence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	<b>Certainly True 1</b>	<b>Somewhat True 2</b>	<b>Not True 3</b>
17. I am kind to younger children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. I am often accused of lying or cheating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Other children or young people pick on me or bully me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. I often volunteer to help others (parents, teachers, children)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. I think before I do things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. I take things that are not mine from home, school or elsewhere	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. I get along better with adults than with people my own age	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. I have many fears, I am easily scared	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. I finish the work I'm doing. My attention is good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**The Strengths and Difficulties Questionnaire – Parent Version**  
**(SDQ; Goodman 1997; Goodman, Meltzer, & Bailey, 1998)**

For each item, please mark the box for **Not True**, **Somewhat True** or **Certainly True**. It would help us if you answered all items as best you could even if you are not absolutely certain. Please give your answers on the basis **of your child's behaviour** over the last **six months**.

	<b>Not True 0</b>	<b>Somewhat True 1</b>	<b>Certainly True 2</b>
1. Considerate of other people's feelings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Restless, overactive, cannot stay still for long	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Often complains of headaches, stomach-aches or sickness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Shares readily with other youth. E.g. CDs, games, food	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Often loses temper	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Would rather be alone than with other young people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Generally well behaved, usually does what adults request	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Has many worries or often seems worried	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Helpful if someone is hurt, upset or feeling ill	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Constantly fidgeting or squirming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Has at least one good friend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Often fights with other young people or bullies them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Often unhappy, depressed or tearful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Generally liked by other young people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Easily distracted, concentration wanders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Nervous in new situations, easily loses confidence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Kind to younger children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Often lies or cheats	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Picked on or bullied by other young people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Often volunteers to help others (parents, teachers, children)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



- |   |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|
| 21. Thinks things out before acting                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 22. Steals from home, school or elsewhere                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 23. Gets along better with adults than with other young people      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 24. Many fears, easily scared                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 25. Good attention span, sees chores or homework through to the end | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**Revised Children's Manifest Anxiety Scale – Short Form: Child Version  
(RCMAS; Reynolds & Richmond, 2005)**

The sentences below tell how some people think and feel about themselves. Read each sentence carefully, then select the word that shows your answer.

- |  | <b>Yes</b>            | <b>No</b>             |
|--|-----------------------|-----------------------|
|  | <b>1</b>              | <b>2</b>              |
| 1. Often I feel sick in my stomach                       | <input type="radio"/> | <input type="radio"/> |
| 2. I am nervous  | <input type="radio"/> | <input type="radio"/> |
| 3. I often worry about something bad happening to me     | <input type="radio"/> | <input type="radio"/> |
| 4. I fear other kids will laugh at me in class           | <input type="radio"/> | <input type="radio"/> |
| 5. I have too many headaches                             | <input type="radio"/> | <input type="radio"/> |
| 6. I worry that others do not like me                    | <input type="radio"/> | <input type="radio"/> |
| 7. I wake up scared sometimes                            | <input type="radio"/> | <input type="radio"/> |
| 8. I get nervous around people                           | <input type="radio"/> | <input type="radio"/> |
| 9. I feel someone will tell me I do things the wrong way | <input type="radio"/> | <input type="radio"/> |
| 10. I fear other people will laugh at me                 | <input type="radio"/> | <input type="radio"/> |

**Revised Children's Manifest Anxiety Scale – Short Form: Parent Version  
(RCMAS; Reynolds & Richmond, 2005)**

The sentences below tell how some people think and feel about themselves.

Read each sentence carefully and give your answers based **on your child's behavior.**

	<b>Yes 1</b>	<b>No 2</b>
1. My child often feels sick in his/her stomach	<input type="radio"/>	<input type="radio"/>
2. My child is nervous	<input type="radio"/>	<input type="radio"/>
3. My child often worries about something bad happening to him/her	<input type="radio"/>	<input type="radio"/>
4. My child fears that other kids will laugh at him/her in class	<input type="radio"/>	<input type="radio"/>
5. My child has too many headaches	<input type="radio"/>	<input type="radio"/>
6. My child worries that others do not like him/her	<input type="radio"/>	<input type="radio"/>
7. My child wakes up scared sometimes	<input type="radio"/>	<input type="radio"/>
8. My child gets nervous around people	<input type="radio"/>	<input type="radio"/>
9. My child feels someone will tell him/her that they do things the wrong way	<input type="radio"/>	<input type="radio"/>
10. My child fears other people will laugh at him/her	<input type="radio"/>	<input type="radio"/>

### Collective Family Efficacy Scale (Caprara et al., 2004)

Please select how well your family can deal with each situation in the following list. For example, if the question was '**how well can your family work together to choose where to go to dinner on Sunday night**' and your family **cannot ever** decide where to go for dinner on Sunday night then you would select **1** for '**not well at all**'.

#### How well can your family work together to...

	Not well at all 1	2	Not too well 3	4	Pretty well 5	6	Very well 7
1. <i>Do things they may not want to do</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. <i>Solve family problems</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. <i>Share house work</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. <i>Have respect for each other's interests</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. <i>Improve trust in each other</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. <i>Make important family decisions</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. <i>Celebrate family events even in difficult times</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. <i>Be a positive example for the community</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. <i>Remain confident during difficult times</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. <i>Accept each other's need for independence</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*NB.* The selected 10 items were simplified for children.

### Family Satisfaction Scale (Olson & Wilson, 1982)

How satisfied are you...

	Very Dissatisfied 1	Somewhat Dissatisfied 2	Generally Satisfied 3	Very Satisfied 4	Extremely Satisfied 5
1. With how close you feel to the rest of your family?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. With your ability to say what you want in your family?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. With your family's ability to try new things?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. With how often parents make decisions in your family?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. With how much your mother and father argue with each other?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. With how fair the criticism ( <i>i.e. negative comments</i> ) is in your family?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. With the amount of time you spend with your family?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. With the way you talk together to solve family problems?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. With your freedom to be alone when you want to?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. With how strictly you stay with who does what chores in your family?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. With your family's acceptance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## **Appendix B**

### **Instructions for the Questionnaire**

### Template Used to Create Unique Identification for Matching Data Longitudinally

#### UNIQUE IDENTIFICATION

You will be asked to complete a survey at two time points during 2012. The researchers need to link your surveys together to analyse the results. The following code will allow us to link all the surveys that you complete, without knowing who you are.

**A.** Put the **first** letter of your **first** name in the box provided:

eg: Jake 

J
---

**Your response =**

--

**B.** Put the **day of your birth** in the box provided:

eg: 09/10/1994 

0	9
---	---

**Your response =**

--	--

**C.** Put the **last** two letters of **your first** name in the box provided:

eg: Jake 

K	E
---	---

**Your Response =**

--	--

**D.** Put the **last** two letters of **your last** name in the box provided:

eg: Gibson

O	N
---	---

Your response =

--	--

 UNIQUE CODE =  
 Eg.J09KEON

--	--	--	--	--	--	--

**PLEASE WRITE DOWN THIS CODE ON THE ENVELOPE PROVIDED**

### Questionnaire Instructions

**MACQUARIE  
UNIVERSITY**



Heidi Brummert  
 PhD Candidate  
*Department of Psychology*  
**MACQUARIE UNIVERSITY**  
 NSW 2109  
 AUSTRALIA  
 98507793

The aim of this questionnaire is to find out about children's communication styles, coping and feelings. This is not a test, and there are no right or wrong answers. Try to answer all questions honestly.

Your answers will not be seen by anyone except the researchers from Macquarie University. Your teachers, parents, or other students WILL NOT SEE what you have written.

To answer each question write your answer in the space provided or completely colour in one of the circles. For example if the question was, "How well can you draw?", and you can draw pretty well, you would fill in the circle under "pretty well" like this:

Not well at all



Not too well



Pretty well



Very well



Please fill in ONE circle only for each question unless otherwise indicated. Use BLUE OR BLACK PEN only.

If you make a mistake DO NOT USE LIQUID PAPER. Instead, place a cross through the incorrect answer like this:



Not well at all

Not too well

Pretty well

Very well



If you do not understand a question ask a researcher to explain it to you.

### Conclusion of the Questionnaire

#### Read this part carefully

Some of this questionnaire may have caused you to think about things in a new way, or may have reminded you of things that have happened in the past which may have upset you. If this has happened we would encourage you to talk to an adult about this. You may want to talk to your parents or another family member or teacher. If you would like to talk to the school counsellor or the researcher who gave you this questionnaire you can make an appointment yourself by speaking to them, or write your name in the box below and we will arrange the appointment for you. You can also contact the Children's Helpline on 1800 55 1800 or the Salvo Youth Line on (02) 8736 3293.

***ONLY COMPLETE THIS IF YOU WANT TO SEE THE SCHOOL COUNSELLOR:***

I would like speak to the school counsellor

Name \_\_\_\_\_

Class \_\_\_\_\_

\*\*\*\*\*

**THANK YOU FOR PARTICIPATING IN THIS QUESTIONNAIRE**

**PLEASE GO THROUGH EACH PAGE AND CHECK THAT YOU'VE ANSWERED ALL OF THE QUESTIONS BEFORE HANDING IT BACK TO THE RESEARCHER**

**Appendix C**

**Final Macquarie University Human Ethics**

**Committee Approval Letter**

**for Chapters 2, 3, and 4**



## Final Approval- Ethics application reference-5201100102

Ethics Secretariat <ethics.secretariat@mq.edu.au>

Wed, Jun 8, 2011 at 1:32 PM

To: Associate Professor Kay Bussey <Kay.bussey@mq.edu.au>

Cc: Mrs Heidi Isabel Brummert Lennings <heidi.brummertorrego@students.mq.edu.au>

Dear Associate Professor Bussey

Re: "The role of Communication Efficacy, Disclosure and Secrecy on Coping Self Efficacy and Children's Psychological Adjustment" (Ethics Ref: 5201100102)

Thank you for your recent correspondence. Your response has addressed the issues raised by the Human Research Ethics Committee and you may now commence your research.

The following personnel are authorised to conduct this research:

Associate Professor Kay Bussey- Chief Investigator/Supervisor  
Mrs Heidi Brummert Lennings- Co-Investigator

NB. STUDENTS: IT IS YOUR RESPONSIBILITY TO KEEP A COPY OF THIS APPROVAL EMAIL TO SUBMIT WITH YOUR THESIS.

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).
2. Approval will be for a period of five (5) years subject to the provision of annual reports. Your first progress report is due on 08 June 2012.

If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

[http://www.research.mq.edu.au/for/researchers/how\\_to\\_obtain\\_ethics\\_approval/human\\_research\\_ethics/forms](http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms)

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

[http://www.research.mq.edu.au/for/researchers/how\\_to\\_obtain\\_ethics\\_approval/](http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/)

[human\\_research\\_ethics/forms](#)

5. Please notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

<http://www.mq.edu.au/policy/>

[http://www.research.mq.edu.au/for/researchers/how\\_to\\_obtain\\_ethics\\_approval/human\\_research\\_ethics/policy](http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/policy)

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have final approval for your project and funds will not be released until the Research Grants Management Assistant has received a copy of this email.

If you need to provide a hard copy letter of Final Approval to an external organisation as evidence that you have Final Approval, please do not hesitate to contact the Ethics Secretariat at the address below.

Please retain a copy of this email as this is your official notification of final ethics approval.

Yours sincerely  
Dr Karolyn White  
Director of Research Ethics  
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