

RUNNING HEAD: EMOTION KNOWLEDGE IN CHILDREN WITH CONDUCT
PROBLEMS

Comparing styles of parent-child conversation: The influence on children's conduct
problems and emotion knowledge

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Abstract

This preliminary study conducted across Canberra and Wellington was the first to compare the effectiveness of two styles of maternal-remiscing as an adjunct to Parent Management Training (PMT) for mothers of children ranging from four to eight-years-old ($M = 63.1$, $SD = 14.4$ months) with conduct problems. This was a manualised six session intervention. Parents in both conditions received PMT. Parents were asked to reminisce with their child about shared events using their allocated style of maternal reminiscing. The W-D-E condition drew on research by Van Bergen, Salmon, Dadds, and Allen (2009) which encouraged mothers to use 'wh' questions and detailed descriptive information about the event. The R-U-S style extended on the research by Ensor and Hughes (2008) in which mothers were encouraged to be responsive and allow their child to lead the conversation. Both conditions placed a direct focus on discussing emotion, including labels, behaviours, causes and consequences of emotion. As expected, both conditions showed a significant decrease in conduct problem severity and a significant increase in aspects of children's emotion knowledge between pre- and immediately post-intervention. However, there were no significant differences between conditions with respect to children's conduct problems severity and emotion knowledge. Given that the literature supports a link between deficits in emotion knowledge and children's conduct problems, and that parental discussion of emotion supports children's developing socioemotional development, the current preliminary study extends on the work by Salmon, Dadds, Allen, and Hawes (2009) in which efforts are being made to integrate emotion components with PMT.

Mother-Child Emotion talk: Enhancing Emotion Knowledge in Children with Conduct Problems

Overview.

Emotion-related problems are central to both the description and diagnostic criteria for many forms of psychopathology (American Psychiatric Association, 2013). For childhood psychopathology, emotional processes are considered to play an important role in externalising disorders. These disorders include disorganised, explosive, and defiant patterns of affect and behaviour which interfere with learning, social maturation and the rights of others (American Psychiatric Association, 2013). Denham (1998) characterises emotion knowledge as one's awareness and understanding of their own and others' emotional states, expressions, causes and consequences. These factors influence emotion regulation and behavioural outcomes, as the process of interpreting emotions and then regulating one's response contributes to the possibility that a child may respond in a disruptive manner when faced with stress (Laible & Panfile, 2009). Thus, on the face of it, facets of emotion would appear to be centrally involved in externalising disorders (Mullin & Hinshaw, 2007). A recent meta-analytic review provided support for emotion knowledge as a correlate of externalising problems with results showing a consistent significant correlation between emotion knowledge and problematic social and behavioural outcomes (Trentacosta & Fine, 2010).

Evidence has shown that mother-child conversations during the preschool years are strongly associated with children's developing emotion knowledge (Brown & Dunn, 1996; Dunn & Brown, 1993; Dunn, Brown, & Beardsall, 1991; Martin & Green, 2005). Furthermore, recent studies have shown that maternal-remiscing can enhance children's emotion understanding (Salmon et al., 2013); mothers can be successfully engaged in training

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to implement an elaborate, emotion-rich style of reminiscing (Van Bergen et al., 2009); and that this style can be implemented as an addendum to standard Parent Management Training (PMT) aimed to address conduct problems in children (Salmon et al., 2009).

Two styles of mother-child conversation have been associated with children's developing socioemotional understanding. One is the W-D-E style used in the study by Van Bergen et al. (2009) which involved asking children 'wh' questions (W), adding detailed descriptions (D) around the event being discussed, and then discussing the emotions (E) associated with the event. The second style is the construct of 'connectedness' identified by Ensor and Hughes (2008). Connectedness was a measure of how semantically related (connected) the mothers utterances are to their child's prior utterance. Unlike W-D-E, connectedness has not been incorporated into interventions previously. For the purpose of the current study, the construct of connectedness was adapted into the R-U-S style so that it could be delivered using emotion talk training. In the current study, mothers were encouraged to be responsive to their child (R) and to use undemanding communication (U) by letting their child lead the conversation during reminiscing. An emotion component was added to this style as discussing emotions has been shown to improve children's emotion knowledge (Van Bergen et al., 2009), thus mothers were encouraged to discuss the emotions associated with the event as well as mothers sharing the emotions they themselves experienced (S).

Comparing the benefits of different reminiscing styles in conjunction with PMT has yet to be investigated. Given that PMT has been empirically shown to reduce children's conduct problems (Dadds & Hawes, 2006), and that both the elaborative, emotion-rich style, and connectedness style of reminiscing are associated with socioemotional understanding, this study compared the W-D-E and adapted R-U-S styles with regards to improving children's conduct problems and emotion knowledge above and beyond standard PMT. In the

following sections I will discuss the links between conduct problems, emotion competencies, and mother-child conversations as well as the aims of the current study.

Conduct problems

Defining conduct problems and their development. Childhood conduct and oppositional behaviour problems both share patterns of aggression and defiance (American Psychiatric Association, 2013) and show strong links not only to adolescent and adult antisocial behaviour and substance misuse, but also to mood, anxiety, and eating disorders (Kim-Cohen et al., 2003). Oppositional defiant disorder includes disobedient, hostile and defiant behaviours towards authority figures, beyond what is normally expected of children (American Psychiatric Association, 2013). Manifesting these behaviours is a risk factor for developing serious behavioural problems which are characteristic of conduct disorder (Mandy, Skuse, Steer, St Pourcain, & Oliver, 2013). Conduct disorder consists of more severe antisocial behaviours including physical aggression, destruction of property, deceit and theft (American Psychiatric Association, 2013). Within New Zealand, studies have reported the prevalence of clinically significant conduct problems to be as high as 5-10% of children and adolescents between the ages of 3 and 17 (Church, 2003).

Conduct problems develop over time. One theory that proposes to explain this development is the Coercive Theory by Granic and Patterson (2006). The coercive theory is a model of behavioural contingencies characterised by negative and aggressive interactions between children and their parents. The child escalates in their protest until the other gives in which is negatively reinforcing for both parties; for the parent as they are removed from the situation which provides relief and for the child as they are no longer required to fulfil the duty that was requested of them. When victims (including children and parents) of aggressive behaviour give up or leave the disputed scenario, the aggressive child 'wins' which is

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positively reinforcing, meaning the child is therefore more likely to use the same aversive strategies in the future (Granic & Patterson, 2006). As a result of utilising these aversive strategies, many of these children have impaired social skills which create difficulties with peer relationships, and early physical aggression has been shown to be a key predictor for the development of antisocial personality disorder in adulthood (First & Tasman, 2004).

A longitudinal study conducted by Mandy et al. (2013) gathered parent-report data for 6,218 children at seven and then ten years of age. Their aim was to assess whether children's ability to accurately perceive the perspectives and emotions of others (termed socioemotional competence) influenced the developmental trajectory between oppositional defiant disorder to conduct disorder traits in childhood. Mandy et al. (2013) found that children's parent-rated socioemotional competence moderated the relationship between oppositionality at seven years and conduct disorder at 10 years of age. Furthermore, as children's socioemotional impairment increased, so too did the relationship between oppositional defiant disorder and conduct disorder. This link between childhood and adult psychopathology provides a strong rationale to focus on the early stages of childhood development when behavioural patterns are more easily modified (Maughan & Kim-Cohen, 2005; Tremblay, 2006).

Standard approach for treating behavioural problems. Behavioural family interventions such as PMT are recognised as one of the most widely used and empirically supported therapeutic interventions for children with externalising disorders (Dadds & Hawes, 2006). Dadds and Hawes (2006) proposed a treatment model which combined social learning theory and attachment theory. Social learning theory focuses on the specific contingencies that characterise parent-child interactions for the individual's family and is the hallmark of all empirically supported interventions for children with conduct problems (Dadds & Hawes, 2006). Attachment theory follows the notion that children will naturally

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choose attachment rich over attachment neutral interactions, meaning those that elicit stronger emotions regardless of whether these interactions are positive or negative in nature (Dadds & Hawes, 2006). In the families of children with conduct problems, positive interactions can become scarce due to the amount of time spent dealing with misbehaviour, hence a cycle is created where the child continues the negative behaviour that is eliciting the attachment rich interaction. To give an example, a child may have learnt that misbehaviour such as physical aggression is their best strategy to gain sustained attention from their parents. Dadds & Hawes (2006) programme aims to identify and alter the maladaptive parent-child interactions by promoting attachment rich interactions in response to appropriate behaviour using a variety of rewards, whilst learning to manage misbehaviour and minimising engagement in response to it.

A recent meta-analytic review of parent training programmes found that the programme components consistently associated with larger effect sizes include increasing positive parent-child interactions and emotional communication skills, teaching parents to use time out, and highlighting the importance of parenting consistency (Kaminski, Valle, Filene, & Boyle, 2008). Many interventions omit emotion knowledge as a component despite its association with conduct problems. Behaviourally focused interventions that do not address parent-child interactions in regards to emotion may fail to impact on children's emotional competence which influence their behavioural problems (Havighurst, Wilson, Harley, Prior, & Kehoe, 2010)

Influence of emotion on conduct problems. During the preschool years children learn and develop skills that assist them in moderating, managing, and expressing their own emotions, whilst developing knowledge of how to respond to situations where emotions are involved (Saarni, 1997). Older children and adolescents participate in increasingly complex

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social situations, which require them to not only be attuned to the emotions of others, but to also be aware of and regulating their own emotions (Zajdel, Bloom, Fireman, & Larsen, 2013).

There are a number of studies indicating that children with conduct problems have deficits in emotional knowledge and emotion regulation (Eisenberg, Fabes, Guthrie, & Reiser, 2000; Suveg, Southam-Gerow, Goodman, & Kendall, 2007; Trentacosta & Fine, 2010). For example, a longitudinal study involving 127 participants found that deficits in emotion knowledge assessed at ages 3 and 4 predicted subsequent anger and aggression across the following three years (Denham et al., 2002). Ensor, Spencer, and Hughes (2011) observed 102 children at the ages of two, three, and four and found a robust association between emotion understanding at the age of three and prosocial behaviours at the age of four. Another longitudinal study involving 143 participants found that deficits in emotion knowledge and emotion regulation assessed at age 3 and 4 predicted subsequent social competencies across the following three years (Denham et al., 2003). There is also evidence that many children with aggressive, antisocial, or delinquent behaviours have difficulty regulating their display of negative emotions (Frick & Morris, 2004).

Research has consistently related high levels of negative emotional reactivity to conduct problems (Frick & Morris, 2004; Mullin & Hinshaw, 2007; Trentacosta & Fine, 2010), with reactivity in the context of emotion referring to individual differences in how intensely a child reacts to eliciting stimuli (Mullin & Hinshaw, 2007). Thus, a child with high negative reactivity would be associated with a temperamental proneness to irritability, anger, or fear in response to environmental triggers. Children's difficulty understanding emotion labels, causes, and consequences, coupled with high levels of negative emotional reactivity can lead to dysregulated anger and frustration with acts of aggression in social situations

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(Trentacosta & Fine, 2010). From a developmental perspective, children who frequently misread emotion cues may develop cognitive errors in their understanding of others' intent which may cohere over time forming generalised interpretations (Trentacosta & Fine, 2010). This may influence children to attend selectively to signs of hostility creating a sociocognitive bias, which in turn limits their ability to correctly evaluate potential responses to social information (Mullin & Hinshaw, 2007). Consistent with this view, children's antisocial behaviour has been associated with poorer recognition of neutral faces which were most often misinterpreted as angry in a facial recognition experiment (Dadds et al., 2006), suggesting that there are deficits in emotion knowledge for those that exhibit antisocial behaviour. An aim of the current study is to improve children's emotion knowledge through parent-child conversation, and assess the influence this has for children's understanding of emotions.

To summarise this section, there are several key findings relating to conduct problems; 1) childhood conduct problems show strong links to adolescent and adult antisocial offending and psychopathology which provides a reason to intervene early, 2) research has shown that children with conduct problems have deficits in emotion knowledge and emotion regulation and 3) PMT is one of the most widely used interventions for children with conduct problems, but these interventions often lack a component that focuses on emotion competencies.

Emotion competencies.

Function of emotion knowledge. Emotion is viewed as central to coping with stress as it acts like a radar and rapid response system to permit quick appraisals of situations, evaluate responses, and to construct and carry meaning across experiences (Cole, Martin, & Dennis, 2004). To have effective emotion knowledge, one must be able to accurately

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understand the expression, language, behavioural cues, social contexts, feelings, and functions of emotions (Izard, 2010). Scientists agree that there are both rapid and automatic connections among emotion and cognition which have implications for aspects of emotion such as emotion activation, emotion regulation, and emotion utilisation (Izard, 2010).

Emotion activation refers to an emotion that is activated in response to a trigger, for example, anger may be more readily activated in response to provocation in children with conduct problems. Emotion regulation is the neural, cognitive, and behavioural processes that sustain, amplify, or attenuate emotional responses to stimuli as well as the associated feelings, cognitions, and behaviours (Izard et al., 2011). An example of effective emotion regulation is one's ability to suppress an aggressive response to a verbal confrontation from an individual they dislike and walk away from the situation. Emotion utilisation consists of the processes involved in making use of emotion arousal, for example, adaptive emotion utilisation in response to anger may be to divert attention away from the provoking stimuli. Thompson (1989) theorised that improved emotion knowledge allows children to interpret their own emotional experience in more complex ways, whilst improving their accuracy when interpreting others' emotional displays; thus emotion knowledge may affect how children react to others.

Individuals with complex emotion knowledge will interpret and adapt to a variety of emotional displays and feelings (Wranik, Barrett, & Salovey, 2007). Comparatively, if the child lacks an elaborate emotion knowledge system, they may be resorting to simple rules (Wranik et al., 2007) such as, "if I feel sad, I will withdraw", or, "if I feel angry I'll hit someone". Effective emotion regulation occurs when children utilise their emotion knowledge to self-regulate both the experience and expression of their feelings when faced with a situation in order to attain their desired goal (Izard et al., 2011). An inability to identify

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emotion expressions, to associate thoughts and behaviours with emotion feelings, and to delay or inhibit automatic emotional reactions impedes the development of adaptive emotion regulation (Izard et al., 2011). This influence of emotion knowledge on emotion regulation is pertinent for children with conduct problems as emotional reactivity is part of the emotion regulation process (Calkins & Hill, 2007). Emotion regulation should provide a buffer for reactivity, allowing the child more flexibility and adaptability in their reactions to stressful events (Skinner & Zimmer-Gembeck, 2007). Emotion knowledge could provide momentum for emotion regulation which enables one to redirect highly emotional and impulsive reactions such as physical aggression, and select some alternative course of desired action (Izard et al., 2011).

Development of emotion knowledge. From a developmental perspective, children's use of language from 24 to 36 months of age increases in the frequency with which they refer to internal states of both themselves and others, as well as their explanations for the causes and consequences of inner states (Brown & Dunn, 1991). A study by Dunn and Brown (1993) followed 50 children at home between the ages of 33 and 40 months, finding a marked increase in discourse about the causality of inner states, as well as a correlation between understandings of causality of inner states at 33 months and success on an assessment of emotion knowledge at 40 months. As part of a longitudinal study, 47 children were assessed on their understanding of basic emotions at age three, and again assessed at age six on their understanding of conflicting emotions (Brown & Dunn, 1996). Significant stability in individual differences was found over the three year period, indicating that emotion knowledge at three was significantly related to children's emotion knowledge at six. These studies indicate that both children's use and understanding of emotion shows progressive development from an early age. Studies such as these highlighted the importance of

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supporting children's emerging language and understanding of emotions and gave rise to interventions that train mother's to reminisce with their children with the purpose of promoting these competencies.

Function of emotion regulation. Effective emotion regulation requires a number of skills related to emotion knowledge such as the ability to adequately process emotionally laden information; to monitor, reflect upon, and understand emotional states; to access past experiences that relate to the current situation; and to successfully generate and implement emotion regulation strategies (Laible & Panfile, 2009). With time, children with adequate emotion knowledge should not only be able to associate angry feelings with another child's furrowed brow and clenched knuckles, but also to understand that the child may have aggressive intentions (Izard et al., 2011). For example, children who are able to regulate their emotional reactivity in social or non-social contexts may deal better with stressful events, such as focussing their attention away from a distressing stimulus and focusing on positive aspects of the situation or environment in order to decrease their levels of negative emotionality (Eisenberg & Sulik, 2012). For children with conduct problems, this could reduce their hostility bias by enabling them to focus on alternative aspects of the situation that are non-threatening. In general, emotionally well-regulated people are thought of as capable of altering how long, how intensely, or how quickly they feel as they do (Thompson & Meyer, 2007).

Other benefits of emotion knowledge. Emotion knowledge affects many aspects of functioning including memory (Wang, Hutt, Kulkofsky, McDermott, & Wei, 2006) which in itself serves an important function for children with conduct problems. A study by Wang et al. (2006) assessed the influence of emotion knowledge on autobiographical memory. They found that emotion knowledge had the strongest influence on children's memory reports,

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independent of the influences of gender, age, and language skills. A longitudinal study by Rudek and Haden (2005) assessed mental state language between mother-child dyads at 30 months of age and found that both mental state language and accuracy of recall increased over a year when assessed using a strategic memory task. McGuigan and Salmon (2004) engaged 63 three-year-olds and 65 five-year-olds in a staged “visit to the zoo” event where children were asked to recall aspects of the event after the adult had either talked about the event before, during, or after it had occurred. Results found that elaborative talk after the event (reminiscing) was most effective at increasing the volume of children’s accurate verbal memory. A longitudinal study conducted by Reese and Newcombe (2007) provided mothers with training to elaborately reminisce with their 30 month old children who subsequently provided richer and more accurate memories, supporting the notion that mothers who reminisce using an elaborative style promote their child’s memory and narrative skills. This may have been achieved by encouraging their child’s active participation which in turn makes the child utilise and improve these skills (Bird & Reese, 2006; Nelson & Fivush, 2004; Reese & Newcombe, 2007). The improvements in memory due to reminiscing may further benefit children as they are able store the messages being conveyed by parents and may then be able to access them when faced by a future stressor, particularly those of a similar nature, which in turn may reduce conduct problems by allowing the child to utilise more effective strategies they have previously learnt. Although memory is not being directly tested in the current study, these examples highlight the influence of emotion knowledge and the benefits of reminiscing.

Emotion interventions. Few behavioural interventions for children with conduct problems directly target emotion. Although temperament is a significant contributor to children’s emotionality and self-regulation, the way that parents model their own emotions

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and respond to their child's emotions plays an important role in the socialisation of children's emotion skills (Havighurst et al., 2013). 'Tuning into Kids' is a six session programme for children with behavioural problems which aimed to promote emotion competencies by targeting parent emotion socialisation. This includes emotion awareness, regulation and emotion coaching skills to respond effectively to their child's emotion (Havighurst et al., 2010). In the study by Havighurst et al. (2013), children in the intervention condition received emotion coaching through the 'Tuning into Kids' programme alongside standard behavioural treatment. Children in the control condition received standard behavioural treatment alone without any emotion component. Results indicated that children had significantly increased in their emotion knowledge and had reduced behavioural problems as compared to controls. Teacher reports also noted that children that received emotion coaching exhibited fewer behaviour problems compared to controls. This study supports the notion that behavioural interventions should include an emotion component.

To summarise this section, there are several key finding relating to emotion knowledge; 1) emotion knowledge enables one to identify, interpret and understand both one's own emotions as well as others' emotions, and this develops over the early years, 2) emotion knowledge affects emotion regulation which influences how the child will react to stressful situations and how intense this reaction will be, 3) emotion knowledge affects other aspects of functioning including memory, which may influence how children reflect on past instances of stress and how they may utilise this information when faced with future stressors, and 4) research has supported the notion that emotion coaching alongside behaviour intervention may further reduce children's conduct problems.

Measures of emotion in past research.

Denham (1986) proposed that there are four subtypes of emotion knowledge that develop across the early years of childhood. The four subtypes are receptive knowledge (ability to identify facial expressions when provided with an emotion label); expressive knowledge (ability to identify emotion labels for facial expressions); stereotypical knowledge (how someone would typically feel in a particular situation); and non-stereotypical knowledge (ability to identify an emotion that may be opposite to what the individual themselves would experience in a particular situation). These subtypes of emotion knowledge have been measured in the Denham Affect Knowledge Tests (AKT; Denham, Zoller, & Couchoud, 1994).

Maternal explanation of the causes of emotion during discourse have been found to be a stronger predictor of emotion knowledge than the frequency in which emotions are referred to (Salmon et al., 2013) and this has been supported experimentally (Brown & Dunn, 1996). Furthermore, Wareham and Salmon (2006) found that the use of causes and consequences of emotion during reminiscing is associated with more advanced emotion knowledge in children. The Emotion Cause Knowledge Task (ECKT) was first utilised by Denham and Zoller (1991) in which children viewed puppets with emotion expressions and were asked provide possible causes for each emotion. The ECKT has been utilised in more recent research (Van Bergen et al., 2009) with the addition of children providing possible causes for why they themselves may experience each emotion, as findings from Wang et al. (2006) indicate that self-focused prompts (e.g. “what makes you feel that was”) yield the same results from children as prompts focused on others. This extended version of the ECKT is a relatively new measure in experimental research. Whilst it lacks empirical evidence as to its validity and reliability, it has been shown to produce results consistent with other measures

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of emotion knowledge such as the Denham AKT and has been used with children between 2.5 and 6 years-of-age (Van Bergen et al., 2009; Wang, 2003).

Social situations often elicit complex and multivalenced ambivalent emotions, for example, a child may be happy about being invited to a party but sad that their friend is not invited (Zajdel et al., 2013). Developing an understanding of ambivalent emotions is important for children's socioemotional competence. Gordis, Rosen, & Grand (1989) measured children's understanding through the use of vignettes in which a protagonist experienced ambivalent emotions. This measure has been utilised in more recent studies, with researchers finding that earlier emotion knowledge as measured by the ECKT predicts later emotion knowledge assessed using Gordis et al.'s (1989) AET (Brown & Dunn, 1996; Denham & Kochanoff, 2002).

To summarise, there are several key reasons for why these measures were utilised in the current study to assess children's emotion knowledge; 1) the Denham AKT has been widely used to assess children's emotion knowledge, 2) although relatively new, the ECKT has been utilised in recent studies and has produced results consistent with other measures of emotion knowledge, 3) the AET has been associated with later emotion knowledge previously assessed by the ECKT, and 4) these measures were selected together to form a comprehensive measure of children's emotion knowledge in the current study.

Parent-child conversation

Function of reminiscing. The temporal component in reminiscing is pertinent to children with conduct problems who may experience high levels of negative reactivity in response to stressful situations (Skinner & Zimmer-Gembeck, 2007) making it more difficult to regulate their emotions in that moment of time (Suveg et al., 2007). By discussing the emotions that were elicited after the event has occurred, a child is more likely to have the

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cognitive resources to reflect upon the event and to concentrate and understand the messages being conveyed by the parent in the context of reminiscing, as they are no longer being taxed by the distressing event during its occurrence (Laible & Panfile, 2009; McGuigan & Salmon, 2004).

Language. Typically, young children's emotion knowledge is verbally assessed via tasks that elicit emotion language such as the Denham Affect Knowledge Tests (AKT; Denham et al., 1994). Language is essential for acquiring emotion knowledge, and children with conduct problems often have impoverished emotion language (O'Kearney & Dadds, 2005; Trentacosta & Fine, 2010). More specifically, children with externalising problems are limited in their use of words and verbal expressions for emotions, an emotion lexicon which is less semantically specific and of reduced range, and are limited in their ability to provide explanations for the causes of emotions (O'Kearney & Dadds, 2005). As children develop, their language serves as a means to organise and understand emotions at a cognitive level; to communicate their internal state to others; and to allow the child to become consciously aware of how he or she is feeling (Greenberg, 2007). According to Wranik et al., (2007), children's emotion knowledge develops each time an adult labels a child's behaviour with an emotion term or the child observes the emotion term being used to label another's behaviour. The child may then extract this information including the environment and the context in which the label was used, and then integrates this with past information associated with the emotion term which is stored in their memory to acquire further emotion knowledge (Wranik et al., 2007). As children are developing much of their time is spent with caregivers, and during this crucial time of development their emotion competencies are greatly influenced by everyday discussion about emotions (Dunn et al., 1991; Laible, 2004; Laible & Song, 2006).

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Young children advance considerably in their understanding of emotions as they participate in adult-scaffolded conversations, and many studies have shown that when mothers frequently talk about emotions in detail within everyday conversations, their children develop more sophisticated conceptions of emotion (Thompson, 2006; Thompson & Lagatutta, 2006). Children's use of emotion language shows progressive development from the age of two alongside their mother's (Brown & Dunn, 1991; Martin & Green, 2005). Frequent use of emotion language, as well as maternal explanations of emotion have both been found to be predictors of children's emerging emotion knowledge (Brown & Dunn, 1996; Martin & Green, 2005).

Maternal-remiscing and emotion knowledge. Less information has been gathered about fathers' emotion socialisation and how this may differ from mothers, as previous research has primarily focused on maternal-remiscing (Denham, Bassett, & Wyatt, 2007). Research has established that mother-child discourse that frequently includes emotion content is associated with better emotion understanding for children, but recent research has found that children benefit more when parents do this within the context of reminiscing (Fivush, Berlin, Sales, Mennuti-Washburn, & Cassidy, 2003; Reese & Newcombe, 2007). Fivush and Nelson (2006) argue that reminiscing is important for two reasons. Firstly, it challenges the child as it requires them to defocus from the present and to refer to a mental representation of the past which is seen as critical in constructing an understanding of mind. Secondly, reminiscing may highlight differences in how one party experienced emotions during the event compared to the other party, and help children understand how people differ in their thoughts, emotions, beliefs, and desires at that moment, and how these differences may be extended across time (Fivush & Nelson, 2006).

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In a longitudinal study that directly assessed the effect of mother-child discourse on children's emotion knowledge, 63 mother-child dyads at 30 months of age were asked to discuss two past events in which the emotional content of the conversations were coded, with results indicating that emotion-laden discourse by mothers was related to improved emotion knowledge 6 months later (Laible, 2004). Martin and Green (2005) examined mothers' emotion talk, children's emotions-talk, and children's understanding of emotion in 50 mother-child dyads at 41 months of age by measuring the total number of emotion words, unique emotion words, labels, explanations, and different types of explanations used. Overall, the mothers' use of emotion in mother-child conversation correlated with children's' emotion knowledge (Martin & Green, 2005). Taumoepeau and Ruffman (2006) assessed the relationship between mothers' mental state language and children's language and emotion knowledge in 15 to 24-month-olds. Results showed that mothers' mental state language was related to children's use of mental state language as well as their performance on emotion knowledge tasks. Laible and Song (2006) assessed the emotion content in conversations with 51 preschool children and their mothers, finding that both the style and content of the conversation was related to children's emotion knowledge and aggression. More specifically, the amount of emotion content used predicted emotion knowledge. Furthermore, an elaborative style of reminiscing (by adding detail rather than repeating information the child had given) predicted children's socioemotional development, and discussion of negative emotions during reminiscing was associated with fewer reports by mothers of aggressive behaviour (Laible & Song, 2006). These studies highlight the importance of supporting children's emotion talk during this crucial period of development.

A recent study by Salmon et al. (2013) looked at the components of adult-child talk that promote children's emotion knowledge for three to four-year-old children. Children that

received emotion causal training (for example, “how is Tommy feeling here?”) showed improvements in their use of emotion labels, but not other components of emotion knowledge, suggesting that it is important to include many key aspects of emotion knowledge during conversation (Salmon et al., 2013). This study highlighted the notion that both the content and style of mother-child conversation is important in supporting children’s development.

Maternal-remiscing about negative emotions. The way in which parents discuss emotions with their child has important implications for their development and subsequent understanding. Parent’s supportive reactions to children’s negative emotions and discussion around labelling, causation and consequences of negative emotions is linked to improved socioemotional competencies in children, including emotion understanding, emotion awareness and emotion regulation (Havighurst & Harley, 2007). In contrast, negative and unsupportive practices from parents such as minimising or punitive strategies in response to children’s expression of negative emotions can have a negative effect of children’s socioemotion functioning, and is linked to lower levels of emotion regulation ability and emotion knowledge.

A study by Lagattuta and Wellman (2002) recorded parent-child discussions and found that negative emotions, including the cause and consequence of these emotions, were predominantly discussed during reminiscing. This suggests that talk about the past may be particularly effective for constructing an understanding of negative emotional states, their relations to both past and present behaviour, and how the child’s emotion influences others (Fivush et al., 2003). Discussing the causes and consequences of negative emotions is important for acquiring emotion knowledge, therefore it is not surprising that individual differences in the amount of emotional mother-child discourse appears to have important

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implications for children's understanding of emotions as well as their behavioural outcomes (Laible & Panfile, 2009).

Bird and Reese (2006) describe two studies conducted in New Zealand where in Study 1, 50 mothers discussed everyday past events with their children at 51 and 65 months of age, and in Study 2, 51 parents discussed one positive and three negative past events with their five and six-year-old children. A greater maternal explanation of negative emotions was associated with a greater explanation and understanding of the causes and consequences of children's negative emotions (Bird & Reese, 2006). Parents who are dismissive or choose to comfort their child rather than discuss emotions surrounding a negative event miss important opportunities to help their child learn to cope with negative emotions (Laible & Panfile, 2009). This is pertinent to children who engage in a range of negative behaviours and for whom negative emotions are particularly salient. Parent-child reminiscing about negative experiences influences children's developing emotional self-concept, which includes how the child views their emotional self; how this is expressed to others, and how they cope with and resolve negative emotions (Fivush et al., 2003). Children with conduct problems may have developed a maladaptive emotional self-concept due to a coherence of negative emotional events and consequences (for example, "I'm a bad person and I can never do anything right"), and as a result may lack appropriate coping strategies (Skinner & Zimmer-Gembeck, 2007) and resort to simple rules in response to stress (Wranik et al., 2007). This highlights the many influences of parent-child conversation, as a positive self-concept is a protective factor against the development of conduct problems (Lösels & Bliesener, 1994).

To summarise this section, several key findings can be drawn from the research in relation to parent-child conversations; 1) discussing emotions in the context of reminiscing allows the child to be more receptive to the messages being conveyed, 2) parents play a major

role in children's emerging language and emotional development through everyday conversations, and 3) parents who discuss emotions in greater deal – particularly negative emotions – have children with more advanced understanding of emotions.

Elaborative maternal-remiscing.

Effects of using an elaborative reminiscing style. Recent research has found that it is not just the content that is important in maternal-remiscing, but also the style of reminiscing (Fivush, Haden, & Reese, 2006; Laible, 2004; Salmon et al., 2013; Van Bergen & Salmon, 2010; Van Bergen et al., 2009; Wareham & Salmon, 2006). Mothers can be differentiated by how elaborative they are when engaging in reminiscing with their child (Wareham & Salmon, 2006). Highly elaborative mothers discuss past events with their child in rich detail, asking many open-ended questions and engaging their child in the construction of the story (Fivush et al., 2006). In comparison, less elaborative mothers may ask few and more redundant questions, essentially probing for pieces of information and providing less detail. For example, asking a closed question such as “do you remember seeing the animals at the zoo?” can only elicit a yes or no response and requires little engagement or skill from the child, as compared to an open question such as “what do you remember at the zoo?” which requires the child to utilise language and memory skills. However, both open and closed-ended questions can be elaborative, as long as the mother includes additional information or focus such as confirmation and praise, as this may encourage the child's participation and conveys that their involvement is valued (Fivush et al., 2006).

Van Bergen and Salmon (2010) extended on the previous staged ‘visit to the zoo’ study (McGuigan & Salmon, 2004) to investigate the differential roles of emotion-language and elaborative reminiscing in children's memory for an event. Eighty-three younger (3 to 4-year-olds) and older (5 to 6-year-olds) children were engaged in one of four types of

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reminiscing by a research assistant two days after participating in the staged ‘visit to the zoo’ event: emotion-cause (the causes of the animals’ emotions were described), emotion-expression (the animals’ emotion expressions were described), no-emotion (only the animals’ physical characteristics were described), and minimal (control group). In all conditions, the researcher used an elaborative reminiscing style except for the minimal condition in which the children were asked only close-ended questions and provided with nonspecific event information with low detail, for example, “over there we saw the next animal”. Following a two week delay, children who reminisced about emotions (particularly emotion-causes) recalled more emotional and non-emotional information overall than did children in the no-emotion or minimal conditions. Children who were engaged in emotion-oriented reminiscing also reported a greater amount of non-emotional information both in free and total recall, despite the fact that reminiscing about the non-emotional aspects of the event was almost identical in all conditions except for the control. Finally, children’s pre-existing levels of emotion knowledge also influenced their recall of the event. These findings suggest that information is more effectively internalised by children when using an elaborative reminiscing style that includes emotion content, as this may make the information more salient for the child as compared to non-emotional content (Van Bergen & Salmon, 2010).

Teaching an elaborative maternal-reminiscing style. Adding to previous research suggesting that emotion knowledge is influenced by family discussion of emotions, there is now increasing evidence that mothers can be directly engaged in training to reminisce with their child using an elaborate, emotion-rich style (Salmon et al., 2009; Van Bergen et al., 2009). This is important as ultimately the child will spend more time with their parent than with a researcher, and longitudinal studies show that children come to internalise their parents’ reminiscing style and content (Salmon et al., 2009).

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Van Bergen et al. (2009) provided training to mothers using an elaborative, emotional reminiscing style to assess autobiographical memory and emotion knowledge for children 3.5 to 5 years-of-age. Forty-four mothers completed the study where they were either allocated to the reminiscing or control condition. In the reminiscing condition, mothers were encouraged to frequently reminisce with their children by asking open-ended 'wh' questions (for example, what, when, who, why), providing detailed descriptions, and discussing emotions. In the control condition, mothers were encouraged to frequently play with their children using child-directed play. At a six month follow-up, mothers in the reminiscing condition had increased both their high-elaborative utterances and emotion references, indicating that mothers had adopted a more emotion-rich, high-elaborative style of reminiscing as a result of training. Children in the reminiscing condition also made more high-elaborative utterances and emotion references during shared recall of an event, and demonstrated superior performance on a test of emotion cause knowledge. Furthermore, both mothers' and their children's references to emotion attributions, behaviours, and causes had increased during shared reminiscing (Van Bergen et al., 2009). The gains in emotion knowledge from this study provide promise for children with conduct problems. However, a clinical sample was not used in this study.

Salmon et al. (2009) assessed the effectiveness of providing training in elaborative, emotion-rich reminiscing as an adjunct to Dadds and Hawes (2006) PMT. Parents of children between 3 and 8 years-of-age with oppositional behaviour problems were assessed, as compared to a control group who received PMT as well as training in how to engage in child-directed play. The inclusion criteria for children were that they must have elevated oppositional behaviour problems with accordance to the Diagnostic Interview Schedule for Children, Adolescents and Parents (DISCAP) (Hollands & Dadds, 1997). This study provided

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an opportunity to observe the direct effects of using a high-elaborative, emotion-rich style of reminiscing for this population of children. Oppositional behaviour problems were reduced in both conditions at post-test, immediately after the intervention, but there was no significant main effect between conditions. A possible explanation for this is that both PMT and child-directed play have been shown to reduce oppositional behaviour problems (Kotler & McMahon, 2004), although time may also have contributed to this change. Relative to the control group, both mothers and their children in the reminiscing condition had increased in both their use of elaborations and emotion references during shared conversations at post-test immediately after the intervention (Salmon et al., 2009). Results from this study were positive in that they showed that mothers can be trained to reminisce with their children using a high-elaborative, emotion-rich style, concurrently to the PMT in order to produce benefits that are associated with better outcomes for children with conduct problems. However, comparing the benefits of different reminiscing styles in conjunction with PMT was yet to be investigated.

To summarise this section, there are several key findings that research has found in the context of an elaborative maternal-reminiscing; 1) an elaborative reminiscing style is characterised by asking many open-ended questions, providing rich details about the event being discussed, and encouraging the child's participation, 2) mother's that utilise an emotion-rich elaborative reminiscing style are associated with children who have an advanced understanding of emotion and more accurate recall about the event, and 3) mothers can be successfully provided with training in an emotion-rich elaborative reminiscing style as an addendum to PMT.

Parent-child mutuality.

Effects of parent-child mutuality. The importance of parent-child mutuality has long been seen as important for children's development. Vygotsky (1978) reported that there are good reasons to believe the importance of children's participation in parent-child conversations and the ability of the dyad to co-create meaning for their developing understanding of emotions and relationships. Parent-child mutuality represented by responsive, reciprocal and co-operative parent-child interactions, is thought to lead directly to children's prosocial behaviours (Ensor et al., 2011). Ornstein, Haden, and Hedrick (2004) suggested that children are more likely to subsequently recall an event if they are actively involved in maternal-remiscing. Engaging the child in conversation is crucial, as their active participation means that the child is utilising and practicing skills such as accessing memories, organising and interpreting, and then recalling the memory in discussion. Tenenbaum, Alfieri, Brooks, and Dunne (2008) assessed 93 children ranging from five to eight years in age on an emotion understanding test. Children who were asked to explain the emotions of characters in a story performed better on a post-test for emotional understanding compared to children that had the emotions explained to them by the experimenter. This supports the notion that children's active participation in conversation is important in shaping their subsequent understanding.

Gavazzi and Ornaghi (2011) found that following a two-month period of emotion talk training with preschoolers, emotion knowledge was only enhanced when, after listening to a story, the children participated in a conversation that encouraged their use of emotion language as compared to those that engaged in free play following the story. Furthermore, this engagement is important when reminiscing with children as the extent to which the parent's conversation is relevant to their child's dialogue is strongly associated with

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children's emotion knowledge (Ensor & Hughes, 2008). This emphasises the fact that it is not just the style (highly elaborative) or the frequency in which the content (emotion) is used during reminiscing that is important, but also how it is being discussed. For example, children whose mothers use causal talk predominantly during disputes did poorly on subsequent assessments of emotion knowledge as compared to mothers who use causal talk within the context of shared play (Dunn & Brown, 1993).

Connectedness. Ensor and Hughes (2008) suggest that both the content and style of parent-child conversation is important for children's subsequent socioemotional development. A stylistic feature Ensor and Hughes (2008) identified is a construct they labelled 'connectedness', which is measured by the frequency with which each speaker's utterance is semantically related to another speaker's prior utterance. Their study observed 120 families with two-year-olds, where the mother's connected turns and mental-state references within connected turns showed independent associations with children's social understanding at ages two, three, and four. Furthermore, children's emotion understanding appeared to be promoted by mental-state references that occurred within connected conversations. When mothers used mental-state references within a connected dialogue, the relevance to the child's current focus meant that the emotion may have been more meaningful and therefore better understood, highlighting the importance of engagement rather than exposure. Furthermore, connected conversations may make salient the similarities and differences between the mother and child's point of view through shared construction about the past (Ensor & Hughes, 2008).

Harrist and Waugh (2002) suggest that dyadic synchrony is important for children's development as it facilitates social skills which affects children's behavioural outcomes. To support the influence of connectedness, Brophy and Dunn (2002) found that mothers of 'hard

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to manage children' as determined by the Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997) engaged in fewer connected conversations as compared to mothers of typical children.

Ensor et al. (2011) observed 102 children at the ages of two, three, and four to investigate the interactions among verbal ability, emotion understanding and mother-child mutuality (dyadic reciprocity and cooperation) as predictors of prosocial behaviour. Emotion understanding mediated the associations between verbal ability and parent-child mutuality, and later prosocial behaviour. The findings suggest that children's abilities to identify and reflect on feelings are influenced by the association between parent-child connectedness and prosocial behaviours at preschool. These findings extended work by Ensor and Hughes (2008) by suggesting that connectedness may also encourage children's prosocial behaviour via the effects of emotion understanding.

A longitudinal study by Laible, Murphy, and Augustine (2013) examined the quality of maternal-remiscing and children's subsequent socioemotional development from 42 to 48 months of age. The conversations were coded for the children's contribution and engagement, maternal elaboration, and the degree to which meaning was co-constructed by the dyad. Firstly, children who were engaged in reminiscing showed increased levels of emotion understanding at 48 months of age. Furthermore, the most consistent predictor of children's concurrent and subsequent sociomoral development was the degree to which mothers and children were connected in co-constructing a meaningful understanding of the child's past experiences with negative emotion.

To summarise this section, there are several key findings that research has found in the context parent-child connectedness; 1) children are more likely to internalise the messages being conveyed if they are actively involved in the process of reminiscing, 2)

connectedness during reminiscing is associated with children's subsequent prosocial behaviours, and 3) when mothers refer to emotion during connected turns, this is associated with children's subsequent emotion knowledge and prosocial behaviours.

The current study.

The current study is part of a larger study investigating two styles of maternal-reminiscing with respect to children's emotion knowledge and conduct problems. In this study I have reported a subset of the data at pre- and immediately post-intervention. In the current study, mothers of children with a diagnosis of oppositional defiant disorder or conduct disorder (American Psychiatric Association, 2013) were provided with Dadds and Hawes (2006) parent management training and one of two adjunct reminiscing conditions. In the W-D-E condition, mothers were encouraged to reminisce with their child about a shared event using 'wh' questions (W); provide detailed descriptions about the event (D); and to label emotions, behaviours indicating the emotions, and the causes and consequence of the emotions being discussed (E; Van Bergen et al., 2009). The R-U-S condition was adapted from the work of Ensor and Hughes (2008) on the construct of connectedness, with an emotion component added similar to the W-D-E condition. Mothers were encouraged to reminisce with their child about a shared event whilst being responsive to their child (R); using undemanding communication by allowing their child to lead the conversation (U); and to label emotions, behaviours indicating the emotions, and the causes and consequence of the emotions being discussed whilst sharing any emotions that mothers experienced themselves around the event (S). This was the first study to directly compare two styles of maternal-reminiscing as an adjunct to PMT, with respect to children's subsequent emotion knowledge and conduct problems.

As both the W-D-E and R-U-S conditions included a direct focus on discussing emotion, the first hypothesis was that there would be an increase at immediate post-intervention in children's emotion knowledge for both conditions. As past research has suggested that children understanding of emotion is enhanced by parent-child connectedness (Ensor et al., 2011; Laible et al., 2013), the second hypothesis was that children in the R-U-S condition will show a greater increase in emotion knowledge at immediate post-intervention. As both conditions included PMT and a direct focus on emotion, the third hypothesis was that children in both conditions will show a similar decrease in conduct problems at immediate post-intervention.

Method

Design

The current study used a mixed design, looking at participants' scores pre- and immediately post-intervention, with intervention group (W-D-E or R-U-S) as a between subjects factor. This study collected data from both Canberra and Wellington, and was part of a larger longitudinal study which is currently being conducted by Associate Professor Karen Salmon and colleagues. This study received ethics approval from the School of Psychology Human Ethics Committee.

Participants

Written information about the study was dispersed using a variety of methods in order to recruit participants including newspaper, and direct contact with daycares, kindergartens and schools. Inclusion criteria were that children must meet criteria for oppositional defiant disorder or conduct disorder (American Psychiatric Association, 2013) using the Diagnostic

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Interview Schedule for Children, Adolescents and Parents (DISCAP; Holland & Dadds, 1997). Exclusion criteria included children with a developmental disability, and participants needed to speak English at home. Information about the purpose of the study was sent out to parents along with consent forms which were obtained for all parents and children that participated (see Appendix A).

One participant did not complete the Strengths and Difficulties Questionnaire (SDQ); one participant did not complete the Emotion Cause Knowledge Task (ECKT); and one participant did not complete the Ambivalent Emotion Task (AET). These three participants were excluded from the study. The final sample used in this portion of the larger study was thirty-one mother-child dyads (W-D-E = 15, R-U-S = 16). All children were aged between 48- and 96-months ($M = 63.1$, $SD = 14.4$). Participants' ethnicity was not gathered from both sites, and so was omitted from the analysis.

Materials used in the current studies analysis

Diagnostic Interview Schedule for Children, Adolescents and Parents. The DISCAP is a semi-structured interview that provides a Diagnostic and Statistical Manual for Mental Disorders (fourth edition) diagnosis and disorder severity rating (Holland & Dadds, 1997). This was used to establish a primary diagnosis of oppositional defiant disorder or conduct disorder as was required for children's inclusion in the study. Both the DISCAP diagnosis and severity measures have high between judge reliability (Johnson, Barrett, Dadds, Fox, & Shortt, 1999).

Strengths and Difficulties Questionnaire (SDQ). Mothers completed the SDQ which is a brief screening questionnaire that assesses emotional, behavioural and relationship aspects of the child (Goodman, 1997). It uses a three point scale and includes 25 questions which provide estimates of the severity of the child's behavioural problems in five areas:

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Emotional Symptoms, Conduct Problems, Hyperactivity/Inattention, Peer Relationship Problems, and Prosocial behaviour. Analysis for the current study only included the Conduct Problems scale which consists of five questions. Parents could rate a maximum severity of 10. Australian data and psychometric properties of the SDQ have been reported (Hawes & Dadds, 2004) with good psychometric properties for the Conduct Problems scale including a coefficient alpha of .66 and good test-retest reliability for this sample over a 12 month period ($r = .65$).

Denham Affect Knowledge Tests (AKT). Children's emotion knowledge was assessed using a procedure developed by Denham (Denham, 1986). (Denham et al., 1994). This included Affective Labelling and Affective Perspective-Taking. This measure has been used with children between 2- and 5-years of age (Denham et al., 1994; Laible, 2004) and has good internal reliability (Cronbach's alpha = .95; Denham, 1986). These two tests are designed to assess the child's capacity and use of emotion language and understanding. Denham (2006) noted that ceiling effects can occur when using the AKT at around 54-months of age. Due to this, in the current study the AKT has been summed, with a maximum score of 52 possible. Denham (2006) also noted that it is advantageous to include measures that assess later-developing aspects of emotion knowledge such as the Emotion Cause Knowledge Task (ECKT; Denham & Zoller, 1991) and the Ambivalent Emotion Task (AET; Gordis et al., 1989) which is done in the current study.

Emotion Cause Knowledge Task. The ECKT assessing children's ability to generate as many causes for each particular emotion as they are able to (Denham & Zoller, 1991). The emotions used included happy, sad, scared, and angry. Through its original use, interrater reliability and validity has been good, and intercoder reliability has been excellent (Denham, 2006). In recent research, this measure has been adapted in that children are now

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required to produce causes for why they themselves may experience an emotion. This measure can vary from around five to 20 minutes to administer. This extended version is a relatively new measure in experimental research and lacks empirical evidence as to its validity and reliability. However, it has been shown to produce results consistent with other measures of emotion knowledge such as the Denham AKT and has been used with children between 2.5 and 6 years-of-age (Van Bergen et al., 2009; Wang, 2003).

Ambivalent Emotion Task. Children's emotion knowledge was assessed using the AET (Gordis et al., 1989). The AET takes approximately 10 minutes to administer. In the current study, the AET included three stories in which the protagonist experienced ambivalent emotions and the child was asked to identify the reason for the two simultaneous emotions. Children could score a maximum of two points for each story, in which a point is given for each emotion correctly identified, making a total score of six possible. Using this measure, Denham (2006) has previously found a Cronbach's alpha of .84, as well as evidence for concurrent validity.

Parent training manual. This is a standardised manual that was used by researchers in both the elaborative and connectedness conditions. This training manual is based on the research by (Salmon et al., 2009), which includes PMT adapted from Dadds and Hawes (2006) research and emotion talk training which was used in the study by Van Bergen et al. (2009). The manual includes standardised content and instructions for all six sessions which will be discussed further in this paper under the 'Procedure' section

W-D-E Style training DVD. This was a 16-minute DVD that introduced mothers in the W-D-E condition about how to adopt an elaborative, emotion-rich style of reminiscing. It included a demonstration of a mother reminiscing with her child using the W-D-E style, as

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well as pauses where a narrator would explain parts of the conversation and highlight how the mother was using the W-D-E style.

W-D-E Style booklet. This training booklet was taken home by mothers after being introduced to the conversational style during session four. This was adapted from the high elaborative, emotion-rich style used by (Van Bergen et al., 2009). It included information on how to use the style by encouraging mothers to reminisce about shared events using ‘wh’ questions (what, where, when, why, who, how); detailed descriptions about the event such as who was there, what they did, and describing the scenery; and to use emotion such as labelling, describing the behaviours that indicated the emotions, as well as what caused the emotions and the consequences. The booklet also included practice guidelines and tips on how and when to use the style, as well as a written example of a transcribed conversation using the style (see Appendix B).

R-U-S Style training DVD. This was a 15-minute DVD that introduced mothers in the R-U-S condition about how to adopt this style of reminiscing. This DVD was similar to the W-D-E training DVD as it included a demonstration of a mother reminiscing with her child using the R-U-S style as well as pauses with a narrator highlighting parts of the conversation that were consistent with the R-U-S style.

R-U-S Style booklet. This training booklet was taken home by parents after being introduced to the conversational style during session four. The R-U-S condition was adapted from the work of Ensor and Hughes (2008) on the construct of connectedness, with an emotion component added similar to the W-D-E condition. It included information on how to use the style by encouraging mothers to reminisce about shared events whilst being responsive to what their child was saying; using undemanding communication by letting the child lead the conversation; and to label emotions, behaviours indicating the emotions, and

the causes and consequence of the emotions being discussed whilst sharing any emotions that mothers experienced themselves around the event (see Appendices C).

Additional measures administered but not analysed

Child Behaviour Checklist. Mothers completed the parent form of the Achenbach Child Behaviour Checklist (Achenbach & Rescorla, 2001) which provided a variety of information about the child including estimates of oppositional and disruptive problems. It also provided parent estimates of their child's interpersonal competencies. The Child Behaviour Checklist has extensive normative data and is the most widely used and reliable and valid measure for child and adolescent emotional and behavioural problems (Achenbach & Rescorla, 2001).

Inventory of Callous-Unemotional Traits Parent Report (Preschool Version). Mothers completed the Inventory of Callous-Unemotional Traits Parent Report which is a 24-item questionnaire designed to provide a comprehensive assessment of callous-unemotional traits for preschoolers (Ezpeleta, Osa, Granero, Penelo, & Domènech, 2013). It uses a four point scale which loads onto three subscales: Callousness, Uncaring, and Unemotional.

Child Behaviour Questionnaire. Mothers completed the Child Behaviour Questionnaire which has been adapted from the original Child Behaviour Questionnaire (Rothbart, Ahadi, Hershey, & Fisher, 2001). It uses an eight point scale and includes 32 questions which load onto five subscales to provide a detailed description about aspects of the child's temperament: Attentional Focussing, Inhibitory Control, Low Intensity Pleasure, Perceptual Sensitivity, and Smiling and Laughter.

Depression, Anxiety and Stress Scale. Mothers completed the Depression, Anxiety and Stress Scale (Lovibond & Lovibond, 1995) to estimate their level of maternal depression,

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anxiety and stress. It includes 42 questions and uses a four point scale which loads onto three subscales: Depression, Anxiety, and Stress.

Emotion Regulation Checklist. Mothers completed the Emotion Regulation Checklist which is a 24-item questionnaire that assesses the mother's perception of their child's typical methods of managing emotional experiences (Shields & Cicchetti, 1997). The ERC uses a four point scale which loads onto two subscales being Lability/Negativity and Emotion Regulation.

Griffith Empathy Scale. Mothers completed the Griffith Empathy Scale which is a 23-item questionnaire that estimates the type of empathic response their child would have in various situations using a nine point scale (Dadds et al., 2008).

Procedure.

Screening. Mothers of potential participants were screened via telephone to assess whether their child was suitable for the study in regards to their conduct problems. Exclusion criteria included children with a developmental disability, and participants needed to speak English at home.

Initial assessment. If the family met the inclusion criteria, they were then invited for an initial session at the university. Prior to the initial assessment the mothers were posted a number of self report instruments (including the SDQ) to complete before coming in. The first session involved a semi-structured clinical assessment (DISCAP) and a developmental assessment with the mother regarding their child, as well as providing further information about the nature of the study. The child's emotion knowledge was assessed using the Denham AKT (Denham et al., 1994), the adapted ECKT (Van Bergen et al., 2009) and the AET (Gordis et al., 1989). All these measures were recorded using both video and audio recording.

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The first component of the Denham AKT was Affective Labelling, involving both expressive and receptive emotion (Denham et al., 1994). For expressive emotion, the researcher showed the child four fabric puppet faces portraying happy, sad, fearful, and angry expressions. The researcher then pointed to each face and asked the child “How does he/she feel?” For receptive emotion, the researcher rearranged the faces and then asked the child to point to each face in response to the researcher verbalising them. For Affective Perspective-Taking (understanding of the links between specific situations and emotions), the researcher introduced children to four puppets (mother and three children). The researcher used these puppets to enact 18 vignettes in which the protagonist felt happiness, sadness, fear, or anger. In eight of the vignettes, the emotions were as expected in the situation. In ten of the vignettes, the emotions expressed by the protagonist are different to which the child expected. This was done by asking the mother prior to the assessment how the child would typically react to that vignette, and then the researcher expressed the emotion which was incongruent to what the mother reported. With each vignette, the researcher acted out the emotion with their facial expression, body language, and with the puppets. The child was then asked to identify the puppets emotion, and to select the fabric face with the corresponding emotion. For all of these tasks, a score of two was given for each emotion that was correctly identified; a score of one was given when an incorrect emotion was identified but if it was of the correct valence, for example, the child chooses scared when the correct emotion was sad; and a score of zero was given when an incorrect answer was given.

For the ECKT, the felt faces were put onto each puppet. An ‘emotion puppet’ was selected and then the child was asked to think of reasons why the puppet may be feeling that way. After the child appeared to have produced as many causes as possible, the researcher prompted the child to think of one more cause. After their list was exhausted, they were then

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asked to think of what might make the child feel that way using the same procedure. For this second scenario where the child was asked what might make them feel that way, if they were unable to produce a single cause, the researcher then prompted the child by asking if they could think of something at home that made the child feel that way, and if they can think of something at school that made the child feel that way. This same process was done for all four emotions. For the AET, the child was read three scenarios in which the protagonist felt two separate emotions, for example, feeling both happy and sad that it is the last day of school. The child was then asked to explain why the protagonist felt each of these emotions. The only prompt that could be provided was to ask why the protagonist felt the second emotion if the child only provided a reason for one of the two emotions.

After this was completed, the researcher asked the mother to nominate and discuss three events in which the child was (i) happy, (ii) angry or sad, and (iii) scared, fearful or surprised respectively, and to talk their child about this in “their usual way”. The researcher explained to the mother that it was up to them how long the conversation went for. These conversations were recorded for later transcribing and coding.

Intervention. Mothers of children who met criteria for oppositional defiant disorder or conduct disorder using the DISCAP were randomly allocated to the W-D-E or R-U-S condition. Both clinicians and students in clinical training conducted the intervention across Canberra and Wellington. This involved the mothers coming in for six individual sessions, with the first two sessions taking approximately two hours, and the following four sessions taking approximately one to one-and-a-quarter hours. Researchers used a standardised parent training manual which was adapted from Dadds and Hawes (2006) PMT and the emotion talk training protocol based on the research by Salmon et al. (2009).

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The first session involved a comprehensive assessment of parents with a focus on conduct problems. This included identifying any specific contingencies that characterised parent-child interactions for the individual's family by discussing the presenting problems for the child as well as the history of these problems, for example, identifying any coercive cycles that were in place (Granic & Patterson, 2006). Assessment of the child's social, school, and physical functioning was also assessed, as well as the parents general functioning and well-being. This initial comprehensive assessment was undertaken as it influenced how the following sessions proceeded in regards to what areas of the child's behaviours were to be targeted. Mothers were then given a CBCL at the end of the session to be returned at session two.

Session two involved introducing the mother to attachment theory and how to use attachment-rich positive reinforcement strategies in response to positive behaviour, and an attachment-neutral disciplinary strategy in response to misbehaviour which was in accordance to Dadds and Hawes (2006) PMT. This was achieved by working collaboratively with the mother to determine what behaviours they would like to see more of. Mothers were provided with a hand out summarising the steps involved in responding to misbehaviour. Session three involved a review of the strategies discussed in session two about responding to positive behaviour and misbehaviour.

Session four involved introducing the mother to their allocated style of emotion talk training; the W-D-E or R-U-S condition. Mothers were shown the relevant training DVD. Mothers then went through their allocated booklet with the researcher and participated in a role-play with the researcher using their allocated style for two past events. Mothers were instructed to practice their allocated style at least once a day. Mothers were then given a recorder and asked to record one conversation with their child using their allocated style and

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bring it to session five. Session five involved a review of the strategies on responding to positive behaviour and misbehaviour. The recording of the mother-child conversation was then reviewed, and feedback was given about how they had used their allocated style; discussing the components of the conversation that were consistent with their respective style; and identifying areas for improvement. As was done in session four, mothers participated in a role-play with the researcher using their allocated style for two past events. Mothers were again instructed to practice their allocated style at least once a day and then asked to record one conversation for homework to bring to session six. Session six followed the same process as session five, with the exception that mothers returned their recorder as it was the last session.

Mothers and children then returned for a follow-up session after at least one week had expired from session six. For mothers, the researcher only delivered the sections of the DISCAP in which their child met criteria for at the initial assessment, as well as the attention deficit hyperactivity disorder, oppositional defiant disorder and conduct disorder screening sections. Children underwent the Denham AKT, The ECKT, and the AET. Mothers along with their child then had another mother-child conversation recorded using the same process as was used during the initial assessment. The Child Behaviour Checklist, Child Behaviour Questionnaire, and SDQ were also completed by parents for a second time.

Scoring and coding.

The Denham Affective Labelling and Affective Perspective-Taking tasks were coded based on whether the emotion provided by the child was correct, incorrect, or of the correct valence. For the ECKT, scores reflected the number of accurate and independent reasons given for the corresponding emotion. For example, “I get angry when my friend hits me” and “I get angry when John hits me” was considered a single cause and only received one point.

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The causes had to be plausible, for example, being happy because you have magic powers does not receive a point. For the AET, the two emotion explanations had to be adequate, they had to be different for each emotion, and the emotions had to be simultaneous rather than successive. When the child was asked why the protagonist felt happy and sad about the last day of school, the response “she felt sad that it was the last day but then was happy when she went back to school the next year” would only receive one point as this was successive. In comparison, “she was sad it was the last day because she wouldn’t get to see her school friends but happy about the holidays” is simultaneous and would receive two points.

For the mother-child conversations, each event that was discussed was coded separately for three aspects of language style. This included a direct focus on emotion used, maternal elaborative style, and connectedness style (see Appendix D). For the scope of this study, the following was coded: the total number of emotion labels and emotion cause statements contributed by parents; the total number of emotion labels and emotion cause statements contributed by the child; the total amount of open-ended and closed-ended questions asked at assessment; and the degree of connectedness within the mother-child conversation at assessment. The R-U-S style was coded based on 15 criteria rated on a five-point scale that characterised the construct of connectedness.

Results

Preliminary analyses.

Table 1 presents children’s conduct problem and emotion knowledge scores at pre- and immediately post-intervention for each condition. Preliminary analyses revealed no significant differences between conditions with respect to any of these variables at pre- and immediately post-intervention (all p ’s > .05). Furthermore, there were no significant

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differences between conditions with respect to children's age, $t(29) = 0.48$, $p = .635$. Gender was not able to be balanced across conditions within this preliminary study.

Emotion knowledge measures

To test the second hypothesis by comparing the effects of the W-D-E and R-U-S styles of reminiscing on children's emotion knowledge, three repeated measures ANOVAs were conducted with condition as the between participants factor and time as the within participants factor. Dependent variables were children's scores on the Denham Affect Knowledge Tests (AKT); the Emotion Cause Knowledge Task (ECKT); and the Ambivalent Emotion Task (AET).

Denham Affect Knowledge Tests. For the Denham AKT (scores on each of the Denham Affective Labelling and Affective Perspective-Taking Tests, summed; possible range, 0-52), there was a significant main effect of time, $F(1, 29) = 10.79$, $p = .003$, indicating that children's scores on the Denham AKT had significantly increased immediately post-intervention across conditions (see Table 1). Condition, $F(1, 29) = 2.3$, $p = .140$, nor the time x condition interaction, $F(1, 29) = 2.02$, $p = .166$ was significant.

Emotion Cause Knowledge Task. For the ECKT (number of plausible causes produced for happy, sad, scared, and angry emotions, summed), there was no significant main effect of time, $F(1, 29) = .32$, $p = .577$, or condition, $F(1, 29) = .12$, $p = .735$, or time x condition interaction, $F(1, 29) = .47$, $p = .499$.

Ambivalent Emotion Task. Scores for the three vignettes on the AET were summed, with a maximum score of 6 possible. There was a significant main effect of time, $F(1, 29) = 5.59$, $p = .025$, indicating that children's scores on the AET had significantly

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Table 1.

Means (and Standard Deviations) of Key Conduct Problem and Emotion Knowledge Variables Across Conditions, Pre-and Immediately Post-Intervention.

	W-D-E (<i>n</i> = 15)		R-U-S (<i>n</i> = 16)	
Variable	Time 1	Time 2	Time 1	Time 2
	<i>M</i> (SD)	<i>M</i> (SD)	<i>M</i> (SD)	<i>M</i> (SD)
Behaviour Measure				
SDQ CPS	5.13(1.55)	3.27(1.94)	5.19(1.68)	3.50(1.75)
Emotion Knowledge				
AKT	44.13(7.89)	48.87(2.59)	47.50(3.10)	49.38(2.28)
Causes	11.53(9.20)	11.40(6.99)	11.75(7.80)	13.13(9.60)
AET	3.40(2.13)	4.00(2.10)	4.00(2.19)	4.88(1.54)

Note. SDQ CPS = Strengths and Difficulties Questionnaire Conduct Problems scale; AKT = Denham Affect Knowledge Tests scores summed; Causes = Emotion Cause Knowledge Task scores summed; AET = Ambivalent Emotion Task scores summed.

increased immediately post-intervention across conditions (see Table 1). There was no significant main effect of condition, $F(1, 29) = 1.29$, $p = .266$, or time x condition interaction, $F(1, 29) = .194$, $p = .663$.

Summary. To summarise the measures of emotion knowledge, there was a significant main effect of time for the AKT and AET, in which children produced higher scores on both

these measures when assessed at immediate post-intervention. No other significant results were found

Children's conduct problems

To test the third hypothesis, and to compare differences in children's conduct problems at pre-and immediately post-intervention, a repeated measures ANOVA was conducted with condition as the between participants factor and time (pre- to immediate post-intervention) as the within participants factor. The dependent variable was the total score on the Conduct Problems scale of the Strengths and Difficulties Questionnaire (SDQ). There was a significant main effect of time, $F(1, 29) = 55.42, p = < .001$, indicating that parents in both conditions reported that the severity of their child's conduct problems had significantly decreased immediately post-intervention (see Table 1). Neither the main effect of condition, $F(1, 29) = .06, p = .805$, nor the time x condition interaction, $F(1, 29) = .14, p = .710$ was significant.

Mother-child conversations

To further explore the results above, and as a manipulation check, we investigated the extent to which mothers were engaging in the key elements of the parent-child conversations (W-D-E and R-U-S) before and after the intervention. Reminiscing conversations of 9 mother-child dyads in the W-D-E condition and ten mother-child dyads in the RUS condition were coded and available for analysis. Table 2 presents the summed scores of several aspects of the mother-child conversations at pre- and immediately post-intervention across each condition. Four repeated measures ANOVAs were conducted with condition as the between participants factor and time as the within participants factor. Dependent variables were key elements of the conversations. These included the total number of emotion labels and

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emotion cause statements contributed by parents summed; the total number of emotion labels and emotion cause statements contributed by the child summed; the level of connectedness that was derived from 15 items each on a 5-point-scale summed (see appendix D); and the total number of open-ended and closed-ended questions summed. Preliminary analyses revealed no significant differences across conditions with respect to any of these variables at pre- and immediately post-intervention (all p 's $> .05$).

Mothers' emotion content. For mothers' emotion content, there was a significant main effect of time, $F(1, 17) = 8.90, p = .008$, indicating that the amount of emotion content contributed by parents had significantly decreased immediately post-intervention across conditions (see Table 2). Neither the main effect of condition, $F(1, 17) = .75, p = .400$, nor the time x condition interaction, $F(1, 17) = 1.88, p = .189$ was significant. Although the results were non-significant, Table 2 indicates that mothers in the W-D-E condition showed a greater reduction in the amount of emotion content contributed at immediate post-intervention

Children's emotion content. For children's emotion content, there was no significant main effect of time, $F(1, 17) = 1.61, p = .221$, or condition, $F(1, 17) = .04, p = .840$, or time x condition interaction, $F(1, 17) = .12, p = .729$.

Connectedness. For connectedness, there was no significant main effect of time, $F(1, 17) = 3.12, p = .095$, or condition, $F(1, 17) = .04, p = .838$, or time x condition interaction, $F(1, 17) = .481, p = .498$.

Total questions asked. For the total questions asked, there was a significant main effect of Time, $F(1, 17) = 5.13, p = .037$, indicating that the total number of questions asked had significantly decreased immediately post-intervention across both conditions (see

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Table 2

Means (and Standard Deviations) of Key Mother-Child Reminiscing Variables Across Conditions, Pre-and Immediately Post-Intervention.

	W-D-E (<i>n</i> = 9)		R-U-S (<i>n</i> = 10)	
Variable	Time 1	Time 2	Time 1	Time 2
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)
Reminiscing Conversations				
Mother Emo	30.33(14.75)	13.33(12.66)	29.90(16.18)	23.60(15.99)
Child Emo	11.11(8.21)	7.22(7.82)	10.80(7.94)	8.60(6.87)
Connectedness	43.56(5.81)	44.78(6.16)	43.30(6.38)	46.10(6.12)
Total Q's	40.67(19.01)	39.11(27.08)	39.60(12.46)	25.30(11.36)

Note. Mother Emo = frequency of mothers' use of emotion labels and emotion cause statements summed; Child Emo = frequency of children's use of emotion labels and emotion cause statements summed; Connectedness = total level of connectedness summed; Total Q's = total number of questions summed.

Table 2). There was no significant main effect of Condition, $F(1, 17) = .954$, $p = .342$, or Time x Condition interaction, $F(1, 17) = .332$, $p = .086$. The Time x Condition interaction was approaching significance, and as shown in Table 2, there was a greater reduction in the total number of questions asked immediately post-intervention for the R-U-S condition as compared to the W-D-E condition which is trending towards what was expected.

Summary. To summarise the findings from the mother-child conversations, there was a significant main effect of time with regards to the total questions asked and parents emotion content, with significant decreases in both of these variables. No other significant results were found.

Discussion

Children's developing emotion knowledge has been demonstrated in a number of studies to be associated with conduct problems (Trentacosta & Fine, 2010), and the way in which parents discuss emotion with their children has implications for this (Salmon et al., 2013). However, research has yet to compare different styles of maternal-remiscing. As recent research has indicated that parents can be successfully engaged in training to enhance their child's emotion knowledge as an adjunct to parent management training (PMT; Salmon et al., 2009), the aim of the current study was to extend on this research by comparing two styles of maternal-remiscing with respect to children's emotion knowledge and conduct problems.

In this novel preliminary study, a subset of data was used to compare the effectiveness of two styles of maternal-remiscing as an adjunctive intervention to PMT. The intervention was conducted over a period of six sessions with mothers of children with conduct problems. The W-D-E condition was an elaborative style of reminiscing which encouraged mothers to elicit their child's contribution to the conversation through the use of 'wh' questions followed up with detailed descriptions. The R-U-S condition encouraged connectedness through being responsive and allowing their child to lead the conversation. Both conditions placed an emphasis on labelling emotions, behaviours that indicated the emotions, and discussing the causes and consequences of emotions. Mothers in the R-U-S condition were also encouraged

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to share their own emotional experience of the joint event. Children's emotion knowledge and the severity of their conduct problems were assessed both at pre- and immediately post-intervention.

Children's emotion knowledge was assessed using the Denham Affect Knowledge Tests (AKT), the Emotion Cause Knowledge Task (ECKT) and the Ambivalent Emotion Task (AET). Children across both conditions had increased scores at immediate post-intervention with respect to the AKT and the AET, but not the ECKT, indicating that aspects of emotion knowledge had increased over time. This result partially supported the first hypothesis that emotion knowledge would increase across both conditions. Results indicated that there were no significant differences between the W-D-E and R-U-S conditions which did not support the second hypothesis that the R-U-S conditions would show a greater increase in emotion knowledge. In both conditions, the severity of children's conduct problems had decreased at immediate post-intervention as measured by the Strengths and Difficulties Questionnaire (SDQ) Conduct Problems scale which supported the third hypothesis.

With respect to the first hypothesis, results need to be interpreted with precaution as there was no control condition. Due to this it is difficult to ascertain how much of an effect the conditions had on children's emerging emotion knowledge as compared to typical developmental changes. However, results indicated that children were more accurate in identifying facial expressions and labelling emotions, as well as identifying protagonist emotions in vignettes. Although significant, the increases in scores were only small as they were already near the maximum score possible at pre-intervention. Denham (2006) noted that ceiling effects can occur when using the AKT at around 54-months of age, and the average age in the current study was 63.1 months.

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Children's ability to identify the reasons for ambivalent emotions (as told in stories) had also increased over time in both the W-D-E and R-U-S conditions. It is possible that parental focus on emotion during the study had increased their child's understanding and awareness of emotion. Another factor is that the average amount of time that elapsed between pre- and post-intervention assessments for participants across both Canberra and Wellington was 168 days, but varied from 83-375 days. Both Larsen, To, and Fireman (2007) and Zajdel et al. (2013) conducted similar research in which children as young as preschool were shown a movie clip with bittersweet themes to elicit ambivalent emotions. In both studies, children's age significantly predicted their performance as the progression from 5 to 8-years of age meant that children more likely to report that the protagonist experienced ambivalent emotions. These results supported past research which suggest that the understanding of ambivalent emotions improves with age as children develop the cognitive emotional abilities needed to organise and interpret conflicting pieces of emotional information (Zajdel et al., 2013), and the current findings potentially add to this. This improvement in understanding multiple simultaneous emotions is important as children develop and participate in increasingly complex social situations, as it allows the child to be attuned to the emotions of others whilst being aware of and regulating their own emotions (Zajdel et al., 2013). It is also possible that practice effects occurred in that children in the study had previously been told the same vignettes in both the Denham AKT and the AET.

In both conditions, there was almost no change in children's ability to identify causes for happy, sad, scared, and angry emotions across time which did not support the first hypothesis. Van Bergen et al. (2009) also assessed children's emotion knowledge using the Denham AKT and the ECKT. Like the current study, Van Bergen et al. (2009) found no significant main effect between conditions (W-D-E and child-lead play); found no significant

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main effect of time or condition on children's ability to produce emotion causes at post-intervention; and found a significant main effect of time (but not condition) in which children's scores on emotion recognition and emotion situation knowledge increased at post-intervention. This is similar to the current study's emotion knowledge findings in that it was only the children's ability to produce emotion causes that had not increased over time.

However, Van Bergen et al. (2009) found a significant main effect of time and condition during their 6-month follow-up assessment, as children in their W-D-E condition showed significantly higher emotion cause knowledge. It is possible that mothers took longer to internalise and generalise their style of reminiscing, and this finding gives reason for the current study to conduct a 6-month follow-up. Furthermore, this follow-up may further add to the literature on the use of the ECKT measure, as both Van Bergen et al. (2009) and the current study are among the first to utilise children's ability to also generate possible causes as to why they themselves may experience an emotion as an addendum to the ECKT.

Another explanation for the lack of improvement on the ECKT may be around the delivery of the emotion talk training. The W-D-E and R-U-S conditions were delivered as an addendum to the PMT in session four. In a similar study by Salmon et al. (2009), their W-D-E condition was introduced in session three with the remaining three sessions focusing on both PMT and maternal-reminiscing. By session four in the current study, for some mothers their child's conduct problems had improved which may also have impacted the level of effort they put into implementing the newly introduced emotion talk training as their desired result had already been produced through PMT. Integrating the PMT and emotion talk training earlier in the programme and in a more in synch fashion may have improved implementation of the conditions.

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With respect to the second hypothesis, this was not supported as there was no significant difference between the W-D-E and R-U-S conditions across any of the measures that were analysed in the current preliminary study. It is worth noting that this is a relatively novel study, particularly in that this was the first time that the research by Ensor and Hughes (2008) on the construct of connectedness has been adapted and delivered in experimental research. Due to the lack of prior research, interpretations of this result are tentative. This preliminary study only involved an immediate post-intervention follow-up, and given that both conditions were introduced in session four, more time may have been needed to see any intended effects. Having a control condition would have helped ascertain if the R-U-S condition contributed to any changes in children's emotion knowledge above and beyond typical development. In explaining this result it helps to look at the content that differentiated the two conditions.

The style of conversing in which mothers were trained was the main differentiating factor. The W-D-E condition encouraged the use of 'wh' questions as compared to the R-U-S condition which encouraged parents to allow their child to lead the conversation whilst asking fewer questions. The only difference in the emotion components was that the R-U-S condition encouraged mothers to share their own emotional experience of the joint event. Furthermore, another factor was particularly evident for mothers in the R-U-S condition when reviewing recordings during sessions five and six. Often during moments of silence or when their child had limited input into the conversations, mothers felt compelled to continue the conversation by asking their child 'wh' questions, much like was encouraged in the W-D-E condition. This factor may have muddled the two conditions making it more difficult to differentiate the results.

A small subsample of participants across both conditions had their mother-child conversations both at pre- and immediately post-intervention recorded. These were then transcribed, coded, and analysed for various aspects of the conversations to assess their emotion content and style. These results suggested that there were no significant differences between the WD-E and R-U-S conditions with respect to both the style and content that was used by mothers during pre- and immediately post-intervention. However, although non-significant, there was a larger decrease in the total number of questions asked at immediate post-intervention for participants in the R-U-S condition. This may suggest that mothers were attempting to let their child lead the conversation more by asking fewer questions.

These results also showed that neither mothers nor their children had increased their frequency of emotion content when reminiscing. In fact, across both conditions their emotion content had decreased though this result was non-significant. This result was surprising, although the small sample size of 19 needs to be noted as this may not be representative of this study or the wider studies total population sample. Both Van Bergen et al. (2009) and Salmon et al. (2009) utilised the same treatment manual as was used in the current study, with the exception of the PMT in the study by Van Bergen et al. (2009). The emotion content produced by parents and their children increased at post-intervention in both these studies. One explanation may be the delivery of the emotion content. In the study by Van Bergen et al. (2009), during their first training session, after watching a training video describing the W-D-E style, mothers were with their child and had an opportunity to practice with active feedback from the experimenter. During the second and fourth sessions, after the experimenter had listened to mothers' audio recordings from home, they received feedback as well as an opportunity to practice with their child during the session to integrate that

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feedback. For future research in this field, adopting a method of delivery such as this may be more beneficial for participants to successfully adopt and implement the programme.

The third hypothesis was supported as both conditions showed a similar decrease in the severity of children's conduct problems as rated by mothers on the SDQ. This was not surprising as both conditions included the same PMT content. Keeping in mind that there was no control condition, this result likely supports PMT in being recognised as one of the most widely used and empirically supported therapeutic interventions for children with externalising disorders (Dadds & Hawes, 2006). As there was a main effect of time but not condition, this suggests that the decrease in conduct problem severity primarily reflects PMT and not maternal-remiscing style. However, Kaminski et al. (2008) conducted a meta-analytic review of PMT programmes and found that those which included emotional communication skills enhanced parenting behaviours and skills. This may have influenced children's conduct problems in the current study, and it is possible that greater parental focus around the discussion of emotions still had the intended effect of further reducing children's conduct problems. For future research, including a group that receives PMT without any emotion talk training may better determine the influence of each condition. Furthermore, a 6-month follow-up assessment may determine if either the W-D-E or R-U-S condition have longitudinal effects that further reduce conduct problems above and beyond PMT, similar to the study by Van Bergen et al. (2009) in which the ECKT measure significantly increased only at 6-month follow-up.

Although not measured, it is also important to note the benefits that parents reported during this preliminary study. During sessions five and six, a number of parents in both conditions reported the benefits they themselves experienced as a result of taking the time to discuss events that they shared with their child. In particular, a number of parents in the R-U-

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S condition came to a realisation that they often don't just sit and listen to what their child has to say for an extended period of time. With a longer follow-up, it will be interesting to see if there are extended benefits due to these positive parent-child interactions and experiences.

Limitations. There are a number of limitations in the current study to address. The study used multiple researches across both Canberra and Wellington, and the amount of participants each researcher either assessed or treated varied. The amount of clinical psychology training each researcher had received up to the point of the study also varied. This meant that there was a large amount of variation in how both the assessments and interventions were delivered, particularly given that there were limited standardised instructions for researches in how to provide the rationale for the emotion talk training. A particular concern was the variation in how the ECKT was administered. Despite the ECKT having high intercoder reliability, there are limitations in regards to the timing of prompts that should be provided by the researcher. Some researchers also provided a higher frequency of prompts than others. Due to this, some children may have received more prompting and opportunities to produce emotion causes.

Conducting qualitative research comes with limitations. There was no way to control for how often mothers were utilising their emotion talk training at home. Mothers were asked to practice at least once a day and to bring one recording to session five and another recording to session six, but on a number of occasions mothers did not bring a recording to review. Reasons for this ranged, and it did not always mean they had failed to practice their allocated style of reminiscing at home. Regardless of the reason, this factor limited opportunities to review recordings and for the researcher to provide constructive feedback. To address this in future research, mothers could have been provided with a checklist sheet as a reminder to practice their allocated style of reminiscing at least once per day.

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Despite efforts to assess children at times of the day that maximise their performance, this did not always occur due to a range of factors such as other child or family commitments; reluctance from parents to take their child out of school; or sometimes due to the child being tired, hungry, or bored. Another factor is the sample population, as children with conduct problems present often present with oppositional behaviours and a reluctance to complete assessment measures or mother-child conversations making engagement more challenging. As many children presented with comorbid difficulties such as anxiety, this may have interfered with both their responsiveness to the programme as well as their performance during the assessments. This also raises the issue of effort which is also a factor for children both at pre- and post-intervention assessments. Children were offered stickers for completing the assessment, but in future perhaps offering greater incentives may help. Adding positive reinforcement prompts in the ECKT may also be beneficial. Adding some form of effort testing may also control for this, although little research has been done on effort testing with children.

Motivation from mothers may also have influenced the implementation of the emotion talk training as their child's conduct problems may have been most salient to them. To support this notion, during sessions five and six which serve as an overall review of the programme, there appeared to be a greater focus from mothers on the PMT as compared to the emotion talk training.

As this study is a subset of a larger study, the sample size of is relatively small. There was a large amount of variation in the time taken between pre- and post-intervention assessments, ranging from 83 to 375 days with an average of 168 days between assessments. The implications of this is that some children may have had the benefits from the PMT for longer or had more instances of maternal-remiscing, both of which may have influenced

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children's conduct problem severity and emotion knowledge. It is also possible that during this period of time, there may have been a number of confounding variables that were unable to be controlled for, for example, we know that some families sought treatment elsewhere for other issues such as Attention Deficit Hyperactivity Disorder.

Another limitation is the generalizability of the current study's findings. Despite the difficulties that participants faced, the families were relatively high functioning in regards to their socioeconomic status, so it is unclear how the intervention would work for families who face greater social adversity. Furthermore, the aims and findings of the current study are limited to a Western cultural context. Although ethnicity data was not presented in this preliminary study, anecdotally we know that there were very few Asian families. Research shows that Asian parents are less preoccupied than are those from Western cultures in helping their children talk about and understand emotion, and at times Asian parents view emotion as disruptive (Wang et al., 2006). Ethnicity data will be made available at a later date.

Future directions. This current study is still being conducted across Canberra and Wellington. The 6-month follow-up will investigate if mothers have utilised their allocated style of maternal-remiscing along with their PMT, and what influence this may have had on their child's emotion knowledge and conduct problems with a longer follow-up period.

In future research, having a condition that receives PMT without emotion talk training would benefit the study as it would be interesting to see if children's performance on the emotion knowledge tasks would improve after their conduct problems had reduced. Having a condition that receives emotion talk training without PMT or without any form of intervention faces ethical issues, as it is unethical to withhold treatment from those in need. A waitlist approach may resolve this dilemma but would limit time for a follow-up assessment as again it is unethical to leave those in need on a waitlist for an extended period of time.

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Other measures that were used in the current study could be utilised in further analysis. The Inventory of Callous-Unemotional Traits Parent Report and Griffith Empathy Scale were included in the psychometric battery completed by parents and these could be utilised to screen for children with callous-unemotional traits, whilst the Emotion Regulation Checklist could assess children's emotional reactivity. Research has shown a consistent significant correlation between emotion knowledge and problematic social and behavioural outcomes (Trentacosta & Fine, 2010). However, much of this research disregards the growing evidence suggesting children with externalising behaviours can be differentiated based on their levels of emotional reactivity (Frick, Cornell, Barry, Bodin, & Dane, 2003; Frick & Morris, 2004; Loney, Frick, Clements, Ellis, & Kerlin, 2003). There is growing evidence of a distinct subgroup of antisocial individuals described by Frick and Morris (2004) as having callous-unemotional (CU) traits. These individuals are said to have a temperament characterised physiologically by low autonomic reactivity and behaviourally by low levels of fear and empathy, rather than a temperament characterised by high emotional reactivity and a greater difficulty controlling their behaviour and emotions (Frick & Morris, 2004). Facial recognition experiments have also shown that antisocial behaviour is associated with poorer recognition of neutral faces which were often mistakenly rated as angry, as compared to CU traits which were uniquely associated with poorer recognition of fearful, sad and surprised expressions faces (Dadds et al., 2006; Marsh & Blair, 2008). Investigating how children's emotional reactivity interacts with their allocated style of emotion talk training would be of interest.

There are a number of studies suggesting that maternal-remiscing promotes children's narrative and memory skills as their active participation makes the child utilise and improve these skills (Bird & Reese, 2006; Nelson & Fivush, 2004; Reese & Newcombe,

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2007). Adding an assessment of memory to the pre- and post-assessments would allow investigations to occur into the influence of maternal-reminiscing on children's memory skills, and also explore if this was an added benefit from emotion talk training as an adjunct to PMT.

From the sample of 31 there were only nine females. This was to be expected in the sample as the inclusion criteria was that children must meet criteria for oppositional defiant disorder according to the DISCAP, and this is more prevalent in males than in females (1.4:1) prior to adolescence (American Psychiatric Association, 2013). Seven females were in the W-D-E condition and two were in the R-U-S condition. Past research has found that girls outperform boys in emotion understanding tasks in preschool (Cutting & Dunn, 1999) A study by Bosacki and Moore (2004) showed that girls scored higher than boys in emotion labelling and understanding of complex emotions such as pride. Given that there may be gender differences in emotion knowledge, future studies could either use equal gender samples or two separate gender samples to assess the effects of emotion talk training across genders.

A rich elaborative style of reminiscing can benefit children's social understanding, language and the quality of the parent-child relationship (Wareham & Salmon, 2006). Ensor and Hughes (2008) also found that mothers' connectedness was a significant correlate and independent predictor of children's social understanding at the age of four years. Social understanding affects one's ability to interpret social cues and to form positive interpersonal relationship; both of which are associated with behavioural outcomes (Trentacosta & Fine, 2010). Future studies could utilise similar W-D-E and R-U-S conditions as an adjunct to PMT, but without the focus on emotion (the E and S components of the conditions) so that

the two conditions can more easily be differentiated, with conduct problem severity outcomes being assessed and compared.

Summary.

Emotion knowledge is a key component in socioemotional understanding as it influences how the individual will interpret and respond to others (Izard et al., 2011). Deficits in emotion knowledge are associated with externalising disorders (Trentacosta & Fine, 2010). Evidence shows that maternal-remiscing early in a child's life influences their emerging socioemotional understanding (Laible & Panflie, 2009). The current preliminary study used two forms of emotion talk training as an adjunct to PMT for mothers of children with conduct problems with the aim to enhance their emotion knowledge. This adjunct intervention drew on research from Van Bergen et al. (2009) and Ensor and Hughes (2008) who each identified a different style of mother-child communication being the W-D-E and the construct of connectedness respectively. There were several implications of the current study's findings. The study did not ascertain which style of reminiscing is more beneficial for children. The results provide guidance for future research in this field, and some of the suggestions made in the discussion and future directions sections may be addressed as the current wider study is completed. At this stage of the preliminary study, no considerable differences were found between the two styles. This preliminary study only assessed at pre- and immediately post-intervention, so limited time was given for parents to utilise their allocated condition or for any intended effects to take place with regards to their children. Analysis of the conversations suggests that parents are yet to contribute a greater frequency of emotion content, nor are their children. Research in this area is relatively new, and considering this is the first time the R-U-S style of reminiscing has been utilised experimentally, effective methods to deliver the training are still being tested. It is unclear whether the small increases in the identifying and

labelling emotions as well as understanding ambivalent emotions were due to developmental changes, practice effects, or due to the intervention. Although there was no control condition, the current findings may further support PMT as an effective intervention to reduce children's conduct problems, and that this can still be effective when an emotion talk training component is added concurrently.

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Appendix A

**Young Children's Understanding of Emotion**

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Dear Parents/Caregivers,

We are conducting a study investigating a novel strategy for promoting young children's optimal development. We are asking parents (particularly mothers) of children between the ages of 4 and 8 years to consider taking part in the study. This research has been approved by the School of Psychology Human Ethics Committee under delegated authority from Victoria University of Wellington Human Ethics Committee.

What is the purpose of this research?

- This research aims to learn whether helping parents develop certain styles of talking with their children benefits the children's development in several areas known to be important for future outcomes. These areas include children's knowledge and understanding of emotions and their resilience for dealing with negative emotions.

Who is conducting the research?

- This research is being conducted by researchers from the School of Psychology at Victoria University, Wellington (Associate Professor Karen Salmon), and the Department of Psychology at the Australian National University (Associate Professor Richard O'Kearney). The research is funded by an Australian Research Council grant.

What is involved if you and your child participate in this study?

- If you agree to participate we will ask you to complete some questionnaires about your child and to give us approximately 3 hours of your time in 2 sessions. These sessions can be conducted at your home where a researcher will visit you and your child at a time that is convenient for you. Alternatively, you can attend with your child at our research facility at Victoria University. During the first session we will interview you about your child and use tasks and questionnaires to look at his or her areas of difficulty and strength (e.g., language and behaviour). In the second session we will ask you to choose and discuss a range of events that you and your child have participated in together. We would

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like to tape record this session but the researcher will leave the room while you complete this task.

- Parents who have entered the study because of their child's difficult-to-manage behaviours will be offered the opportunity to take part in one of two interventions. Each of these interventions includes a well-supported 8-session parent management treatment for disruptive behaviours in children. The two interventions will differ in the type of training in emotion talk each mother receives. The actual mother-child talk training is very easy and, we think, is likely to be enjoyable (simply engaging in conversations with your child). We will provide very specific instruction in how to implement the interventions, and will follow up to provide you with further support.
- So that we can assess the immediate and long-term effects of our approaches, all parents and children will complete follow up sessions immediately, as well as after 6 and 12 months. In these follow up sessions, parents and children will be given some of the same measures as at the initial assessment. The approximate duration of each assessment is one and a half hours.
- We do not anticipate that there will be any problematic physical or psychological risks associated with your taking part in this study. However, we cannot and do not guarantee or promise that your child will receive any benefits from the study.

Privacy and Confidentiality

- Consent forms and data from the study will be kept for five years after we publish any of the results of this research.
- Any information that is obtained in connection with this study and that can be identified with you or your child will remain confidential and will be disclosed only with your permission or except as required by law. Questionnaires, audiotapes and videotapes will be stored securely with access only by the researchers directly involved in this project.
- Coded data may be shared with other competent professionals upon request.

What happens to the information that you provide?

- We may publish the results of the study in a scientific journal or present them in at conferences. For both publication and theses, no child will be identified in the results and will remain confidential.
- A summary of the results will be sent out to you upon completion of the study, which we anticipate will be in end of 2013.

We would also like to make clear that you may refuse permission for your child to take part in the study without any implications whatsoever for you or your child. Further, you are free to withdraw your child from the study at any time without prejudice. Please note also that this research is conducted under the auspices of Victoria University of Wellington and is completely independent of your child's school.

If you are interested and willing to participate in this research, please phone or email Associate Professor Karen Salmon (T: 04 463 9528; Karen.salmon@vuw.ac.nz). She will also be happy to answer any further questions you may have about the study. We look forward to hearing from you.

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This information letter remains yours to keep.

Thank you for your time in considering participating in this study.

Yours sincerely,

Karen Salmon, PhD., Dip.Clin.Psych
Associate Professor in Psychology

Clare-Ann Fortune, PhD., PG Dip. Clin. Psych
Senior Supervising Clinical Psychologist

EMOTION KNOWLEDGE IN CHILDREN WITH CONDUCT PROBLEMS

PARENTAL (OR GUARDIAN) CONSENT FORM

(Please return)

Researcher: Associate Professor Karen Salmon

Project: Enhancing understanding of emotions in young children

I agree for myself {.....insert name} and my child {.....insert name} to participate in a study of emotion understanding in young children conducted by Dr Karen Salmon. I understand that taking part in the study will initially require 2 assessment sessions of about 3 hours in total. I understand that I may also be invited with my child to take part in an intervention for behavioural problems in young children. I understand that this involves training in different ways of talking to my child about his/her emotions and 8 sessions of parent management training.

I have read all the information above and have asked any questions relating to this study, which have been answered satisfactorily. I have been informed that I may withdraw myself and my child from the study at any time without giving a reason and that any data obtained up to the point of withdrawal will be destroyed. I understand that my child is free to indicate that she or he does not wish to participate.

I consent for data obtained from me and my child to be used for research purposes. I understand that these data will be stored without identification of our names and will be stored securely for at least 5 years after which they may be destroyed. Results will be published only on a group basis and individuals will not be identified in any way. Confidentiality will be ensured as far as the law allows.

Name: _____

Email: _____

Signature: _____

Phone #: _____

Date: _____

Important contact information in case of questions or problems:

Associate Professor Karen Salmon
School of Psychology
Victoria University of Wellington
e-mail Karen.Salmon@vuw.ac.nz
Ph: 04 463 9528

Appendix B

The W-D-E style booklet

The W-D-E Style Practice Guide

*** WH-questions**

- ☒ What? Where? When? Why? And How?

*** Detailed descriptions**

- ☒ Describe who was there and what they did
- ☒ Describe objects, colours, shapes and sizes
- ☒ Describe locations

*** Emotions**

- ☒ Label emotions your child experienced
- ☒ Describe the behaviours that indicated the emotions
- ☒ Focus on what caused the emotion and its consequences

Practice Guidelines

- * Pick a "big event" you experienced together.
- * Be prepared. Think about the details. Perhaps write them down before you discuss them.
- * Start your conversation with a "Do you remember...?" question.
- * Follow the W-D-E guide from page 2.
- * Keep away from using questions that only lead to "yes/no" answers!
- * Don't worry if you feel uncomfortable using the style at first. That's normal!
- * Practise *at least once a day*.
- * The more you practice the easier it will become.

Helpful Practice Tips

- * Pick practice times when your child is likely to be alert and attentive.
- * Try and practice when your child is alone with you.
- * Praise your child's contributions to the conversation with comments like "good remembering" or "well done".
- * If your child changes the topic, follow their lead and keep using the style with the new topic.
- * Stop if your child loses interest. You can come back to the style at another time.
- * Don't worry if your conversations aren't that long.

Example

Mother (M): Remember when we went to the aquarium on Sunday and there were lots of people there? We walked down a dark corridor. What did we see there?

Child (C): Fishes!

M: Yeah, that's right we saw fishes. What kinds of fishes did we see?

C: Big, big, big!

M: They were very big. What were their names?

C: Don't know.

M: What about my favourite kind of big fish. There was a big grey one with big teeth. It looked mean and ugly.

C: Sssshak.

M: Yes, it was a shark, that's great remembering!

C: Swimming

M: Yes, the shark was swimming above our heads. Remember when we walked in the tunnel under the water and the big sharks were swimming around us and you were scared. You held my arm very tight and you turned your back to the tank.

C: Uh huh.

M: What made you scared?

C: Mmm

M: You thought the shark might bite you, did you?

C: Yeah. Ouch!

M: Yes, ouch! That would have hurt. What about when we first came in the aquarium and we looked down and there were lots of black and white birds in the water?

C: Ducks!

M: Good try, they walked a bit like ducks, didn't they? But they weren't ducks. Remember how they had little suits on. They were black and white and you thought they walked funny. They were called Penguins.

Appendix C

The R-U-S style booklet

The R-U-S Style Practice Guide

* Responsiveness

- ☒ Get 'tuned in' and show interest in your child's story by responding
 - promptly
 - positively
 - relevantly

* Undemanding communication

- ☒ Let your child lead the conversation
- ☒ Stick with what your child is talking about
- ☒ Ask fewer questions and balance them with responsive comments

* Sharing of emotions

- ☒ Label emotions that you and your child experienced during the event
- ☒ Describe behaviours that indicated your emotions; do the same for your child's emotions
- ☒ Focus on what caused these emotions and their consequences;

Practice Guidelines

- * Pick a "big event" you experienced together.
- * Be prepared. Think about the details. Perhaps write them down before you discuss them.
- * Start your conversation with a "Do you remember...?" question.
- * Follow the R-U-S guide from page 2.
- * Be face-to-face with your child, getting down to his/her physical level if necessary, eye to eye. This will make it easier to see your child's facial expressions and maintain his/her interest in the conversation.
- * Don't worry if you feel uncomfortable using the style at first. That's normal!
- * Practise at least once a day.
- * The more you practice the easier it will become.

Helpful Practice Tips

- * Pick practice times when your child is likely to be alert and attentive.
- * Try and practice when your child is alone with you.
- * Praise your child's contributions to the conversation with comments like "good remembering" or "well done".
- * If your child changes the topic, follow their lead and keep using the style with the new topic.
- * Stop if your child loses interest. You can come back to the style at another time.
- * Don't worry if your conversations aren't that long.

Example

Mother (M): Remember when we went to the aquarium on Sunday and there were lots of people there? We walked down a dark corridor. What did we see there?

Child (C): Fishes!

M: Yeah, that's right we saw fishes.

C: Big, big, big!

M: They were very big.

C: (silent)

M: One of them was my favourite kind of big fish. There was a big grey one with big teeth. It looked mean and ugly.

C: Sssshak.

M: Yes, it was a shark, that's great remembering!

C: Swimming

M: Yes, the shark was swimming above our heads. Remember when we walked in the tunnel under the water and the big sharks were swimming around us and you were scared. You held my arm very tight and you turned your back to the tank.

C: Uh huh.

M: I was a bit scared too. What made you scared?

C: Mmm

M: You thought the shark might bite you, did you?

C: Yeah. Ouch!

M: Yes, ouch! That would have hurt. I wouldn't want any sharks biting me either!

C: Didn't wanna look.

M: Of course, you didn't! When something's scary, you don't want to look at it.

C: I like the ducks.

M: You liked the black and white birds in the water! I liked them too, how cute that they had little suits on. They're actually called Penguins.

C: Funny.

M: You thought it was funny how they walked, and you laughed and pointed at them.

Appendix D

ENHANCING UNDERSTANDING OF EMOTIONS IN YOUNG CHILDREN

Proposed Parent-Child Conversation Coding Protocol

(8/8/13)

GENERAL PROCEDURE:

1. Code each emotion conversation separately. (e.g., happy, angry/sad, scared).
2. Note the order/sequence in which the three emotions were discussed.
3. Coding starts when the emotion is introduced (e.g., Do you remember a time when you were happy?). Off-topic (non event-related) utterances within the emotion conversation will be included as the entire interaction of mother-child is to be examined.

MEASURES/DATA POINTS:

1. **Length** of conversation: measure is # of **conversational turns** (defined as utterances of one speaker bounded by another speaker's utterances, or a significant silence).
 - a. # of **on-topic conversational turns**
 - b. # of **off-topic conversational turns**
 - c. # of **total conversational turns**
2. **Interruptions**
 - a. # of **parent interruptions** (i.e., parent interrupts child).
 - b. # of **child interruptions** (i.e., child interrupts parent).
3. **Emotion labelling** (e.g., happy, angry, sad). Reflects an internal state. For every emotion label, code the following:
 - a. specificity: emotion label is **specific** (e.g, happy, angry, afraid/scared) or **general** (e.g., good, bad, fun, funny)
 - b. valence of emotion label: **positive** or **negative** or **unclear**
 - c. who produced the label: **parent** or **child**

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d. whose emotion was referred to: **parent's** or **child's** or **other's**

Example 1: Child says to Mother: 'I was felt bad 'cuz Dad was angry'

Code 'bad' as a) general b) negative c) child d) child

Code 'angry' as: a) specific b) negative c) child d) other

Example 2: Mother says to Child: 'Were you sad because Rory hurt himself?'

Code 'sad' as: a) specific b) negative c) parent d) child

4. **Emotion behaviour labelling** (e.g., crying, laughing, hit). An internal state made you do this behaviour. For every emotion behaviour identified, code the following within the context of the emotion:

a. valence of emotion behaviour: **positive** or **negative** or **unclear**

b. who produced the emotion behaviour label: **parent** or **child**

c. whose emotion behaviour was referred to: **parent's** or **child's** or **other's**

5. **Emotion cause** discussion. This is when the cause of the emotion is discussed by providing the cause ("You were angry because daddy didn't let you play") or prompting the other participant to provide the cause ("Why were you scared?"). Causes should be independent (the same cause of emotion repeated several times is entered only once).

Emotion cause statements are coded in terms of:

a. who produced the emotion cause statement: **parent** or **child**

b. whose emotion was referred to: **parent's** or **child's** or **other's**

Example 1: Mother says to Child: 'What made you think I was upset with you?' is coded as a) parent b) parent

Example 2: Mother says to Child: Why were you not happy? [Code as a) parent b) child]
Child says to Mother: Because they're mean to me. [Code as a) child b) child]

6. **Maternal elaborative style**: See Laible (2004, 2011). Look at questions asked by mother and code the following:

a. # of **open-ended questions**

b. # of **close-ended yes/no questions**

c. # of **total questions** (we may have to report this later as proportion of total conversational turns)

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Example 1 (open-ended): Mother: When your sister does not allow you to touch her iPad, how do you deal with it?

Example 2 (close-ended): Mother: Does Fredrick say things like that to you?
Child: No.

7. **Connectedness** : Coders read transcript and listen to the recording to rate overall conversation on the following characteristics below using a 5-point scale from 1: not like this conversation at all to 5: very like this conversation

Connectedness Scale

1: not like this conversation at all to 5: very like this conversation

Item	1	2	3	4	5
1. Conversation is the source of conflict.					
2. Interaction flows smoothly/harmoniously.					
3. Communication flows effortlessly and has a connected back and forth quality.					
4. Conversation promotes intimacy and connection.					
5. There is little or no communication between parent and child.					
6. There is poor acceptance of roles in the conversation.					
7. Subtle influences by either party promote cooperation.					
8. Parent and child are 'in tune' with one another.					
9. Overall emotional ambience is warm and positive.					
10. There are clear bouts of negative affect.					
11. There are clear bouts of positive affect.					
12. Negative affect is effectively addressed.					
13. Parent disagrees with or is dismissive of child's emotions.					
14. Parent follows child's lead in conversation.					
15. Parent is demanding of child's contribution.					