

**Attributional Change in Mothers of Children with
Conduct Problem Behaviours**

**by
Rachel Holl**

**Thesis Submitted
for the Qualification of
Doctorate in Clinical Psychology**

University of Leicester

Submission Date: 29th January 1999

UMI Number: U114355

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Acknowledgements

I would like to express my sincere gratitude and thanks to all those mothers who agreed to participate in this study.

I would also like to thank staff at Tanglewood, the Children's Day Resource, in particular Mike Hodgkinson who acted as field supervisor. He contributed a great deal of time, support and valuable inspiration in the development of this study.

I also wish to thank Dr. Stephen Wright for supervising the write-up of this study. His continued support and enthusiasm are greatly appreciated.

In addition, thanks are due to Leicestershire Mental Health Services NHS Trust for their approval of and support for this study, thereby enabling it to be carried out.

Finally I would like to thank all my family and friends who supported and encouraged me and refused to allow me to give up.

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Abstract

Attributional Change in Mothers of Children with Conduct Problem Behaviours

Rachel Holl

This study examines the spontaneous causal attributions made by mothers about their child's behaviour, before and after they attended a Behaviour Management Group for the management of their child's conduct problem behaviours. The attributions of eight mothers were extracted and coded from discourse using the Leeds Attributional Coding System. It was found that mothers made more attributions to positive child behaviours, and fewer to negative child behaviours following the intervention. As predicted there were some changes from pre- to post-intervention in the nature of attributions made. For all types of child behaviour mothers shifted towards causal attributions which were universal, specific and internal to themselves post-intervention. Negative child behaviours were attributed to causes which were more unstable and specific following the intervention, suggesting mothers explanations were more benign post-intervention. Positive child behaviours were more often attributed to causes which were controllable to the mothers post-intervention, suggesting they were taking some credit for the emergence of such behaviours. Methodological issues, proposals for further research and clinical implications are discussed.

Introduction

1. Literature Review

1 i) Parenting Programmes and Conduct Disorder

Between one third and one half of children and adolescents who are referred to mental health services are assessed as having 'disruptive behaviour disorders' (Webster-Stratton & Herbert 1994; Kazdin & Crowley, 1997). The prevalence of these disorders is increasing, creating a vast need for families and a huge demand upon available resources. Webster-Stratton & Herbert (1994) assert that although the presenting behaviours in themselves are not unusual, (non-compliance, oppositional-defiant behaviours, aggression, tantrums) the difference between these difficult behaviours and 'behaviour disorders' lies in the extent to which they cause disruption to the families, the presence of the behaviours in diverse settings such as school and home, and the existence of the behaviours over time. A number of factors serve to increase the risk of children with such behaviour disorders developing further antisocial behaviour problems such as truancy, drug abuse, juvenile delinquency, adult crime and interpersonal problems throughout adolescence and into adulthood (Herbert, 1995). Webster-Stratton & Herbert (1994) propose that such factors include; early age of onset of the problem behaviours, deviance across a wide range of settings, diversity and frequency of problem behaviours and family characteristics. The impact of a child with disruptive behaviour problems on family members should not be minimised, as a qualitative study by Webster-Stratton & Herbert (1994) suggests parents report low self-esteem and or high levels of depression. Maternal depression in particular has been found to be prevalent in the mothers of children with disruptive behaviour disorders (Webster-Stratton & Hammond, 1988). In addition, children with disruptive behaviour problems themselves may be at an increased risk of abuse from carers (Herbert, 1995). Within the wider context, the cost to society of the disruptive behaviour disorders is high, placing huge demands upon health, social services and educational provision (Herbert, 1995). Therefore great importance should be placed on developing effective interventions for these children and their families (Herbert, 1995; Webster-Stratton & Herbert, 1994).

Primarily, interventions for children with conduct problem behaviours have been provided on an individual basis, which is clearly a time-consuming and expensive approach (Webster-Stratton, 1984). More recently, group interventions aimed at parents or families who have children with conduct problem behaviours have gained in popularity. One well researched programme that has been developed by Webster-Stratton (1984) is a therapist-led videotaped modelling programme for families with conduct disorder children. A comparison of the effectiveness of this group programme with a standardised individual intervention was undertaken. All families were from a "high risk" clinical population, characterised by their low socio-economic status, high number of single parents, low mean education, high prevalence of child abuse and deviant nature of the child. The primary reason for referral in each case was the child's oppositional behaviour. Findings indicated that following both interventions positive behavioural and attitudinal changes had occurred relative to a waiting list control group, and these changes were maintained at one year follow-up. There were no significant differences in outcome between the two experimental groups, leading the author to conclude that both treatments offer equivalent and lasting therapeutic effects. Although the therapeutic elements of neither intervention were explicitly identified, one suggestion for the effectiveness of the group approach lies in the mutual support, reinforcement and improved self-efficacy, both with respect to parenting and other relationships, gained within the group.

Traditionally interventions aimed at children with disruptive behaviour disorders assumed a 'parenting deficit model' and thus the focus of the intervention was on working with parents to enable them to develop more appropriate parenting skills (Webster-Stratton & Herbert, 1994). The basis for such an approach is in altering the reinforcement contingencies that support negative child behaviours, thus enabling more positive behaviours to develop (Webster-Stratton, 1991). This notion has its roots in Patterson's family coercion model (Patterson, 1982) which offers an explanation of the development and maintenance of child conduct disorders. The model hypothesises that firstly, cycles of reciprocated aggression between parent and child are set up, through parental tendencies to ignore positive child behaviours and over-react to negative child behaviours. A second process then occurs whereby non-compliance is negatively reinforced through parental withdrawal from the interaction

or further coercive behaviour from the parent, such as yelling or shouting. Consequently, these processes lead to a gradual escalation of the child's aggressive behaviour.

Kazdin (1987; cited in Eyberg, 1992) reviews the literature on parent training for childhood disruptive behaviour disorders, and concludes that this is an effective intervention with children across a wide age range. However, Eyberg argues that the review does not take into account the diversity of approaches employed in various studies, nor methodological differences between studies such as sample size and the type of assessment measures utilised. Other authors propose that interventions focusing solely on developing parenting skills are not always effective in bringing about behavioural change. This has led to the development of broader approaches, encompassing a consideration of other variables apart from a 'skills deficit' thought to be associated with a positive outcome (Herbert, 1995). Among the variables which have been identified are; parental beliefs and cognitions about child behaviours and their attributions regarding the causes of such behaviours (Dix and Grusec, 1985; Webster-Stratton & Herbert, 1993). These variables have been considered a valuable focus for research (Herbert, 1995). Boland (1993) states that parents of children with behaviour problems often hold beliefs about the child as "bad or mad", and argues that these powerful beliefs have an effect on parental child-directed behaviour. Thus the author argues that parental attributions may need to be assessed and challenged in interventions, as a precursor to expecting parental behavioural change. Goddard & Miller (1993) support this view, further asserting that parental attributions contribute to a child's developing self-concept.

Another important reason for including an assessment of parental attributions about child behaviour in parent training, relates to the literature on attrition from such interventions. Reimers et al. (1995) studied the relationship between parental attributions and acceptability of behavioural treatments for childhood behaviour problems with parents who were seeking help for the management of their child's behaviour. These authors developed an attribution measure for the purposes of the study, which assessed parental beliefs about the causes of their child's behaviour on the dimension of physical versus environmental. Analysis of the data showed a

negative relationship between parental physical causal attributions for their children's behaviour problems and acceptability. This could be explained by hypothesising that parents who attribute their child's behaviour problems to physical causes are less likely to accept environmental interventions for changing such behaviour. Following on from this, the authors suggest that those parents who make physical attributions for their child's behaviour may be less likely to implement a behavioural intervention consistently, with the result that its effectiveness is reduced, thus supporting their original attributions. Conversely, parents tending to make environmental attributions would be more likely to implement the intervention positively leading to a successful outcome and consequent reinforcement of their original causal attributions. The authors suggest that future research would be valuable to address the issue of whether parental attributions can be modified prior to the implementation of particular clinical strategies for managing child behaviour. Such a view is supported by Sturm & Drotar (1991) who examined causal attributions made by mothers of children with a diagnosis of nonorganic failure to thrive. The rationale behind their study was the importance of exploring attributions in order to understand parental beliefs more clearly, develop good communication and a working alliance between parents and professionals, and identify any maladaptive beliefs which may be unhelpful or impede the course of the intervention. They found that most mothers perceived the cause of nonorganic failure to thrive as an acute illness rather than a reflection of environmental or interactional causes, despite research indicating the contrary. The authors suggest this may indicate the mothers are maintaining a defensive stance in the form of a self-serving bias, which helps to protect their self-esteem. They assert the importance of exploring these beliefs and facilitating mothers to reattribute the causes of nonorganic failure to thrive in order that any proposed intervention fits with their beliefs, thereby increasing the likelihood that they adhere to it.

A similar study focusing on maternal attributions for enuresis (Butler et al., 1986) found that mothers who attributed a high degree of control to the child for the enuresis, showed greater intolerance of the problem and were more likely to drop-out of treatment. Furthermore mothers highly endorsed being a heavy sleeper as the main cause of enuresis, even though there is no consistent evidence for this belief. The authors suggest that this is evidence of the 'fundamental attributional error' whereby

individuals tend to attribute the behaviour of others to dispositional factors, whilst disregarding situational influences.

1 ii) Attribution Theory

Attribution theory is described by Hewstone (1983) as a 'conceptual framework' which is concerned with understanding how people make sense of the world around them. The principles were first described by Heider (1944, 1958), who assumed that individuals are motivated to perceive their environment as predictable and thus controllable. This idea has been extended through the work of Jones & Davis (1965) and Kelley (1967). Kelley (1967) provides a useful definition: 'Attribution theory concerns the processes by which an individual interprets events as being caused by a particular part of a relatively stable environment' (cited in Weiner, 1972, p.310). Although there is no one attribution theory, there are a couple of key principles (Forsterling, 1986). Firstly, all the attribution theories agree that it is a natural process whereby humans try to explain events which occur in the world, in order to exercise greater control over them. In other words, understanding the causes of events, or making a 'causal attribution', helps individuals to be able to predict the outcome of events in the future (Brewin, 1988). Secondly, the attribution theories state that when an individual experiences a stimuli, it is the particular cognitions or causal attributions produced, that predict their response. Various dimensions of causality have been proposed, and the development of these dimensions has been described by Weiner (1985). According to Weiner, Heider first proposed a distinction between causes which are internal to the individual and those which are external. Later, two further causal dimensions of stability, (stable or unstable) and controllability, (controllable or uncontrollable) were added by Weiner and his colleagues. In 1978, Abramson and his associates (Abramson et al., 1978) proposed a reformulation of the theory of learned helplessness in which they included the causal dimension of globality, which distinguished between those causes that have wide-ranging effects (global) with those that have specific effects (specific).

Attribution theorists propose that the attribution process is most likely to be activated in ambiguous circumstances, when an individual experiences events which are unusual or unwanted (Weiner, 1985), or when expectancies are disconfirmed

(Harvey, 1988). Many authors (e.g.: Harvey et al., 1988; Eiser, 1983) suggest that individuals will be particularly likely to make causal attributions after a traumatic event, as they seek possible explanations for the event.

The relevance of attribution theory to clinical practice, Brewin (1988) suggests is twofold. Firstly, events in the world are complex, and therefore there is a potential for misunderstanding; in other words, making causal misattributions. Secondly, the explanations given by individuals have both behavioural and emotional consequences, the nature of which are determined by the type of attribution made. On the basis that individuals are likely to seek causal attributions to events which are unusual to them, it could be predicted that such cognitive activity would be triggered in parents during difficult parent-child interactions, such as when a child is exhibiting conduct-problem behaviours. By attempting to properly understand the causes and consequences of their children's behaviour, parents will be able to predict and hopefully control the outcomes of their interactions with their children.

1iii) Parental Attributions

Research into parental attributions for child behaviours has found that in 'non-problem' families, parents attribute positive child behaviours to internal and stable factors and negative child behaviours to external and situational factors. An exploration of parental attributions was carried out by Dix et al. (1986), who used as the target material a series of nine vignettes representing three different types of child behaviour; norm violation, altruistic behaviour and failure to be altruistic. Their findings showed that parents made differential attributions for altruistic compared to antisocial child behaviours, in that they viewed children's altruism as more intentional, stable over time and under the child's control than acts of misconduct. These results fit with the notion that individuals tend to make positive attributions about their own behaviour and those they are close to, in order to maintain a positive image of themselves and significant others, a phenomena known as the self-serving bias (Harvey and Weary, 1984). Further, it emerged that these parents tended to interpret the behaviour of older children as more intentional and controllable and likely to be due to personality dispositions. The explanation given for this finding is

that parents are taking into account developmental changes observed in their children. In this way, they make the assumption that with age, children develop greater internal control over their behaviour and thus they are referring to notions of when human competencies emerge.

Scott & Dembo (1993) used hypothetical vignettes involving child misbehaviour, modelled on those employed by Dix et al. (1986) to explore maternal attributions. Mothers were randomly assigned to two groups, with the vignettes for one group describing 'direct defiance' and for the other, 'passive non-compliance'. As predicted, they found direct defiance to be regarded as more intentional and dispositional than passive non-compliance for two age groups of children. However, their results did not fully support Dix et al. (1986) as, for acts of direct defiance, they found no differences in the attributions for controllability and intentionality between the two age groups, suggesting that mothers recognise this form of behaviour as deliberate, regardless of age (Scott and Dembo, 1993).

Further evidence contrary to the Dix et al. (1986) finding that developmental factors are considered by mothers when making causal attributions for child behaviour, comes from an interesting single-case study by Feagans et al. (1988). This was a longitudinal study of one mother's attributions concerning her twins, one who was developing normally and one who was severely developmentally delayed. Naturally occurring maternal attributions for each twin's behaviour and communication were assessed during mother-child interactions. It was found that the mother produced differential attributions regarding the communication abilities of each twin, but identical attributions for each child's behaviour. This suggests that this mother was taking into account each child's developmental level with those attributions that concerned communication, but not with those pertaining to child behaviours. It could be argued that the radically different method employed for assessing attributions in this study, compared to that used by Dix and colleagues, may account for the divergent findings. Alternatively, one could postulate that the single-case nature of the present study illuminates results which become concealed when data from a number of subjects are grouped together. Notwithstanding particular

limitations inherent in the single-case paradigm, the finding that mothers may not always take into account developmental level when making attributions about their child's behaviour, could have important implications.

A study by Gretarsson and Gelfand (1988) examined mothers' attributions about their child's behaviour and personality characteristics. The subjects in this study were predominantly white middle class mothers with children aged between four and 12 years old, who were not from a clinical population. The authors found that these mothers tended to attribute positive child characteristics to inborn and stable causes, and in contrast, negative characteristics as unstable over time and caused by external agents. These mothers attributed prosocial behaviour to personality dispositions and attributed misbehaviour to situational factors. Mothers attributed a greater degree of responsibility to their child for positive than they did negative behaviour. A further interesting finding was that with children whom mothers found difficult to manage, they showed a tendency to attribute negative behaviour as more inborn, which the authors suggest could serve to alleviate them of the responsibility for both the behaviour itself and for promoting change.

Similar findings were reported by Mills & Rubin (1990) with their study of mothers and fathers of four year old children, who provide evidence that parents attribute problematic social behaviours, namely aggression and withdrawal predominantly to internal unstable factors, most usually transient states. Situational factors were also noted by many parents as a cause of aggressive child behaviour, which is consistent with previous research. They also found that age related factors were more likely to be mentioned in their explanations of aggression than withdrawal, and trait explanations were more often given for withdrawal than aggression. The authors postulate that withdrawal was unlikely to be modified by mothers, for which there may be a number of possible explanations. Firstly, mothers may hold a cultural belief that traits such as withdrawal are not modifiable thus informing their decision not to act. Or it may be that behaviours such as withdrawal, which are believed to be unmodifiable are attributed to traits. Alternatively, social withdrawal may leave parents uncertain how to respond, or previous attempts may have been unsuccessful,

thus decreasing parental feelings of perceived power to change such behaviour and leading to trait attributions.

The question of why parents tend towards a positive attributional pattern, can be answered in two general ways. Firstly, it may be that the differences in attributions reflect reality, and negative behaviours really are less stable, intentional, dispositional and under the control of the parent than positive behaviours (Miller, 1995). Alternatively such a pattern of attributing may reflect a positivity bias on the part of the parents (Miller, 1995).

The findings regarding parental attributions for child behaviour outlined above, concern parents of 'non-problem' children. However, if we turn now to parents of children with problems, a rather different pattern of attributing emerges, suggesting that such parents may tend towards a negative attributional style (Scott, 1995).

In a comparison of attributions made by mothers of clinic referred conduct-disordered adolescents and a control group of non-referred adolescents, Baden & Howe (1992) found that clinic mothers were more likely than control mothers to view their child's acts of misbehaviour as intentional, global, stable and uncontrollable for themselves. These authors propose that the combination of clinic mothers blaming their children for acts of misbehaviour whilst at the same time feeling helpless to be able to change their child's behaviour, would be likely to act either as precursors to, or emerge from, family coercion cycles as advanced by Patterson (1982), and discussed earlier. For example, if parents blame their child for negative behaviours, they would be more likely to react with reciprocated aggressive behaviour. This in turn would negatively reinforce the child's negative behaviour, leading to an escalation of the behaviour, thus supporting parental beliefs of helplessness.

Rubin & Mills (1990) who assessed maternal attributions of adaptive and maladaptive child behaviours, with mothers of aggressive, withdrawn and normal children, found significant differences between the groups. Mothers of aggressive children tended to attribute aggression to age-related factors, possibly in this way

seeing aggression as a passing phase leading to the use of more indirect parenting strategies, thus avoiding confrontation. These mothers experienced strong emotions of anger as a result of their child's aggression, but their choice of withdrawal from confrontation, the authors suggest could perpetuate a high level of aggression in the manner proposed by Patterson (1982). Mothers of withdrawn children tended to attribute child behaviour problems to a trait within the child.

A study examining the attributions made by parents of children with a diagnosis of attention deficit hyperactivity disorder (ADHD), was carried out by Johnston & Patenuade (1994). They made a distinction between child behaviours rated as oppositional-defiant (OD) and those they termed inattentive-overactive (IO) behaviours. Results indicated that parents of ADHD children attributed more control to OD than they did to IO behaviours, and supported stronger negative reactions to the OD behaviours. For both IO and OD behaviours, attributions to causes which were internal and controllable to the child were viewed more negatively by parents.

A number of suggestions have been put forward to account for why parents of children with problems tend to show a different style of attributing to parents of normal children. One factor which has been shown to influence causal attributions is immediate mood of the parent (Dix & Reinhold, 1991; Dix, Reinhold & Zambarano, 1990). In their study, Dix & Reinhold induced mothers to experience either happy, angry or neutral emotions, before showing them videotaped sequences of disobedient child behaviours and asking them to rate their beliefs about the cause of such behaviours. They found that transient mood state influenced maternal attributions for misbehaviour, in such a way that subjects who had experienced positive affect, produced consistently more negative attributions than those previously experiencing neutral affect. Furthermore when mothers were angry, they tended to make more negative attributions about child misbehaviour.

A further factor which is believed to influence parental attributions is chronic emotional state (Miller, 1995). There is agreement that mothers with depression report higher levels of child behaviour problems than asymptomatic mothers (White &

Barrowclough, 1998). Several studies which have examined depressed mothers' perceptions of their children, have demonstrated that depressed symptoms contribute at least in part to maternal perceptions of child behaviour, beyond that accounted for by the behaviour alone (Griest, Wells & Forehand, 1979; Webster-Stratton & Hammond, 1988). One suggestion to account for this disparity is given by the 'depression-distortion' hypothesis (Richters & Pelligrini, 1989), which states that depressed mothers distort their perceptions of their children negatively. The learned helplessness model of depression (Abramson et al., 1978) proposes that internal, stable and global explanations for negative events involving the self, contribute to depression. Cognitive theories of depression (Beck et al., 1979) advocate that depression results in a tendency to negatively evaluate all events, which would include depressed mothers evaluations of their children. To date, most studies in this area have focused on the relationship between depression and maternal perceptions of child behaviour, as opposed to maternal attributions (Miller, 1995). One recent exception was a study by White & Barrowclough (1998), who interviewed mothers of pre-school children with behaviour problems. These authors assessed the naturally occurring causal attributions made by subjects to explain their children's behaviour problems. They found differences in the nature of causal attributions between depressed and non-depressed mothers. Specifically it was found that depressed mothers attributed their child's problem behaviours to causes which were more stable, personal and controllable by the child than did the non-depressed mothers. Also a positive relationship was found between the level of depression and self-blame attributions; in other words those which were regarded as being caused by an agent internal to themselves.

A further line of research into maternal bias has been studies into abusive mothers and the beliefs they hold about the causes of their children's behaviour. Abusive mothers are believed to wrongly interpret age-appropriate behaviour as 'wilful disobedience' and noncompliant behaviour as evidence of a 'bad' disposition (Miller, 1995). There is some evidence to suggest abusive mothers share a peculiar pattern of attributing which may make them more likely to abuse (Larrance & Twentyman, 1983). These authors found that abusive mothers made causal attributions for their own children that differed from those they made for other

children on the dimensions of internality and stability, exactly the opposite to the pattern observed in control mothers. However, Stratton & Swaffer (1988) argue that no definitions for these dimensions were given, making the findings difficult to interpret. Evidence against abusive mothers having a particular style of attributing was presented by Rosenberg & Repucci (1983). These authors did not find any group differences between abusive and nonabusive mothers in attributions of intent and disposition. However, there is evidence to suggest that abusive mothers differ from normal control mothers on a dimension of perceived control over caregiving outcomes. Bugental et al. (1989) found abusive mothers were more likely than control mothers to believe that they were unable to control negative child behaviour outcomes, whilst at the same time believing their children could control such outcomes. In addition these authors found abusive mothers with low perceived control over negative outcomes were more likely to show coercive caregiving, which was interpreted as evidence for low perceived control as a moderator of negative affect in response to difficult children.

1 iv) Effects of attributions

Parental attributions about child behaviour may exert an influence on three major areas; parental child-directed affect, parental child-directed behaviour and child development (Miller, 1995). We are concerned here with the former two, and there have been three important contributors to research in these areas; Dix and colleagues, Bugental and colleagues and Rubin and Mills, who have all been mentioned earlier.

Dix and Grusec (1985) propose that the attributions made by parents about their child's behaviour will be a major determinant of their emotional reaction to it. Further studies support this view that parental attributions influence both parental emotion and behaviour (Dix et al. 1986, 1989; Dix & Lochman, 1991). In these studies it has been found that parents experience stronger negative affect if they attribute the cause of negative behaviour to a disposition within the child, or to something the child did intentionally and is thus responsible for. Child behaviours triggering these types of attributions are associated with parental high-power assertive strategies for managing the difficult behaviour. As has already been mentioned,

parents' attributions of knowledge, intentionality and responsibility are generally believed to increase with age, thus meaning that parents will be more upset with the misbehaviour of older children, and are likely to respond more strongly. Behaviour is therefore considered in relation to the child's age, but age alone is not a good predictor of discipline; rather Dix and colleagues suggest age-related changes in attributions may influence discipline choice through altering affective reactions (Dix et al. 1989).

Bugental's research, which has employed observations of parent-child dyads, describes attributions as moderator variables, rather than directly influencing maternal behaviour (Bugental, 1987). Further research to test this model (Bugental et al., 1990) found that the more mothers attribute negative outcomes to the child, the more negative affect is produced in the mother, especially when they believe they have little control over the behaviour. There is also evidence that these effects are most marked when mothers are dealing with a difficult child. Using computer-simulated enactments of responsive and unresponsive children, Bugental's team (Lewis et al., 1991) found that women with low perceived control were maximally influenced by child responsiveness. So when viewing unresponsive children, these mothers reacted with negative thoughts and attempts to regain control using high-power strategies, which ultimately were unsuccessful, thereby reinforcing their original attributions. Day et al. (1994) provide consistent evidence that parental use of harsh disciplinary practices appears to be mediated by their degree of self-efficacy as a caregiver. Both the present researchers and Bugental and colleagues advocate assessing parental attributions and self-efficacy as part of a clinical intervention. Furthermore, they note that it would be valuable to investigate the precise effects of altering parental attributions, and to study attributions through different methods, such as the clinical interview.

1 v) Attributional Change

As discussed above, certain patterns of parental attributions can be seen to be less helpful than others, therefore one aim of an intervention should be to manipulate such attributions. Brewin (1988) suggests that one way to produce attributional change would be to offer new explanations for ambiguous experiences, by providing information which is inconsistent with an individual's prior belief. However, in the

literature, there is very little evidence for the efficacy of attributional manipulation within clinical interventions. One conceivable explanation for this is that there exists a belief that attributions are relatively stable entities, and therefore not readily amenable to change. Early reattribution studies focused primarily on attempts at systematic reattribution training for various aspects of academic and intellectual achievement (Brewin, 1988). However, one study aimed at modifying the more general attributional style of college students (Layden, 1982; cited in Brewin, 1988) found that, relative to a control group, subjects who had received reattribution training changed their attributions for their successes and failures in a positive direction as predicted, and levels of self-report depression and self-esteem improved.

Alexander et al. (1989), from a family therapy perspective, examined reattribution manipulation, involving an experimenter offering new and different attributions for child behaviours, to families in therapy. Causal attributions were compared before and after this manipulation. Contrary to their hopes, the authors found this approach to be unsuccessful in changing family members' attributions for the causes of child behaviours. Although the authors offer possible methodological reasons why the expected results were not observed, they conclude that negative attributions are difficult to shift, and that the reattributing of events may need to be repeatedly applied in order to effect any change.

Goddard & Miller (1993) incorporated the concept of attributions into their parenting programme, with middle class mothers and fathers of school aged children exhibiting conduct problem behaviours. At the end of the intervention, mothers perceived themselves as more able to see good in their children, as feeling less angry and upset by their children's behaviour, and more likely to say things that made their children feel good. This study did not employ a control group of parents, and the authors are careful to note that observed changes may not necessarily be a consequence of the attributional elements of the programme. They conclude by advocating the inclusion an assessment of parental attributions, followed by challenging of unhelpful attributions, as part of parenting programmes.

Munton & Antaki (1988) compared the attributions made by five families who were rated to have changed positively following family therapy and five who were rated as having made no positive changes after therapy. First and last therapy sessions were video-recorded and transcribed, and naturally occurring causal attributions were extracted and coded using the Leeds Attributional Coding System (Stratton et al., 1988). These authors predicted that those families who had changed would make less stable and global attributions, more situational and fewer trait explanations for negative events. However, there was no evidence of the emergence of such predicted patterns of attributing. They did find that those families who had not changed made more stable attributions after therapy, but these same families had made significantly more stable attributions even before therapy began. One possible explanation for why the predicted patterns of attributing did not emerge, was that attributions made by all family members were examined simultaneously, possibly masking attributional change within each individual family member. Alternatively, the authors suggest that behavioural change may be a precursor to attributional change, and that if causal attributions had been assessed at follow-up, more significant group differences may have emerged.

1 vi) Relationships between attributions and outcome

A meta-analytic study of eight separate studies which investigated the relationship between parental attributions and parental satisfaction or child adjustment was conducted by Joiner & Wagner (1996). The studies varied considerably in the populations selected, attributional dimensions included and outcome measures employed. Despite this, the meta-analysis provided significant support for the notion that parental child-centred attributions are reliably related to various outcome measures. More specifically, of all the attributional dimensions studied, those of stability and globality were correlated most strongly with outcome. The direction of the relationship was such that more stable and more global attributions were associated with poorer outcome, a finding which is consistent with the hopelessness theory of depression (Abramson, Metalsky & Alloy, 1989; cited in Joiner & Wagner, 1996). There was moderate support for internality as a correlate of outcome, which the authors suggest may relate to measurement difficulties on this dimension. Finally, the

commonly cited dimension of controllability received little support, in contrast to the vulnerability to depression literature in which this features as the crucial attributional dimension (Anderson & Arnoult, 1985; cited in Joiner & Wagner, 1996). Although these are interesting findings, criticisms can be made of the study, including the fact that only a relatively small number of individual studies were included for analysis, there was large variation in outcome measures used, and seven out of eight of the studies were cross-sectional, thus revealing nothing about the causal nature of the relationship between attributions and outcome variables.

Watson (1986) investigated whether there was any relationship between parental attributions and the outcome of family therapy. A brief structured interview was used to assess maternal attributions about child behaviours. It was found that mothers attributions were predictive of therapeutic outcome. Poorer outcomes were observed in mothers who attributed their child's behaviour problems to a disposition within the child, than those who attributed it to external situational factors. There was also a positive relationship between the maternal self-perceived responsibility and outcome success.

Wright et al. (1990) studied family attributions and adjustment in adolescent end-stage renal failure. This study employed the Leeds Attributional Coding System (Stratton et al., 1986), to analyse attributions made in interviews with 11 well-adjusted and 11 poorly-adjusted families. Using a variety of adjustment measures, they found the well-adjusted families made significantly more universal attributions than the poorly-adjusted families. The well-adjusted families also tended to make more external attributions than poorly-adjusted families, although this difference was not statistically significant. Poorly-adjusted families made more internal, personal and controllable attributions to the adolescent, thereby taking a blaming stance for negative outcomes. Analyses of the number of attributions made by the two groups indicated that overall, poorly-adjusted families made a greater number of attributions, although taking positive outcomes alone, the well-adjusted group made more such attributions.

Silvester et al. (1995) used the Leeds Attributional Coding System (Stratton et al., 1986) to investigate attributions made in interviews by abusive families, whose prognosis had formerly been rated as 'good', 'uncertain' or 'poor'. They found that families who had ratings of 'uncertain' or 'poor' attributed more control to the abused child and less to themselves for negative outcomes. Families rated 'good' were more likely to attribute negative outcomes to unstable causes, than 'poor' or 'uncertain' families, but this was not a significant difference. These findings suggest that abusive families with a good prognosis have greater expectations for change and believe that change is possible.

vii) Summary of the literature

This discussion began by giving a brief description of the 'disruptive behaviour disorders' and the value of developing effective interventions, moving beyond the 'parent deficit' model. Parental attributions for child behaviours have been presented as one important factor believed to interact with parenting, thus influencing the outcome of any intervention. In non-problem families it has been found that parents tend to attribute positive child behaviours to internal and stable factors, and negative child behaviours to external and unstable factors, thereby maintaining a positive image of themselves and their child. In contrast mothers of children with problems generally show the opposite pattern of attributing, tending towards a negative attributional style. Furthermore, mothers of children with problems may fail to take into account the developmental level of the child when attributing cause to their actions, such as abusive mothers who believe their child's negative behaviour to be more intentional and controllable by their child than normal mothers. Bugental's model has been presented, which proposes that parental attributions act as moderator variables between child behaviour and parental response, by affecting parental affect. For example if a parent perceives a negative act of child behaviour as dispositional or intentional, they are likely to experience stronger negative affect in response, in turn leading to a more coercive response. The implication of Bugental's model for the present study is clear: if the goal of the intervention is to change parental behaviour in order to alter the reinforcement contingencies sustaining reciprocal negative interactions as described in Patterson's model, then changing the parental attributions

supporting their actions is a crucial element. Thus far, research has paid scant attention to interventions which aim to change attributions, possibly because there is a view that they are relatively stable entities. The meta-analytic study cited suggests that the attributional dimensions most likely to be related to child and parent adjustment are stability and globality, and other research suggests that individuals who are poorly adjusted are likely to make more causal attributions than those well adjusted.

2. Methodological Issues

Typically research into parental causal attributions has used questionnaires with structured Likert response scales, in order to assess attributions (Harvey et al., 1988). Using such methodology, respondents would be asked to rate to what extent they believe stated causes are implicated in a particular outcome. However, researchers have varied in their choices regarding exactly what it is parents are asked to judge (Miller, 1995). Some studies have required the parent to provide examples of behaviour of their own child, about which they then make causal attributions. Clearly when analysing such results with groups of parents, different outcomes are being considered. In other studies parents have been provided with scenarios and then asked to imagine their own child behaving in that particular manner, before rating their beliefs about causality on a Likert scale (e.g. Rubin & Mills, 1990; Mills & Rubin 1990). However, the disadvantage of such a procedure is that there is no certainty that parents have ever witnessed such behaviour with their own child, and therefore may not have previously generated any accompanying causal attributions. Another significant line of research, by Dix and associates once again uses standard situations, but of a hypothetical child the same age and sex as the parent's own child. In each of the methods described, the immediate target is verbal - asking the parent to memorise or imagine a particular outcome (Miller, 1995), and never have naturally occurring attributions during a parent-child interaction been studied. This is understandable given methodological issues which would need resolving in order to utilise such a technique. Although structured techniques of the type described above produce data which can be analysed quantitatively, the disadvantage is that respondents may be constrained by the particular dimensions given. Furthermore, as Hewstone (1983) points out, language plays an important role in the attribution process, both in the stimulus language, or material from which the attributions are made, and response language, that which the subject has available to explain the given behaviour. With questionnaire techniques the respondent has no control over either the stimulus or the response language, with the possibility that the language chosen by the researcher is not relevant or meaningful to all respondents. A large body of research that has employed structured techniques has accumulated, and this has certainly paved the way

for developing an understanding of the nature and consequences of causal attributions (Stratton et al., 1988). However, given the methodological issues discussed, the reliability of such structured techniques for assessing attributions has been called into question (Stratton et al. 1986; Scott, 1995). This has resulted in a developing interest in using more open techniques in order to elicit attributions from natural discourse (Harvey et al., 1988). The clear advantage of this method is that it enables respondents to describe causal beliefs in their own words, without the constraints inherent in a questionnaire (Harvey et al., 1988).

The Leeds Attributional Coding System (LACS; Stratton et al., 1986) is a system for extracting and analysing causal attributions produced in natural discourse. The LACS has been developed out of existing attributional theories, particularly the attributional reformulation of learned helplessness (Abramson et al., 1980). Revised definitions have been provided for each of the dimensions, and one significant advance is the distinction between the dimensions of personal/universal and internal/external in order to clarify earlier confusion over the latter dimension (Stratton et al., 1986). The process of using the LACS involves three stages. Firstly attributional statements are extracted from natural discourse and they are then coded along five attributional dimensions (stable/unstable, global/specific, internal/external, personal/universal and controllable/uncontrollable). The speaker and target (the person to whom the outcome happens) are each identified, and outcomes are rated as positive, negative or neutral. Following the coding of attributional statements, the third step in the process involves the use of quantitative analyses, in order to examine the number of attributions made and their dimensional content.

3. Present Study

3 i) *Methodology*

The investigation reported here sought to investigate the frequency, content and attributional dimensions of spontaneous causal attributions made by mothers of children with conduct problem behaviours. Mothers were all from families who attended a Behaviour Management Group for the management of their child's difficult behaviour. Based on the argument presented above, an open-ended technique was chosen for assessing causal attributions from natural discourse. Semi-structured interviews were carried out with mothers before and after they completed the Behaviour Management Group, and causal attributions were extracted and analysed using the Leeds Attributional Coding System (Stratton et al., 1986). Two outcome measures were also completed by mothers - the Eyberg Child Behaviour Inventory (ECBI; Robinson et al., 1980) and the Beck Depression Inventory (BDI; Beck, 1972), in order to examine possible relationships between outcome and the nature of causal attributions made.

3 ii) *Hypotheses*

Based on the literature described above, a number of hypotheses were made as follows:

- a) It was predicted that post-intervention, subjects would report fewer and less intense child behaviour problems, as measured by the self-report ECBI.
- b) Associated with the above, it was predicted that subjects own adjustment would improve from pre- to post-intervention, as indicated by a decrease in their self-report level of depression, as measured by the BDI.
- c) It was predicted that the total number of causal attributions made by subjects would significantly decrease from pre- to post-intervention, as greater numbers of causal attributions have been found to be associated with poorer adjustment (Wright et al. 1990). Furthermore, it was expected that at post-intervention, fewer of the causal

attributions made by subjects would be ambiguous, as compared to pre-intervention, as they would have moved towards attributional clarity.

d) It was predicted that subjects would make significantly more causal attributions concerning positive child behaviour outcomes, and significantly fewer causal attributions concerning negative child behaviour outcomes following the intervention than prior to it. This hypothesis is in line with Patterson's (1982; cited in Baden & Howe, 1992) family coercion model, which proposes that one factor responsible for the setting up and maintaining of reciprocated aggression within families, is a parental tendency to ignore positive child behaviours. In this case, one could assume that mothers are unlikely to be making many spontaneous causal attributions about their child's positive behaviours, if they are rarely noticing such behaviours.

e) It was predicted that the dimensional content of the causal attributions made by subjects would change from pre- to post-intervention. Specifically it was expected that, for negative child behaviour outcomes, subjects would shift towards attributing the causes as more specific, unstable, external to the child, universal, uncontrollable to the child and controllable to the subject. For positive child behaviour outcomes, it was expected that subjects would shift towards attributing them to causes which were more stable, global, internal to the child, personal to the child and controllable by the child.

Method

Subjects

The subjects were mothers from families who were referred for inclusion within a Behaviour Management Group programme, which was provided as a tertiary service by a local Child and Family Psychiatric Service. Due to small numbers of families included within each Behaviour Management Group, subjects were recruited from two cohorts of families who attended consecutive Behaviour Management Group programmes. These two Behaviour Management Group programmes were run at the Day Resource between March and May of one year. No additional groups had been planned for later in the year.

In total, there were 13 families who accepted the opportunity to be included within one of the two Behaviour Management Groups. Mothers from all of these families were approached to request their inclusion within the study. It had been expected that there would be a low percentage of mothers choosing not to take part in the study, as it had been stressed to families attending their screening assessment for inclusion within the Behaviour Management Group that further assessment and evaluation was a crucial component of the group. However, three mothers out of the 13 did decline to participate in the study, leaving 10 subjects, six from the first Behaviour Management Group and four from the second, who completed the pre-intervention assessment prior to commencing the group. Unfortunately two of these subjects, one from each cohort, declined to participate in the post-intervention assessment following completion of the group programme, thus rendering their data obsolete. Therefore the total number of subjects who completed both assessments was eight, five from the first Behaviour Management Group and three from the second.

The ages of the subjects ranged between 29 years 5 months and 53 years 2 months, the mean age being 36.3 years. Regarding relationship status, six subjects were married and living with the identified child's father, one was currently single, and one was cohabiting with a new partner who was not the identified child's birth father. The subjects recruited to this study were all primary carers for their children.

In each family there was an identified child, whose behaviour had presented management difficulties to the parents, thus prompting a referral to the Child and Family Psychiatric Service. The gender ratio of the identified children was seven boys to one girl. The ratio of boys to girls in this study was higher than one would expect on the basis of reported gender differences in the prevalence of childhood behaviour disorders. However, the research consistently indicates that childhood behaviour disorders occur more frequently in boys than in girls (Robinson et al., 1980). The ages of the identified children immediately prior to the intervention ranged from four years six months to nine years ten months, with a mean age of 7.32 years.

In the initial stages of the study, I had planned to generate a control group of mothers, who would comprise those on the waiting list for the second Behaviour Management Group. The aim had been that control data would be collected from these mothers at two points prior to beginning the group. Unfortunately, smaller numbers of families were involved in each group than had been predicted, due to limited staff availability within the service. Therefore it was decided that it would be important to generate as much experimental data as possible and as such, a control group was not feasible. Furthermore, it was felt that as there would be no direct payoff to subjects participating in the study, recruiting subjects to a control group would be especially difficult. The collection of control group data was therefore abandoned.

Behaviour Management Group

The Behaviour Management Group is one of a range of group programmes provided by the local Children's Day Resource, which is a tertiary service to the Child and Family Psychiatric Service. The format of the Behaviour Management Group involves a small group of families, approximately five to seven, attending the Children's Day Resource for an intensive intervention, one whole day per week for three consecutive weeks. The model is based upon research suggesting that group interventions are as effective as individual approaches in alleviating conduct problems in children. Evidence in support of the efficacy of the Behaviour Management Group has been provided by Hodgkinson (1997) who evaluated two cohorts of families who completed the group. These two cohorts differed in the mean ages of the identified

child in each family, such that the mean age in the first group was eight years nine months and in the second was just five years. Using multiple outcome measures including the Eyberg Child Behaviour Inventory (ECBI; Robinson, Eyberg & Ross, 1980), the Beck Depression Inventory (BDI; Beck, 1972) and a revised form of the Knowledge of Behavioural Principles As Applied to Children (adapted from O'Dell, Tarler-benolo & Flynn, 1979), the author found that parents rated the intensity and number of problem behaviours as significantly lower post-intervention than they had done pre-intervention. Furthermore, parents showed a significantly greater knowledge of behavioural principles following the intervention. However, there was no significant change from pre- to post-intervention in self-report levels of depression. A waiting list control group was employed and no significant differences in any of the measures were found in this group. In addition to evidence in support of the effectiveness of the Behaviour Management Group, such an approach provides a time efficient and cost-effective solution to the problem of lengthening waiting lists within the Child and Family Psychiatric service, especially for those children presenting with oppositional-defiant and conduct disorders (Davison, 1996).

All parents plus their identified child were invited to attend the first of the three days, but the two consecutive days were designed for parents only. The purpose of inviting the identified child to the first day was to enable further assessment through observation of the child and the nature of their interactions with their parents (Hodgkinson, 1997). The Behaviour Management Group was run on the principle of facilitating parents to manage their children's behaviour more effectively, within an environment which promotes families to have fun together, thereby breaking the cycle of negative interaction (Davison, 1996). The content of the Behaviour Management Group comprised a variety of activities including large group meetings, family meetings and parents groups. The emphasis throughout the Behaviour Management Group was predominantly behavioural, with attention paid to exploring parents' understanding of their children's behaviour more clearly. The content and structure of the Behaviour Management Group remained essentially identical for both cohorts of families (see Appendix for details).

The Behaviour Management Group accepts families who are on the Child and Family Psychiatric Service waiting list, having been referred from an agency outside the service. Seven of the subjects were from families recruited to the Behaviour Management Groups in this way, all of whom were initially referred by their General Practitioners and had been on the waiting list for some time. The remaining subject was referred to the Behaviour Management Group internally, having been assessed by a member of the Child and Family Psychiatry Service. All families were then seen by a member of the staff team from the Day Resource, in order to assess their suitability for the group. The following criteria operate with regard to inclusion of families within the Behaviour Management Group:

- Behavioural conduct problems (e.g. oppositional behaviour, tantrums, non-compliance) in the identified child are the main presenting problem.
- There is no evidence of overt psychiatric disturbance or severe learning difficulties in the identified child.
- The identified child is aged between two and ten years old.
- The identified child/family are not receiving simultaneous input from another agency, specifically for behavioural conduct problems.
- The family live within reasonable distance of the Day Resource and are willing or able to travel.

Procedure

Ethical permission for the study was sought from Leicestershire Health Ethics Committee, following their standard procedure. This was granted without major changes to the design or procedure planned.

After families had been assigned and accepted a place on one of the Behaviour Management Group programmes, the mother from every family was approached in writing by the co-ordinating Clinical Psychologist at the Day Resource in order to request their participation in the study. In this information letter, the study was described as an 'Evaluation of the Behaviour Management Group'. The purpose of the evaluation was described as looking at how mothers make sense of their child's behaviour and what possible changes may occur within families who attend the

Behaviour Management Group. It was explained that participation would involve the researcher meeting the mother on two occasions, before and after completion of the Behaviour Management Group and at each meeting the mother would be asked to complete two brief questionnaires, and take part in a discussion about their child's behaviour. It was detailed that this discussion would be tape-recorded for the purposes of the research. The name and designation of the researcher was given, and it was clarified that the evaluation was being undertaken to fulfil the course requirements of a Doctorate in Clinical Psychology. Mothers were asked to contact the aforementioned Clinical Psychologist if they did not wish to participate in the evaluation. It had been decided that this was adequate consent, as when families attended the initial assessments it had been made clear to them that they would be required to complete questionnaires and other assessment measures as part of the group programme. The information letter clearly stated that should mothers not wish to participate in the evaluation, their right to attend the Behaviour Management Group would not be affected in any way, and they would have the right to withdraw from the evaluation at any stage. Confidentiality was assured and it was stated that no names would be included in the write up of the research, and any other identifying features would be changed to ensure confidentiality. Further details regarding confidentiality were given to subjects when they attended for the assessment sessions.

The research followed a repeated measures design, whereby data was collected on two occasions, once before subjects had commenced the Behaviour Management Group and again shortly after completion of the group. There was some variation in the time elapsed between measurements between subjects for practical reasons. However, all subjects were seen for the first assessment not more than four weeks prior to commencing the Behaviour Management Group and again, for the follow-up assessment, within four weeks of completing the group. Subjects were seen either at the Day Resource or in their own homes - in such cases where transport or childcare presented a particular difficulty to the subject.

At each assessment, subjects were first introduced to the researcher and the purposes of the evaluation as given in the information letter, were reiterated. Subjects

were reminded of the confidential nature of the study, specifically that the information they gave would be used solely for the purposes of the research study, and would not be passed on to staff members running the Behaviour Management Group in a form by which individual participants could be identified. Subjects were also reminded that no names would be included in the write-up of the research. Written consent was sought from subjects to tape-record the semi-structured interview to enable it to be transcribed at a later date. It was also explained to subjects that if there was anything that they had discussed in the interview that they did not wish to be included in the transcript and further analysis, they were entitled to ask for that part of the interview to be deleted. All eight subjects gave their consent for both pre-intervention and post-intervention interviews to be tape-recorded, and none identified any elements of their interviews that they wished to be deleted prior to transcription.

Subjects completed all measures at both the pre-intervention assessment and post-intervention assessments, and all measures were administered in one session, which lasted approximately one hour. The two questionnaires given which are described fully below, are designed to be self-administered. However, to control for the possibility that some subjects may have had difficulty reading or understanding the items in the questionnaires, every subject was asked whether they would prefer to read and complete the questionnaires on their own, or have the items read out by the researcher. One subject chose the latter option, and she had some difficulty comprehending individual items, necessitating clarification to be given by the researcher. In all assessments the questionnaires were administered before the semi-structured interview, as occasionally subjects expressed some anxiety about the prospect of being tape-recorded, and this format helped to put them at ease.

Although there was clearly some variation between subjects in the length of time taken to administer the interview, the average time taken was approximately 45 minutes. Each interview was tape-recorded using a Sony TCM-335V Cassette-Corder and Electret Condenser Microphone, which was placed on a table between the subject and the interviewer. This system offered a high quality sound recording whilst at the same time remaining as unobtrusive to the subject and interviewer as possible.

The three assessment measures completed by subjects were as follows:

i) Eyberg Child Behaviour Inventory (Robinson, Eyberg & Ross, 1980). The Eyberg Child Behaviour Inventory (ECBI) is a 36-item rating scale of conduct problem behaviour for children between the ages of 2 and 17. Respondents rate how often each behaviour occurs with their child on a 7-point frequency of occurrence scale, between 'never' and 'always'. The total score resulting from the sum of individual scores yields an 'Intensity score'. Respondents also indicate on a 'yes' or 'no' problem-identification scale whether each behaviour is currently a problem to them. The total number of behaviours rated as a problem generates a 'Problem score'.

The ECBI was chosen as a measure of child conduct problem behaviours as it has been standardised on a population of the parents of 512 children between the ages of two and 12 years (Robinson et al., 1980). Factor analyses of the ECBI for both children and adolescents have shown that the ECBI is a valid measure of a one-dimensional construct, "conduct problem" (Eyberg & Robinson, 1983; Robinson et al., 1980). Discriminant validity has been demonstrated by significant differences on the ECBI between conduct-problem children and other clinic-referred children, and conduct-problem children and normal children (Eyberg & Robinson, 1983; Eyberg & Ross, 1978). The ECBI has also been shown to be consistent across the age range and socio-economic status (Eyberg & Robinson, 1983). A number of authors (e.g. Eyberg & Robinson, 1982; Webster-Stratton, 1984), have found the ECBI to be a sensitive measure of change, and concurrent validity has been demonstrated with the widely used Achenbach Child Behaviour Checklist (Boggs et al., 1990).

There are clearly disadvantages of employing maternal self-report as a measure of conduct problem behaviours, as they are liable to potential biases, and it could be argued that maternal perceptions of child behaviour do not represent an objective measure of outcome (Robinson et al., 1980). Therefore, ideally additional outcome observational measures, such as the Dyadic Parent-Child Interactive Coding System (Robinson & Eyberg, 1981), would have been employed. However, time limitations meant that for this study only a self-report measure of behaviour was practicable.

ii) *Beck Depression Inventory (Beck, 1972)*. The Beck Depression Inventory (BDI) was chosen as a measure of maternal distress, as maternal depression has been shown to be associated with an increased risk of child conduct problems, (Webster-Stratton & Herbert, 1993). The BDI is a 21-item self-report questionnaire used to measure the severity of depression in adults. Each item consists of four statements rated on a four point scale, (0, 1, 2 and 3) and the respondent is required to indicate which statement best describes how they have been feeling over the past week including the present day. A total score is calculated by summing the individual scores from all of the items. Scores may be categorised as follows: 11-18 indicates mild depression; 19-25 indicates moderate depression; and 26 or above indicates severe depression (Beck, Steer & Garbin, 1988). The BDI has been frequently used as a screening measure in research studies, as it is brief and easy to administer, whilst at the same time offering good validity and reliability.

iii) *Semi-Structured Interview*. Subjects were administered a semi-structured interview, which had been designed specifically for this study (see Appendix 1). The purpose of the interview was to facilitate subjects to make causal attributions about their child's behaviour, using an open-ended technique. The interview schedule was designed for the study as there were no other currently available measures for use in assessing maternal causal attributions using an open-ended technique.

The interview was designed to facilitate an in-depth discussion with subjects concerning child behaviours in their identified child which they were finding difficult to manage - 'bad' behaviours, and also those which they were finding easy to manage and thus considered to be 'good' behaviours.

The interview schedule was initially piloted on two mothers who had children within the age range of those in the study. These mothers were colleagues of the researcher, and neither of them were currently seeking or had sought in the past, a referral for help in managing their child's behaviour. Individual interviews were conducted with these two mothers, which were tape-recorded and then transcribed. Causal attributions were extracted following guidelines given in the Leeds

Attributional Coding System (LACS; Stratton et al., 1988). It was apparent from this analysis that the interview schedule relied too heavily on closed questions, in particular, questions relating to subjects' beliefs about the causes of behaviour on the five attributional dimensions coded in the LACS. Due to this limitation in the design of the interview schedule, naturally occurring causal attributions were not a frequent occurrence in the two pilot interviews. This resulted in adaptations being made to the original interview schedule. The adaptations focused primarily on developing more open ended questions asking subjects to describe child behaviours in more detail. After these alterations had been made the subjects were interviewed using the revised interview schedule.

Analysis

All interviews were transcribed and the transcriptions were then checked against the original recording for accuracy before any further analysis. Causal attributions from the written transcripts of the semi-structured interviews, were extracted and analysed according to guidelines set out in the manual of the Leeds Attributional Coding System (Stratton et al., 1988). The first stage of the analysis involved examining the transcripts to identify and extract all causal attributional statements. In order for a statement to qualify as a causal attribution, the authors state three conditions which must be satisfied:

- i) The statement must refer to a specific event, outcome or behaviour, which can be real or hypothetical.
- ii) The statement must offer a specific cause as being responsible for the event.
- iii) The cause and the outcome must be linked together in the statement.

As the particular focus of this study was on subjects' causal attributions about their child's behaviour, only statements referring to child behaviour outcomes, specifically concerning the identified child, were included for further analysis. This meant that some causal attributional statements were discounted as they related to outcomes other than the identified child's behaviour. Following the manual, and the particular interests of this study, causal attributions reported by a third party were not included, nor were historical attributional beliefs, which could not be assumed to be

currently held by the subject. Guidelines in the manual regarding statements in which more than one outcome or cause are combined in one statement were followed. Thus, where a cluster of causes (or outcomes) were similar, they were grouped together in a summary statement in brackets; if not the speaker's own words were used. In contrast when a cluster of causes or outcomes were of a different nature, they were divided into separate statements.

Four transcripts were checked for the reliability of extraction of attributions by a second coder (Stephen Wright) who was experienced in the use of the LACS. This process was undertaken independently of the researcher. The percentage of statements extracted by both coders was calculated and then further discussion took place in order to resolve any differences of opinion regarding extraction. Although the LACS manual provides extraction instructions for most types of attributional statements likely to be encountered in natural discourse, it was apparent that certain types of causal attributions arising in the transcripts were not explicitly accounted for. Therefore a number of ground-rules were agreed between the researcher and SW, which were used to increase the correspondence with which causal attributions were extracted from the transcripts. The most important guideline in mind when extracting and coding causal attributions was to attempt to understand the speaker's intention, at all times. However, this was not always immediately apparent. For example in the statement; "He contradicts whatever I say, just to be irritating", is the cause, him contradicting and the outcome, being irritating? Or is the cause, having the intention of being irritating, the outcome of which is him contradicting? In such statements where the cause and outcome appeared to be interchangeable, it was important to look to the context in which the statement was made, in order to gather further information on the intention of the speaker. Clearly it was vital that the two coders were coding the same part of each statement, as any differences would lead to confusion and inaccuracy. Disagreements regarding the extraction of causal attributional statements were almost entirely resolved through discussion between the researcher and SW. New ground rules which were devised for the purposes of this study are given below:

- In some cases a causal attribution was repeated by a subject, when referring to the same event more than once. It appeared that this occurred in order for the subject

to clarify to the interviewer their attributional belief. It was agreed to include only one statement in these instances. However, if two different causal attributions were stated referring to the same outcome, both were included.

- Frequently, causal attributions were given by a subject in the form of a question. It was decided to include these attributions under a sub-category of 'Ambiguous' attributions, as this would have been valuable information to leave out, yet there was clearly an element of uncertainty in the subject's attributional belief. Ambiguous causal attributions were then coded according to the standard guidelines. Those attributional statements which were not rated as 'ambiguous' were referred to as 'Definite' attributions, in order to distinguish between the two types of attributional statement.
- Each causal attribution had to contain a cause and outcome linked together, although in some cases this would span more than one sentence of speech. It was agreed that a statement would qualify as a causal attribution if this was the case, even if the link was given by the interviewer in order to clarify the speaker's meaning.

Once causal attributions had been extracted from the transcripts, they were recorded as individual statements, following a convention suggested in the manual, in which the cause in the statement was underlined. The authors state that this practice is important to ensure that different coders are not coding different parts of the same statement.

The next stage in the analysis involved coding each causal attribution along a number of attributional dimensions elucidated in the LACS manual, which have been derived from the attribution theory research. SW independently coded 40 causal attributional statements, which was approximately 10% of the total number of attributions produced by the subjects. 20 of these were statements were taken from one initial assessment interview, and 20 from a follow-up interview. Both these interviews had been randomly selected by the researcher. Disagreements regarding the coding were resolved primarily through discussion between the researcher and second coder. Statements were coded directly onto Microsoft Excel spreadsheets, to enable further analysis. Bar one exception, the columns in each spreadsheet followed the

convention given in the LACS guidelines. The definitions given below are taken from the LACS manual (Stratton et al., 1988):

Column 1: Multiple Statements: This indicates whether the attribution is part of a complex statement that has been broken down. Usually an attribution is in the form of a single statement, and is coded with [0]. An attribution is multiple if more than one cause or outcome are quoted within the statement. When the statement contains more than one cause for the same outcome, it is coded [1], and when there is more than one outcome for the same cause, it is coded [2]. An attribution would be coded [3] if there are multiple causes and outcomes.

Column 2: Definite [1] / Ambiguous [0]: According to the manual, this column is used to indicate who is the speaker and who is the target (the person to whom the outcome happens), when coding interviews with families which have multiple speakers and targets. As there was only one speaker in the interviews in this study, and it had been decided only to analyse child behaviour outcomes (i.e. the identified child would always be the target), the distinction between speaker and target was redundant in the present study. The column was used instead to indicate whether the attribution given by the subject was definite [1], or in the form of a question; i.e. ambiguous [0].

Column 3: Stable [1] / Unstable [0]: This column is used to indicate the probability that the cause will be present or operative on relevant occasions (i.e. the topic of the outcome) in the future. If the cause is believed by the speaker to be more likely than not to apply in the topic of the outcome in the future, then stable [1]; if it would only apply about half the time or less, then unstable [0]. The manual suggests that events with a probability in the given context of about 0.75 are defined as stable.

Column 4: Global [1] / Specific [0]: This column is used to indicate whether the cause has limited consequences or is likely to have widespread consequences. If the cause is believed by the speaker to be likely to influence at least a moderate range of outcomes which are regarded as non-trivial by the speaker, then global [1]; if few such links exist, then specific [0].

Column 5: Internal [1] / External [0]: If the speaker believes the cause to originate within the person being coded (a psychological, physical or behavioural characteristic), then internal [1]; if it is believed to originate outside of the person, whether a characteristic of another person or a circumstance, then external [0].

Column 6: Personal [1] / Universal [0]: This is concerned with whether the causal sequence occurred only because this particular person was involved. If anything in the statement (cause link or outcome) is believed by the speaker to indicate something particular or idiosyncratic about the person being coded, then personal [1]. If it would apply to any normal member of the appropriate reference group, in terms of age, sex, cultural group etc. then code universal [0].

Column 7: Controllable [1] / Uncontrollable [0]: This is a classification of outcome, and the primary concern is in deciding how much control the person had over the outcome. If the speaker believes the person being coded could normally manage to significantly influence the outcome in the absence of exceptional effort or circumstance, then controllable [1]. If the sequence is believed to be inexorable or inevitable in normal circumstances, then uncontrollable [0]. Statements taking the form of; “If we did this, that would happen” are coded controllable.

Column 8: Actual [1] / Hypothetical [0] Outcome: If the outcome is believed to have occurred then it is coded as actual [1]. If the statement represents a hypothetical possibility, then it is coded as hypothetical [0]. These codes represent a slight deviation from the LACS manual, in which [1] is used to indicate actual outcomes and [2] hypothetical outcomes. For the purpose of consistency with coding on the other dimensions, the codes employed were altered as given. Frequently in discourse, the word “If” is used about events that have recently happened, so in such cases this was taken as the equivalent of “When” and coded as an actual outcome.

Column 9: Positive [2] / Neutral [1] / Negative [0] Outcome: This column is used to indicate the speaker’s feelings about the event being coded. If the outcome is believed

by the speaker to be desirable or positive then code positive [2]. If neutral, then code [1], and if negative, then [0].

According to the manual, the three dimensions of internal/external, personal/universal and controllable/ uncontrollable are coded separately for the speaker and target, when the speaker is a different person to the target. This meant that in the present study, all statements had to be coded separately for the speaker (subject) and target (identified child) on these three dimensions.

Following completion of the coding, the data for each subject were summarised to yield frequency data, indicating how many causes were coded on each pole of every dimension. For the purposes of further quantitative analysis, this was then converted into percentage scores. In this way, the fact that each subject produced different numbers of causal attributions in each interview was taken into account. Further statistical analysis was then undertaken and this is reported fully in the following section.

Results

In terms of the statistical analyses employed, one-tailed tests were justified as the researcher had particular predictions about the expected direction of differences. However, as multiple comparisons were made, there was the possibility that spurious significant findings due to a type I error would occur. In order to reduce the chances of this occurring, it was decided to adopt a more stringent probability cut-off of $p < 0.025$ for statistical significance, and $p < 0.05$ for marginal significance. An alternative solution would have been to use a procedure such as the Bonferroni correction (Fairclough, 1988), but the disadvantage of this approach is that it decreases the chances of detecting real differences; in other words making a type II error (Howell, 1989).

The subjects' scores on the two adjustment measures, the Beck Depression Inventory (BDI) and the Eyberg Child Behaviour Inventory (ECBI), were compared before and after the intervention. A one-tailed paired samples t-test comparing subjects' BDI scores pre- and post-intervention revealed that there was no significant difference between their mean scores ($t = -0.79$; $d.f. = 7$; $p = .23$). In fact the overall mean subject score showed a small increase from 12 pre-intervention, to 13.6 post-intervention, rather than the predicted decrease, although this clearly masks substantial individual differences in self-report levels of depression. The ECBI yields two subscales, Number of problem behaviours (ECBI-Problem) and Intensity of problem behaviours (ECBI-Intensity). Therefore subjects' scores on each of the ECBI subscales at pre- and post-intervention were compared separately, using paired samples t-tests (one-tailed) as for the BDI. Post-intervention the subjects' mean score on the ECBI-Problem was significantly lower than their pre-intervention mean ($t = 2.52$; $d.f. = 7$; $p = .02$), indicating that subjects reported fewer problem behaviours following the intervention. The analysis did not reveal any significant difference between subjects' mean ECBI-Intensity scores pre- compared to post-intervention ($t = 1.51$; $d.f. = 7$, $p = .09$). Although this latter result was not significant, the overall mean ECBI-Intensity score for the subjects did decrease following the intervention as predicted.

In order to examine whether there was any association between change from pre- to post-intervention on the three adjustment measures; ECBI-Problem, ECBI-Intensity and BDI, a three-way Pearson product-moment correlation was calculated by using change scores for each of the three measures. Change scores for each adjustment measure were given by subtracting subjects' post-intervention score from their pre-intervention score. A significant positive correlation was found between change scores on the two sub-scales given by the ECBI; Problem and Intensity ($r = .7552$; d.f. = 7; $p = .03$). This indicates that there was a relationship between subjects rating there to be fewer problem behaviours following the intervention, and indicating that the intensity of the problem behaviours had also decreased. No significant correlation was found between the subjects' change scores on the ECBI-Problem sub-scale and their change scores on the BDI ($r = -.2253$; d.f. = 7; $p = .59$). Similarly no significant correlation was shown between subjects' ECBI-Intensity change scores and their BDI change scores ($r = -.3059$; d.f. = 7; $p = .46$). These findings indicate that change scores on the BDI are not consistently related to change scores on either of the ECBI sub-scales, at least in the short term.

Reliability checks on the extraction of causal attributions from the transcripts gave an initial agreement rate of 87.5% which was based on the proportion of statements identified as causal attributions by the researcher and also by SW. There were additionally some statements which had been identified by one or other of the coders. These were examined individually, in order to reach agreement on whether or not they qualified as causal attributions, as suggested by Stratton et al. (1986) in their reliability study. Following this review of the pooled extracted statements, the final agreement rate was 95%, which compares favourably with an agreement rate of 88% reported by Stratton et al. (1986).

A subsample of 40 attributional statements, which corresponded to approximately one tenth of the total number of statements, were independently checked for the reliability of coding by the second rater SW. This initially yielded agreement rates of between 58% and 85%, depending on the dimension. Coding on the dimension of globality showed the lowest agreement rate of 58% which was felt to

be unsatisfactory. Further discussion was therefore undertaken between the two raters in order to resolve these disagreements. Agreement rates were then calculated once again and the percentage agreement rates, which compare favourably with those demonstrated in other studies (Stratton et al 1986), are given in Table 1. The high agreement rates reached both for the extraction and coding of causal attributions may reflect some lack of confidence by the researcher and an associated tendency to agree with the independent coder, SW, who was experienced in using the LACS.

The total number of causal attributions made by the subjects in the eight transcripts before the intervention was 204, a mean of 25.5 per subject, of which 173 were definite and 31 were ambiguous. Following the intervention the total number of attributions made was 186 (mean number 23.25) of which 162 were definite and 24 were ambiguous. The total number of causal attributions made by subjects before and after the intervention was compared using a paired samples t-test (one-tailed). Similarly, the number of attributions that were classified as definite or ambiguous were compared before and after the intervention. The results shown in Table 2, indicate that there were no significant differences from pre- to post-intervention between the total number of causal attributions made by subjects. Furthermore, there were no significant differences in either the number of definite or ambiguous attributions made after the intervention, as compared to pre-intervention.

Comparisons were made of the proportion of statements with positive or negative outcomes before and after the intervention, using one-tailed paired samples t-tests. The results summarised in Table 3 indicate that subjects made significantly more attributional statements concerning child behaviour outcomes of a positive nature following the intervention, than they had done prior to the intervention. Conversely, following the intervention, subjects made significantly fewer causal attributions regarding negative child behaviour outcomes, than they had done before the intervention.

All causal attributions were examined to compare the proportion of attributions which were coded on either pole of each dimension, before and after the

intervention. For these analyses percentage scores were used to indicate how many attributions were made on either pole of each dimension. This was in order to take account of the fact that different subjects spontaneously made varying numbers of causal attributions and each subject produced different numbers of causal attributions pre- and post-intervention. Percentage scores for each subject were calculated by dividing the number of statements coded on a particular pole of each dimension (e.g. stable or unstable; global or specific) by the total number of statements made in each transcript by each particular subject. As every statement by definition was coded on one pole or the other for each dimension, percentage scores and further analyses needed only to be calculated for one of the two poles on each dimension. One-tailed paired samples t-tests were used to compare the proportion of statements on either pole of each dimension, before and after the intervention. The results of these analyses are given in Table 4.

It can be seen from Table 4 that the most significant difference between attributions made by subjects before and after the intervention was on the dimension of globality. Following the intervention, subjects made significantly fewer global attributions for the causes of behaviour after than they had done before the intervention. Expressed conversely, the results indicate that subjects made significantly more specific attributions following the intervention than they had done prior to it. Another significant result was on the dimension of personal to the target, whereby subjects made significantly fewer attributions which were personal to the target (i.e. their child) for the causes of child behaviours following the intervention than they had done before. In other words subjects tended to make attributions which were more universal following the intervention. The final marginally significant difference from pre- to post-intervention, concerned attributions which were coded as internal to the speaker (i.e. the subject). It emerged that subjects tended to make more attributions which were rated as internal to themselves post-intervention, than they had done pre-intervention. This was an unexpected result and possible explanations shall be considered in more depth in the discussion.

The predictions that subjects would tend to make less stable, internal and controllable to the target attributions after the intervention were not substantiated by the data, although it can be noted from Table 4, that there were trends in the expected direction for each of these dimensions.

Further analysis of the data involved dividing all causal attributions into two sub-categories according to whether they referred to a positive or negative child behaviour outcome. Each sub-category of attributions was then separately analysed, using one-tailed paired samples t-tests in order to compare attributional content before and after the intervention. This level of analysis was an important extension of that given above, as it had been predicted that subjects would make different types of causal attributions to explain negative as opposed to positive child behaviour outcomes. For these analyses percentage scores for each dimension were calculated in the same manner as for the analysis involving all outcomes. However, this time the total number of attributions was either the total number of attributions with negative or with positive outcomes. At this stage a decision was made to exclude all neutral outcomes, as they were infrequent (mean number pre-intervention = 2.13; mean number post-intervention = 1.13), and thus it was felt there were not enough to justify further analysis as a separate sub-category. Furthermore these statements seemed to have a flavour of both positive and negative outcomes (usually expressed by the subject with ambivalence), and as such could not be included for analysis within either the positive or negative outcome sub-categories.

Taking first attributions for negative child behaviour outcomes, Table 5 shows a comparison of the mean percentage of causal attributions on each attributional dimension before and after the intervention, the calculated t-value and the associated significance levels. It can be observed that there were two significant findings. Firstly, there was a significant difference from pre- to post-intervention, in the extent to which subjects made stable attributions for the causes of negative child behaviour outcomes. As predicted, subjects made proportionately fewer stable attributions for the causes of negative child behaviours following the intervention. In other words, post-intervention they were more likely to believe that a given cause of the negative behaviour would

not be likely to operate in future similar outcomes; it would therefore be rated as unstable. The second positive finding was that there was a significant difference before and after the intervention in the likelihood that subjects would attribute negative child behaviours to global causes. Following the intervention, subjects were more likely to attribute negative child behaviours to specific causes than they had been prior to the intervention.

The hypotheses that subjects would make fewer attributions with internal, personal and child controllable causes following the intervention, were not substantiated by the data. However, it can be seen from Table 5 that the mean percentages of attributions made by subjects on each of these dimensions showed a decrease from pre- to post-intervention. Thus there were trends were in the predicted direction, although the differences in the means were not great enough to reach statistical significance.

Turning now to the attributional analysis of positive child behaviour outcomes, Table 6 shows a comparison of the mean percentage of causal attributions on each attributional dimension before and after the intervention, the calculated t-value and the associated significance levels. It can be seen that the most significant finding concerned attributions of cause which were rated as internal to the speaker. On this dimension it emerged that subjects were significantly more likely to attribute positive child behaviour outcomes as being caused by something internal to themselves, following the intervention than they had been prior to the intervention. The second marginally significant result was on the attributional dimension of subject controllability. Subjects were slightly more likely to attribute the cause of positive child behaviours to something that was controllable by themselves post-intervention than they had been pre-intervention. Both of these findings were contradictory to the hypotheses, which had predicted that positive child behaviours would be more frequently attributed to causes internal and controllable by the child following the intervention. On the dimension of child controllability, there was indeed a trend in this direction, although this was not statistically significant. However, on the dimension of internal to the child, there was a slight trend in the opposite direction, suggesting that

subjects were less likely to attribute positive child behaviours to causes internal to their child after the intervention than they had been before. The predictions that subjects would be more likely to attribute positive child behaviours to causes which are stable and global following the intervention than prior to it, were not upheld. In contrast, the means given in Table 6 indicate a slight decrease in the proportion of positive child behaviour outcomes post-intervention which were attributed to stable or global causes, although these differences were not significant. There were no significant changes from pre- to post-intervention in subjects' attributions to causes which were personal to themselves or their child.

A further interesting level of analysis would have involved examining possible relationships between attributional change on each of the attributional dimensions and outcome as measured by the two adjustment measures. Multiple regression would have been the appropriate technique for exploring these relationships, however in view of the small subject sample in this study such analysis was not feasible.

Table 1: Percentage agreement rates between two raters for the coding of causal statements on the five attributional dimensions (N = Total number of statements independently coded).

	Stable / Unstable	Global / Specific	Internal / External	Personal / Universal	Control / Uncontrol
N	40	40	80	80	80
N agree	34	35	74	70	75
% agree	85	88	93	88	94

Table 2: Comparison of the mean frequency rates of Definite and Ambiguous causal attributions occurring before and after the intervention.

	Pre-intervention		Post-intervention		T-tests (d.f=7)	
	Mean	Standard deviation	Mean	Standard deviation	T	Significance
Definite	21.63	5.90	20.25	5.63	0.56	n.s.
Ambiguous	3.88	2.85	3.00	2.27	1.22	n.s.
Total	25.50	7.15	23.25	5.63	0.94	n.s.

Table 3: Comparison of the mean percentage of causal attributions made by subjects to explain positive and negative child behaviour outcomes, before and after the intervention.

	Pre-intervention		Post-intervention		T-tests (d.f.=7)	
	Mean	Standard deviation	Mean	Standard deviation	T	Significance
Positive	18.50	11.11	40.00	17.76	-2.52	.02
Negative	73.00	10.81	55.50	15.53	2.44	.02

Table 4: Comparison for *all* child behaviour outcomes of the mean percentage of causal attributions on each of the eight attributional dimensions before and after the intervention. (N.B. * indicates statistical significance; † indicates marginal significance).

	Pre-intervention		Post-intervention		T-tests (d.f.=7)	
	Mean	Standard deviation	Mean	Standard deviation	T	Significance
Stable	77.00	8.73	69.88	11.51	1.61	n.s.
Global	67.25	9.39	53.75	5.73	4.74	.001*
Internal (Sp)	13.38	10.25	22.00	12.49	-2.16	.035†
Internal (T)	63.63	13.16	57.00	9.86	1.63	n.s.
Personal (Sp)	17.88	13.37	15.88	9.13	0.15	n.s.
Personal (T)	58.25	8.31	47.75	14.00	2.37	.025*
Control (Sp)	11.88	4.32	18.00	9.32	-1.50	n.s.
Control (T)	60.13	9.16	59.50	9.43	0.12	n.s.

Table 5: Comparison for *negative* child behaviour outcomes of the mean percentage of causal attributions on each of the eight attributional dimensions before and after the intervention.

	Pre-intervention		Post-intervention		T-tests (d.f.=7)	
	Mean	Standard deviation	Mean	Standard deviation	T	Significance
Stable	76.36	11.14	62.88	11.27	2.42	.023
Global	71.63	10.41	58.25	14.94	2.37	.025
Internal (Sp)	13.63	11.55	19.38	16.19	-1.17	n.s.
Internal (T)	66.50	15.92	57.38	13.10	1.52	n.s.
Personal (Sp)	18.38	13.10	16.63	14.89	0.38	n.s.
Personal (T)	68.25	12.21	56.63	12.09	1.66	n.s.
Control (Sp)	10.13	5.28	8.13	6.66	0.71	n.s.
Control (T)	58.38	7.76	51.00	16.78	0.94	n.s.

Table 6: Comparison for *positive* child behaviour outcomes of the mean percentage of causal attributions on each of the eight attributional dimensions before and after the intervention. (N.B. * indicates statistical significance; † indicates marginal significance).

	Pre-intervention		Post-intervention		T-tests (d.f.=7)	
	Mean	Standard deviation	Mean	Standard deviation	T	Significance
Stable	83.63	34.59	79.00	16.48	0.30	n.s.
Global	54.75	31.89	43.75	21.65	0.86	n.s.
Internal (Sp)	6.63	9.88	24.75	12.30	-5.88	.0005*
Internal (T)	53.00	25.67	50.13	23.88	0.20	n.s.
Personal (Sp)	16.00	17.37	17.25	11.11	-0.19	n.s.
Personal (T)	31.88	21.68	34.00	14.99	-0.30	n.s.
Control (Sp)	11.88	13.50	29.50	18.13	-2.09	.038†
Control (T)	55.75	31.65	66.13	13.39	-0.77	n.s.

Discussion

Main findings

Subjects rated their children as having significantly fewer problem behaviours post-intervention than they had done pre-intervention, as indicated by a decrease in their overall mean score on the ECBI-Problem sub-scale. However, according to subjects' self-report on the ECBI-Intensity subscale there was no significant decrease in the intensity of the problem behaviours from pre- to post-intervention, although there was a positive relationship between change on each of the two ECBI sub-scales. One possible explanation for these findings may be that with the intervention, subjects were able to begin to implement new and different strategies for managing their child's difficult behaviour. This would have had the effect of altering the reinforcement contingencies for these behaviours, and through a process of extinction the child's repertoire of difficult behaviours would gradually be reduced. However, at the same time these children may have resisted change by increasing the intensity of some of the remaining difficult behaviours, which would explain why there was no overall decrease in the self-reported intensity of problem behaviours following the intervention. This process was highlighted by parents in the Webster-Stratton & Herbert (1994) study, who suggested that their children actively resisted any changes to the family dynamics that resulted from the intervention.

Subjects spontaneously made significantly more causal attributions concerning positive child behaviour outcomes following the intervention, than they had done prior to the intervention. Conversely, they made fewer causal attributions concerning child behaviour outcomes of a negative nature following the intervention than they had done before it. Both of these findings were consistent with the hypotheses, and they suggest that one favourable outcome of the Behaviour Management Group was to enable mothers to take a slightly different perceptual stance with their children and begin to notice positive child behaviours as well as negative ones. This explanation is consistent with previous research (Webster-Stratton & Herbert, 1994) as their qualitative study showed that a group intervention prompted parents to begin to notice and appreciate positive child behaviours whilst de-emphasising the negative. Only

when mothers were able to notice such positive behaviours would they attempt to make sense of them, through a process of attributional search. This finding also appears to support Patterson's model (Patterson, 1982) which suggests that when families present with a child with conduct problem behaviours, there are likely to be ongoing reciprocal coercive interactions within the family. Such interactions would have been set up through an initial focus on negative child behaviours at the expense of noticing and reinforcing positive child behaviours. This process was highlighted by one subject who stated in a pre-intervention interview: 'When you've got it (*difficult behaviour*) all the time, you forget the good bits'.

For all types of child behaviour outcome, subjects made significantly more attributions in which the cause was perceived to be universal as opposed to before the intervention, when more attributions were perceived as personal to the child. This finding suggests that over the course of the intervention, there was a change in maternal beliefs about child behaviours, away from less benign explanations such as personality traits or negative characteristics (e.g. 'a bad gene'), towards universal explanations which may include developmental factors or transient states such as tiredness. This change would mean that following the intervention mothers were more likely to view the causes of their child's behaviour as similar to other children of the same age. Furthermore at post-intervention, mothers made more specific attributions for the causes of their child's behaviour than they had done before.

Finally, when attributions for all child behaviour outcomes were analysed together, it was found that after the intervention subjects made slightly more attributions which were rated as internal to themselves. Some of this variation in attributions to causes which were internal to the mothers, may be from negative outcomes, although taken alone the increase in internal attributions for negative outcomes was not significant from pre- to post-intervention. However, mothers did attribute negative outcomes to causes which were internal to themselves pre- and post-intervention, suggesting there was an element of self-blame for their children's difficulties, which would be associated with the experience of guilt. One mother stated at post-intervention: 'I mean I do think a lot of it is my fault...just feeling so isolated

you think it's got to be'. Webster-Stratton & Herbert (1994) found a similar tendency for mothers in their sample to take some of the blame for their child's negative behaviours.

An initial focus pre-intervention on stable and global causes for negative behaviours was evident in subjects' initial pessimism concerning their children's futures. An example of this negative view of the future, made by one mother pre-intervention was: 'He's so easily led, so my fears for him in the future is obviously I can foresee him going joyriding or stealing or getting drawn to drugs - anything the wrong side of the law'. However, following the intervention it was found that subjects tended to attribute negative child behaviours to causes which were more unstable and specific than they had done prior to the intervention. This shift away from global, stable attributions for negative behaviours is evidence that post-intervention, mothers tended to believe that the causal agent of negative behaviour in their child may not always be present in the future and furthermore such causes may not influence many important outcomes.

Research introduced in the introduction (Bugental, 1987; Bugental et al. 1990; Dix and Grusec, 1985; Dix et al, 1989; Dix & Lochman, 1991), supports a model of attributions as determinants of parents' emotional reactions to their child's behaviour. Thus if parents attribute the cause of their child's misbehaviour to something dispositional within the child, or an intentional act by the child for which they are responsible, they are likely to experience strong negative affect. This in turn would be more likely to trigger parents to use a high-power strategy for managing the child's behaviour, which may be coercive and contribute to the continuation of such behaviours. In this study, mothers changed in the extent to which they made causal attributions about their child's misbehaviour as dispositional, as evidenced by a significant decrease from pre- to post-intervention in stable and global attributions. This would lead mothers to experience less negative affect which would, according to Bugental's model, result in a low-power choice of management intervention, which would be with a greater likelihood of positive change in the child's behaviour.

For attributions regarding positive child behaviour outcomes, following the intervention subjects tended to attribute the causes as more internal to themselves and more controllable by themselves. This suggests that post-intervention, mothers are feeling less helpless and more able to promote positive behaviour in their child, which is reflected in their belief that they have some degree of control over positive child behaviour outcomes. The fact that they were also more likely to regard such behaviours as being caused by something internal to themselves after the intervention, suggests these mothers were taking the credit for the emergence of positive child behaviours. It could be proposed that this results from mothers' assumption that if they are interacting differently with their children and more prosocial behaviour is evident, that they have somehow brought this about. Remembering that maternal attributions were assessed immediately post-intervention, if attributions were assessed again at follow-up, it may be the case that as child prosocial behaviours become more frequent, maternal attributions may shift again, in order to assimilate this. If so, over time, one would expect maternal attributions for their child's prosocial behaviour to change towards attributing greater control to the child and to internalise the cause of positive behaviour to the child.

Despite a significant decrease overall in maternal attributions to stable causes, even post-intervention a large percentage of negative behaviours were attributed to stable causes. The notion that such attributions for negative behaviour may alleviate responsibility from mothers has been proposed by Gretarrson & Gelfand (1988) and supported by Reimers & Wacker (1995). It is possible that those mothers who even after the intervention continued to attribute their child's behaviour to causes which were inborn and stable, would be less likely to implement new techniques for the management of difficult behaviours, resulting in less chance of positive behavioural change. This suggests that these mothers may require a more intensive intervention in order to counter such unhelpful attributions and effect lasting therapeutic change. In this study, there were no subjects who failed to complete the intervention. However, a useful area for further research would be to examine attributions for mothers who terminate prematurely and compare them to those made by mothers who complete the intervention. This may illuminate qualitative differences and possible patterns of

unhelpful attributions, which would need to be addressed early on in an intervention in order to avoid later drop-out.

This study did not reveal any significant changes from pre- to post-intervention in the extent to which mothers attributed negative child behaviours to causes which were internal and controllable by the child. Both pre- and post-intervention, mothers attributed a large proportion of negative behaviours to causes internal to the child and controllable by the child, and few to causes which were internal to themselves or controllable by themselves. This latter finding was unexpected, as it had been predicted that following the intervention mothers would attribute more control for negative outcomes to themselves, as they began to re-establish boundaries for their child's behaviour.

Taken together, the above findings with respect to attributions of internality and controllability for negative outcomes, appear to indicate that even after the intervention, mothers were tending to blame their children for negative outcomes, whilst at the same time believing they had little power to exert any control. This lends some support to Baden & Howe's (1992) suggestion, that such a pattern of attributing would sustain negative coercion cycles.

Bugental's model (Bugental et al., 1989) suggests that certain attributions will lead mothers to experience more anger and use high-power techniques for managing child behaviour. In particular caregiver beliefs of low perceived control paired with a belief that the child has a high degree of control over negative outcomes, has been proposed as a risk factor for developing abusive patterns of parenting. As the present study did not include a control group of mothers, it is impossible to gauge to what extent mothers in this sample were 'over-attributing' control to their child and 'under-attributing' control to themselves for negative outcomes. However, in a study by Stratton & Swaffer (1988) comparing the maternal attributions of abused, handicapped and normal pre-schoolers, the authors found that the mothers of normal pre-schoolers attributed approximately equal control to themselves and their child for all behavioural outcomes. In contrast, mothers of the abused children attributed twice

as much control to their child as to themselves for behavioural outcomes. Maternal attributions of control for negative events in this study, does show a pattern which seems quite consistent with Bugental's description, and similar to Stratton & Swaffer's finding with attributions made by mothers of abused children. It is important to note however, that these apparent similarities do not mean to say that the mothers in this study were engaging in coercive or abusive parenting. Rather, the aim of this discussion is to draw attention to certain types of maternal attributions which may be seen as risk factors to the parenting process. Subjects' comments in the pre-intervention interviews certainly implied that they were experiencing a high level of stress and anger in the parenting role, this often being cited as the cause for seeking the original referral. One subject stated: 'That's why I went to the doctors, 'cos I got to the stage I thought if I hit him once I'm not going to stop at that - he was just driving me to despair'. From the above discussion, it is clear that future research could usefully address the issue of developing effective methods for modifying maternal attributions along the dimension of controllability.

In terms of hypotheses which were not substantiated by the data, there was no significant decrease in subjects' self-report levels of depression from pre- to post-intervention, nor was there a consistent relationship between mothers' ratings of their child's behaviour problems and their self-report level of depression. This is likely to reflect the fact that for the mothers in this sample, there were factors other than, or as well as, the child's behaviour problems impacting upon them. Mash & Johnston (1990) present a model of stress in parent-child interactions, which emphasises the contribution of child, parent and environmental characteristics, such as social support, sociocultural background and life events. These authors argue that maternal cognitions (which would include causal attributions) mediate the child and environmental effects, and they suggest further study of the way in which this occurs. Based on this idea, one valuable extension to the study presented here, would be to include measurements of various parent, child and environmental factors, as well as maternal attributions. The aim of this would be to develop a clearer understanding of how these factors interact together to impact upon the outcome of the intervention.

One general issue warranting further discussion concerns the relationship between attributional change and behavioural change, both with respect to maternal and child behaviour. Clearly the present study being correlational in nature, cannot answer any questions about directionality of cause and effect. Thus so far, whether behavioural change preceded or followed attributional change, or vice versa, and exactly how these two variables may be related remains unresolved. However, there are three plausible explanations. Firstly, maternal behaviour may have altered as a result of the intervention, leading to positive changes in child behaviour, in turn forcing mothers to re-evaluate their beliefs about the causes of their child's behaviour. Secondly, mothers' altered behaviour in managing their child may have been dependent upon attributional changes, without which mothers may have placed little value on the intervention and the assumptions underpinning it. The final and conceivably most likely explanation, is that the above two processes in fact occurred simultaneously, each one stimulating the other.

Following on from the above issue, the limits of this study meant that it was not possible to discover which attributional dimensions, if any, were most closely related to outcome. One previous study found dispositional attributions to be predictive of poor outcome (Watson, 1986), although in that study causal attributions were examined only along the dimension of internal or external to the child, meaning that relationships between any other attributional dimensions and outcome would have gone unnoticed. In their meta-analysis of studies examining the relationship between attributions and outcome, Joiner & Wagner (1996) found the attributional dimensions of stability and globality were most highly related to outcome. Future studies in this area could usefully explore the relationships between attributional change and outcome.

Limitations of the study

There are a number of criticisms which can be levelled at this study and these shall be discussed here. Firstly, as the study involved just eight subjects overall, it cannot be assumed that these were representative of all mothers of children with disruptive behaviour disorders, and therefore the findings cannot be generalised. Furthermore, as

there were some mothers who attended the Behaviour Management Group but chose not to take part in the evaluation, and two mothers who completed only the pre-intervention assessment, it may be the case that these mothers represented a sub-population of all those included in the Behaviour Management Group. It could be proposed that those mothers who chose not to complete the post-intervention assessment differed in some way from those who completed both assessments - perhaps in the extent to which they were able to perceive positive changes in their child. However, this hypothesis remains to be tested.

A further issue concerning the subject group was that of the gender of the identified child within each family, seven out of eight of whom were boys. Scott (1995) notes that few studies into parental attributions have considered sex of the child as a central variable. Grettarson & Gelfand (1988) in their study, found some differences in maternal attributions for child behaviours depending on the sex of the child under consideration. Specifically, girls actions were considered more innate than those of boys, whose actions were more likely to be attributed to environmental factors. Scott (1995) suggests that a certain level of aggression may be acceptable for a boy but not for a girl, and proposes further research to explore such hypotheses in more depth. Gender of the identified child was not specifically taken into account in the study reported here, although it was interesting to note references made by some subjects to the relationship between gender and their understanding of the causes of child behaviours. As an example, one subject commented: 'I still want him to you know, think he is a proper boy and do boyish things, you know, get into little scrapes like'. An extension of this study would be to compare maternal attributions to boys and girls behaviour, and to examine whether attributional changes differ in mothers as a factor of the gender of their identified child. One final point on the subject group, concerns the wide age range of the identified children, which may have masked specific patterns of maternal attributions related to the age of the identified child. Clearly this may be resolved in future studies by restricting the age-range of the identified children.

Despite the limitations inherent in having a small subject group, one of the main strengths of this study was that the subjects recruited were from a clinical sample. Many similar studies have in fact recruited subjects from non-clinical populations, which implies that they are examining maternal attributions in the general population, not necessarily attributions made by mothers of children with disruptive behaviour disorders.

In addition to there being small numbers of subjects overall, the study could be criticised on the basis that subjects were recruited from two cohorts of families who attended consecutive Behaviour Management Groups. This was necessary in order to recruit enough subjects to make the study feasible, and was dictated in part by some mothers from the first cohort declining to participate. The content of the Behaviour Management Group was in theory, exactly the same for each cohort. However, it could be argued that subjects from each cohort received qualitatively different interventions. I would argue that this is inevitable and unavoidable, as even if all subjects had attended the same group, as individuals they would have attached various degrees of importance to different elements of the intervention. In depth process oriented research would be required in order to tease out the essential and therapeutic elements of the Behaviour Management Group intervention.

The design of the study necessitated subjects to repeat the assessment measures twice within a relatively short time span. This approach could be criticised on the grounds that a 'practice effect' may have confounded the results, most likely affecting subjects' performance in the semi-structured interview. The interviewer may have unwittingly led subjects to develop hypotheses about the nature of responses desired, which may have had the effect of subjects producing more causal attributions at post-intervention. Alternatively, at the post-intervention assessment, subjects may have felt they had discussed the issues once already, resulting in reluctance to go into detail. This would presumably have resulted in subjects making fewer causal attributions at follow-up. However, the analysis showed that there were no significant differences between the number of causal attributions made before and after the intervention, suggesting that maybe neither of these hypotheses was in operation. One

possible way to resolve this methodological issue, would be to devise ways of recording causal attributions as they are made by mothers in natural discourse during the Behaviour Management Group itself, thereby avoiding the need to 'set up' two specific research interviews before and after the intervention.

The method employed in this study involved detailed analysis of verbatim material for the extraction and coding of causal attributional statements. Practicalities and resources dictated that this was done by one researcher, with clear hypotheses in mind. It may be proposed that this confounded the objectivity necessary for accurate extraction and coding of causal attributions using the Leeds Attributional Coding System. To counter this, inter-rater reliability was used as a technique to assess the accuracy and agreement of extraction and coding of causal attributions. A more stringent approach would be for future research to deploy independent 'extractors' and 'coders' blind to the particular hypotheses under examination, a luxury which was not feasible in the present study.

As noted in the method section, it had been hoped to include fathers in the study, but due to time limitations during the data collection phase of the research and expectations that few fathers would be actively involved in the Behaviour Management Group, this was not undertaken. However, an interesting area for future research would be to consider how paternal attributions about child behaviours relate to maternal attributions, and whether or not they are amenable to change. Furthermore, although no fathers attended these Behaviour Management Groups, most of the children had important father-figures in their lives. A worthwhile area for future study would be to examine whether attributions made by fathers who are unable to attend the Behaviour Management Group are sensitive to change through a process similar to vicarious learning.

Clinical implications

One question this study cannot answer is whether the attributional changes found were detectable only because of the particular methodology used. Or, whether alternative methods for assessing maternal attributions would have illuminated the same results.

To date there is very little research comparing different methods of assessing causal attributions (Scott, 1995). The open-ended method for eliciting and analysing attributions chosen in this study was clearly a time-consuming technique. Further research could usefully examine whether using more structured techniques for assessing attributional change would produce similar, and detectable results. Although the advantages of open methods for assessing attributions have been detailed, if maternal attributions for child behaviour are to be routinely used as an outcome measure following clinical intervention, the time demanded by such an approach would need to be given serious consideration by already over-stretched clinical services.

Despite evidence of maternal attributional change occurring in this study, no causal relationship between this and attendance at the Behaviour Management Group can be assumed in the absence of a control group who did not receive the intervention. In addition it would be interesting to assess whether greater attributional or behavioural change may occur if subjects were followed up some time in the future, such as three months or six months post-intervention. Further research will necessitate a move beyond correctional studies in order to begin to answer questions about the direction of causality in the relationships between attributions and outcome.

In order to maximise the possibility of attributional change occurring as a consistent outcome of the intervention, it would be useful to consider focusing more on cognitive approaches to modifying attributions within the intervention. As Forsterling (1985) argues, reframing attributions requires the individual to believe in the transience of the cause. Thus mothers tending to make stable attributions for negative behaviour are likely to need more intensive therapeutic input. The possibility of utilising cognitive therapies in conjunction with parent management techniques to influence attributions has been proposed by a number of authors already (e.g. Webster-Stratton & Herbert, 1995; White & Barrowclough, 1998), and the present study supports their position.

This study focuses purely on maternal attributions for child behaviours. An interesting area for further research would be to examine maternal attributions for their own behaviour within the parenting relationship. In this study mothers did spontaneously make these kind of attributions, such as one mother stating: 'I find it very difficult to love her now because I'm so angry all the time'.

Grusec & Mammone (1995) review the work of the two major contributors in the area of maternal attributions for child behaviour; Bugental and Dix and their respective colleagues. The authors conclude that parental attributions may be grounded in parents' own child-rearing experiences; in other words their style of attachment. They go on to argue that to understand and work effectively with parenting cognition's, interventions must move beyond considering just the parenting relationship, to a position whereby general maternal representations of relationships are the focus of attention. Based on this argument, it could be proposed that more substantial attributional changes may have occurred in this study, had the intervention been able to take a wider perspective on parents' representations of relationships. However, the value of any possible extension to the current intervention needs to be weighed up against the additional time and resources which would be necessary and how this can be provided by the clinical service.

Many families presenting with a child with conduct problem behaviours have often had difficulty managing the behaviour for some time. One hypothesis is that over time, as parents attempt to modify their child's behaviour with little or no success, their attributions would shift gradually towards stable and global causes for negative behaviours. Thus it could be predicted that early intervention may be particularly valuable, in order to modify attributions and behaviour before they become entrenched in unhelpful patterns, which at a later date may be more resistant to change. In view of this, taken together with characteristically lengthy waiting lists for conduct type problems within child and family mental health services, there is a strong argument in favour of continuing to develop group interventions for families of children with conduct problem behaviours.

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Melanie Sursham
Direct Dial 0116 258 8610



LEICESTERSHIRE HEALTH
Gwendolen Road, Leicester LE5 4QF
Tel: (0116) 273 1173 Fax: (0116) 258 8577
DX 709470 Leicester 12

11 November, 1997

Ms R Holl
46 Adderley Road
Clarendon Park
Leicester LE2 1WB

Dear Ms Holl

Mothers of conduct disordered children: Do attributions about their child's behaviour change following parent training intervention and what is the relationship between attributional change and outcome? - our ref. no. 4856

Further to your application dated 27 October, you will be pleased to know that the Leicestershire Ethics Committee at its meeting held on the 7 November, 1997 approved your request to undertake the above-mentioned research conditional upon the initial approach to parents being from one of the Consultants. I enclose an article regarding the use of video tapes.

Your attention is drawn to the attached paper which reminds the researcher of information that needs to be observed when ethics committee approval is given.

Yours sincerely

A handwritten signature in black ink, appearing to read "R F Bing", is written over a horizontal line.

R F Bing
Chairman
Leicestershire Ethics Committee

(NB All communications relating to Leicestershire Ethics Committee must be sent to the Committee Secretariat at Leicestershire Health)

Appendix

Pre-Intervention Interview Schedule

Introduction:

- **Thank you** for volunteering to participate in this evaluation of the Behaviour Management Group.
- **Tape recorded for purposes of evaluation.** Recording will be destroyed after it has been used to write out the discussion word for word.

Do you consent for this interview to be tape-recorded? Give consent form.

- The discussion today should last between **45 minutes**.
- **No right of wrong answers**, but do try to answer as honestly and fully as possible.
- Please **ask if you are not sure what I mean** or don't understand something I ask you.
- **Confidential and anonymous** (no names included in the write-up).
- **Purposes / benefits of the research** - to understand more about your child's behaviour and how you make sense of it; help us to understand how changes occur within families who have attended the Behaviour Management Group. Overall, aim of improving the service we provide to families.
- Throughout this interview I would like you to answer the questions **considering only your child** _____ (*Name of identified child*), and **not** any of their brothers or sisters.

1) Before we begin, do you have any questions about what we are going to be doing today?

2) To start with it would be useful for me to hear about how you came to be invited to take part in the Behaviour Management Group. Could you describe how that came about?

Prompts:

- Repeat question if not understood

- How long have you been concerned about your child's behaviour?

- *What was it that first made you think that something was wrong?*
- *How did you make sense of your child's behaviour?*
- *Have you sought any help before for your child's behaviour?*
- *Briefly, what were the difficulties that you were seeking help for then?*
- *What was the outcome of that intervention?*

3) I would like you to think about how things are **now** with your child _____, (Name of identified child). Could you describe to me your child's behaviours that you find most difficult to manage?

Prompts:

- *Repeat question if not understood*
- *For clarification: I am interested in the things your child does, such as have tantrums, not obey your rules etc. that you find a problem.*
- *When you said could you explain to me exactly what you mean?*
- *It may be difficult to describe the things your child does, that you are finding difficult to manage at the moment. Could you tell me about the times when you find _____'s (Name) behaviour most difficult to manage?*
- *Some parents find bedtimes or going shopping very difficult. What times do you find the most difficult with your child _____ (Name)?*

4) You have mentioned a few different **behaviours / times** that you are finding **difficult to manage** at the moment. I would like us to think about two of these in a bit more detail. Which would you like to talk about in more detail?

Prompts:

- *Repeat question if not understood*
- *I just want you to tell me two of the behaviours you have just mentioned, and we will think about them in detail.*

5) Shall we start by thinking about _____? (Behaviour 1/ Time 1)

Prompts:

- *Could you start by explaining exactly what your child does when he / she behaves in that way?*

- *In what situations would you expect your child to behave in that way?*
- *Could you tell me exactly what happens in that situation?*
- *How would you normally react to your child behaving in that way?*
- *What is it about that behaviour / time that makes it particularly difficult for you to manage?*
- *Are there some times when your child would not behave in that way in similar situations?*
- *How do you make sense of that?*
- *Do you think this will always happen in similar situations?*
- *Why or why not?*
- *Would you expect other children the same age as _____ (Name) to behave in that way?*
- *How do you explain that?*
- *Do you think your child _____ (Name) intended to behave in that way?*
- *Why or why not?*
- *Do you think your child _____ (Name) has any control over behaving in that way?*
- *Why or why not?*
- *Do you think other people have any bearing on _____ (Name's) behaviour at these times?*
- *How do you think other people can affect _____ (Name's) behaviour?*

6) Repeat question 5 for Behaviour 2 / Time 2.

7) We have spent some time thinking about those times or behaviours you find difficult to manage. Now I would like you to consider the sorts of things or behaviours that your child does that you feel are **good behaviours**. Can you tell me what your child does that you would describe as 'good behaviour'?

Prompts:

- *Repeat question if not understood*

- For clarification: I am interested in the things your child does, that you find easy to manage.

- In other words, I am interested in behaviours, or times when you find _____ (Name) easy to manage.

- When you said could you explain to me exactly what you mean?

8) You have mentioned some different behaviours / times when you find you are able to manage _____ (Name's) behaviour. I would like us to think about two of these in a bit more detail. Which would you like to talk about in more detail?

Prompts:

- Repeat question if not understood

- I just want you to tell me two of the behaviours you have just mentioned, and we will think about them in detail.

9) Shall we start by thinking about _____? (Behaviour 3/ Time 3)

Prompts:

- Could you start by explaining exactly what happens when your child behaves in that way?

- In what situations would you expect your child to behave in that way?

- How would you react to your child behaving in that way?

- What is it about that behaviour that makes it easy for you to manage?

- Are there some times when your child would not behave in that way in similar situations?

- How do you make sense of that?

- Do you think this will always happen in similar situations?

- Why or why not?

- Would you expect other children of the same age as _____ (Name) to behave in the same way as your child?

- How do you explain that?

- Do you think your child _____ (Name) intended to behave in that way?

- *Why or way not?*

- *Do you think your child _____(Name) has any control over behaving in that way?*

- *Why or why not?*

-*Do you think other people have any bearing on _____(Name's) behaviour at these times?*

-*How do you think other people can affect _____(Name's) behaviour?*

10) Repeat question 9 for Behaviour 4 / Time 4.

11) When you think about the future with your child _____(Name), can you tell me how you foresee his/her behaviour?

Prompts:

- *Do you think your child's behaviour will remain the same?*

- *How do you think it may change, and why?*

12) Is there anything you hope may be change within your family when you attend the behaviour management group?

13) Do you have any questions or comments about what we have talked about today?

14) Are there any parts of this interview that you would not like to be included when it is written out for further analysis?

End of interview.

Thank you once again for your participation. I will contact you after the end of the group to ask you to be interviewed again.

Post-Intervention Interview Schedule

Introduction:

- **Thank you** for volunteering to participate in this evaluation of the Behaviour Management Group.
- **Tape recorded for purposes of evaluation.** Recording will be destroyed after it has been used to write out the discussion word for word.

Do you consent for this interview to be tape-recorded? Give consent form.

- The discussion today should last about **45 minutes**.
- **No right of wrong answers**, but do try to answer as honestly and fully as possible.
- Please **ask if you are not sure what I mean** or don't understand something I ask you.
- **Confidential and anonymous** (no names included in the write-up).
- **Purposes / benefits of the research** - to understand more about your child's behaviour and how you make sense of it; help us to understand how changes occur within families who have attended the Behaviour Management Group. Overall, aim of improving the service we provide to families.
- Throughout this interview I would like you to answer the questions **considering only your child** _____ (*Name*), and **not** any of their brothers or sisters.

1) Before we begin, do you have any questions about what we are going to be doing today?

2) You have now completed the Behaviour Management Group. Do you feel that over the past few weeks anything (good or bad) has changed within your family?

Prompts:

-Could you tell me what if anything you feel has changed over past few weeks?

- Have you noticed any differences in _____(Name's) behaviour since coming to the group?

3) I would like you to think about how things are **now** with your child _____, (*Name*). Could you describe to me the sorts of things or behaviours that your child does that you find difficult to manage?

Prompts:

- Repeat question if not understood
- For clarification: I am interested in the things your child does, such as have tantrums, not obey your rules etc. that you find a problem.
- When you said could you explain to me exactly what you mean?
- It may be difficult to describe the things your child does, that you are finding difficult to manage at the moment. Could you tell me about the times when you find _____'s (Name) behaviour most difficult to manage?
- Some parents find bedtimes or going shopping very difficult. What times do you find the most difficult with your child _____ (Name)?

4) You have mentioned a few different **behaviours / times** that you are finding **difficult to manage** at the moment. I would like us to think about two of these in a bit more detail. Which would you like to talk about in more detail?

Prompts:

- Repeat question if not understood
- I just want you to tell me two of the behaviours you have just mentioned, and we will think about them in detail.

5) Shall we start by thinking about _____? (Behaviour 1/ Time 1)

Prompts:

- Could you start by explaining exactly what your child does when he / she behaves in that way?
- In what situations would you expect your child to behave in that way?
- Could you tell me exactly what happens in that situation?
- How would you normally react to your child behaving in that way?
- What is it about that behaviour / time that makes it particularly difficult for you to manage?
- Are there some times when your child would not behave in that way in similar situations?
- How do you make sense of that?

-Do you think this will always happen in similar situations?

- Why or why not?

- Would you expect other children the same age as _____ (Name) to behave in that way?

- How do you explain that?

- Do you think your child _____ (Name) intended to behave in that way?

- Why or way not?

- Do you think your child _____ (Name) has any control over behaving in that way?

- Why or why not?

- Do you think other people have any bearing on _____(Name's) behaviour at these times?

-How do you think other people can affect _____(Name's) behaviour?

6) Repeat question 5 for Behaviour 2 / Time 2.

7) We have spent some time thinking about those times or behaviours you find difficult to manage. Now I would like you to consider the sorts of things or behaviours that your child does that you feel are **good behaviours**. Can you tell me what your child does that you would describe as 'good behaviour'?

Prompts:

- Repeat question if not understood

- For clarification: I am interested in the things your child does, that you find easy to manage.

- In other words, I am interested in behaviours, rather than the situations in which these behaviours occur.

- When you said could you explain to me exactly what you mean?

8) You have mentioned some different behaviours / times when you find you are able to manage _____ (Name's) behaviour. I would like us to think about two of these in a bit more detail. Which would you like to talk about in more detail?

Prompts:

- Repeat question if not understood
- I just want you to tell me two of the behaviours you have just mentioned, and we will think about them in detail.

9) Shall we start by thinking about _____? (Behaviour 3/ Time 3)

Prompts:

- Could you start by explaining exactly what happens when your child behaves in that way?
- In what situations would you expect your child to behave in that way?
- How would you react to your child behaving in that way?
- Why do you think your child behaves in that way?
- How do you think that has an effect?
- What is it about that behaviour that makes it difficult for you to manage?
- Are there some times when your child would not behave in that way in similar situations?
- How do you make sense of that?
- Do you think this will always happen in similar situations?
- Why or why not?
- Would you expect other children of the same age as _____ to behave in the same way as your child?
- How do you explain that?
- Do you think your child _____ intended to behave in that way?
- Why or way not?
- Do you think your child _____ has any control over behaving in that way?
- Why or why not?
- Do you think other people have any bearing on _____(Name's) behaviour at these times?

-How do you think other people can affect _____(Name's) behaviour?

10) Repeat question 9 for Behaviour 4 / Time 4.

11) When you think about the future with your child _____(Name), can you tell me how you foresee his/her behaviour?

Prompts:

- Do you think your child's behaviour will remain the same?

- How do you think it may change, and why?

12) Do you have any questions or comments about what we have talked about today?

13) Are there any parts of this interview that you would not like to be included when it is written out for further analysis?

End of interview.

Thank you once again for your participation.

Behaviour Management Group

PROGRAMME

Week 1 - Children and Parents

10.00	Introductions and coffee
10.15	Structured Family Activity
11.00	Outdoor Play
11.30	Parents' Group and concurrent Children's Group
12.00	Lunch
12.45	Parents' Group and concurrent Children's Group
2.00	Finish and leave

Weeks 2 & 3 - Parents Only

10.00	Arrive and coffee
10.15	Parents' Group
11.15	Coffee
11.30	Parent' Group
12.30	Lunch
1.00	Parents' Group
2.00	Finish and leave

All sessions take place at Tanglewood, with refreshments and lunch provided free of charge.

Behaviour Management Group

SUMMARY OF CONTENTS

- **What constitutes “normal” behaviour for children?**

- **Explanations for difficult behaviour:**
 - Childish irresponsibility
 - Developmental factors
 - Challenging parents’ authority

- **How do behaviour patterns develop and keep going?**
 - The A:B:C Model for understanding behaviour.

- **Making rules and applying them consistently.**

- **Increasing Positive Behaviours:**
 - Praise and Attention
 - Rewards and Privileges
 - Suggestive Praise
 - Encouraging Compliance

- **Decreasing Negative Behaviours:**
 - Planned Ignoring
 - Time-Out
 - Withdrawal of Rewards and Privileges
 - Physical Punishment

- **Problem-Solving**

Table A: Subjects' scores on the Beck Depression Inventory before and after the intervention.

Subject	Pre-score	Post-score
1	1	0
2	8	22
3	13	17
4	22	16
5	12	11
6	28	30
7	5	7
8	7	6

Table B: Subjects' scores on the Eyberg Child Behaviour Inventory before and after the intervention.

ECBI-P = Number of Problem Behaviours.

ECBI-I = Intensity of Problem Behaviours.

Subject	Pre-Intervention		Post-Intervention	
	ECBI-N	ECBI-I	ECBI-N	ECBI-I
1	21	137	17	113
2	27	164	20	133
3	29	202	27	210
4	26	186	18	163
5	23	108	23	121
6	23	153	21	137
7	14	148	13	126
8	24	177	25	192

Causal Attributions Extracted From Subject A's Pre-Intervention Interview

(The cause is underlined in each case)

1. As soon as you say "no", she goes off into temper tantrums, shouting saying she hates me.
2. If you try and sit down and have quality time with her, she's too busy thinking about what she's going to do next, and it's a constant battle with her.
3. She wants the adult jobs, she doesn't want the little girls jobs, and so there again you've got the conflict.
4. She doesn't have any social skills, that is a major problem, I mean I'm getting to the stage where I'm embarrassed to take her anywhere because she can be nasty verbally or she can assault somebody.
5. It (saying she hates me) is really coming out now, but I think that's because I'm wearing down as well now and I've not got the strength that I had.
6. If she's been grounded and she wants to go out to play, that's it she's shouting and hollering and stamping around the room.
7. Because she knows that I'm not gonna hit her, she's sort of thought well it don't matter if she chases me.
8. I blame the fact that I'm not with her Dad (for her behaviour).
9. Her natural father is very much the same, he's very big on attention, and I just put it down to that, you know, the same as him genetically.
10. I mean I was quite hyperactive as a child and he loves the attention, so I just sort of thought it was a combination genetically.

11. She loses them (friends) equally as fast because she's so bossy.
12. She loses them (friends) equally as fast because she'll get violent.
13. I think that aggression is that she gets so engrossed.
14. If you're angry she's angry, because she's sensitive to other people's emotions.
15. She's being crafty (cuddling partner) because she knows she gets an extra 10 minutes up rather than going to bed.
16. I do genuinely think that she's forgotten when we've said you're not allowed to go here, because you can tell from the reaction on her face.
17. Was it because I was on my own, she was spoilt because she was the first grandchild, is it because she got all that attention?
18. I don't know why she's aggressive, because as I say I've never been a Mum that smacks constantly?
19. I don't know why she's aggressive because she's not been brought up around violence?

Coding of Causal Attributions From Subject A's Pre-Intervention Interview

CA	M	D/A	S/U	G/S	I/Es	I/Et	P/Us	P/Ut	C/Us	C/Ut	A/H	P/N
1	0	1	1	1	1	0	0	1	1	0	1	0
2	0	1	1	0	0	1	0	1	0	1	1	0
3	0	1	0	0	0	1	0	1	0	1	1	0
4	0	1	1	1	0	1	0	1	0	0	1	0
5	0	1	0	0	1	0	1	0	1	0	1	0
6	0	1	1	0	0	0	0	0	0	1	1	0
7	0	1	1	0	0	1	0	0	1	1	1	0
8	0	1	1	1	0	0	0	0	0	0	1	0
9	0	1	1	1	0	1	0	1	0	0	1	0
10	0	1	1	1	1	1	1	1	0	0	1	0
11	0	1	1	1	0	1	0	1	0	0	1	0
12	0	1	1	1	0	1	0	1	0	1	1	0
13	0	1	0	0	0	1	0	0	0	1	1	0
14	0	1	0	1	0	1	0	1	0	1	1	1
15	0	1	0	0	0	1	0	0	0	1	1	1
16	0	1	1	1	0	1	0	1	0	0	1	0
17	0	0	1	1	0	0	0	0	0	0	1	0
18	1	0	0	0	1	0	1	0	0	1	1	0
19	1	0	0	1	0	0	0	0	0	1	1	0

Causal Attributions Extracted From Subject A's Post-Intervention Interview.

(The cause is underlined in each case)

1. We talked about rules and boundaries, and I made sure she knew what was expected of her, and it's made a difference.
2. We had a star chart as well, that we used if she did these things correctly, and she was absolutely wonderful, because it was sort of getting her involved and making it fun for her.
3. She would start to get angry after a couple of minutes, 'cos she was bored.
4. I think it's because I was calmer and I managed to diffuse it before it went right and snowballed, she was a lot better.
5. I put Gemma's behaviour down to a chemical imbalance, because she was starved of oxygen when she was born.
6. I think it's (her behaviour) is with the way that I've been with her and let it sort of spiral out of control, because we just always used to make excuses.
7. I do say no to her but (when I do) she has temper tantrums.
8. When she realised it wasn't a game, she had been naughty, she got really miffed about it.
9. I always make sure that I give her an explanation now before I actually say no, because as soon as I say no she shouts and then she can't hear a word you're saying.
10. She doesn't seem to be stamping up the stairs so much, because she knows that she's only there for five minutes as long as she's quiet.

11. She puts her pyjamas on straight away, because she knows if she does it she can watch TV.
12. She wants to push it just that little bit further to be in control I suppose.
13. Because she saw how it had affected me, she used it quite a bit (saying she hated me).
14. Now when she does say it ('I hate you') she is not getting the reaction, so it doesn't happen very often.
15. Gemma went through a phase of finding it difficult to cuddle me, because of the signals I was sending off.
16. I mean we don't argue now, 'cos I won't talk back to her if she starts.
17. Gemma's got manners, which she'll use when she feels like it.
18. When she's out she has to say cheeky comments to people, just to bring attention on herself.
19. She seems to be getting on a lot better with her brother, maybe because our relationship is better, she doesn't feel like she needs to compete anymore.
20. She seems to have calmed down a bit more in that way, because she doesn't feel like she's got to steam in and be the adult.
21. Maybe she's stopping to think a bit more because things are a lot more relaxed around the house.
22. Maybe she's stopping to think a bit more because she feels a bit more secure.

23. She's taking pride in her work, maybe because she's happier.
24. Perhaps she doesn't have to fight for the attention at school, so her work is better.
25. She has difficulties playing in the street, because of a clash of personality with this particular girl, they're both quite strong willed.
26. As soon as there's a group they're sort of fighting for the most friends I think.
27. It's as if she thinks they're going to hit me, so she goes first.
28. That might be bred into her because I was the same as a child, fear of what might happen, so you get in first.
29. She apologises when she's been naughty, because I've apologised so she's felt it's OK for her to.

Coding of Causal Attributions From Subject A's Post-Intervention Interview

CA	M	D/A	S/U	G/S	I/Es	I/Et	P/Us	P/Ut	C/Us	C/Ut	A/H	P/N
1	0	1	1	1	0	1	0	0	1	1	1	2
2	0	1	1	1	0	1	0	0	1	1	1	2
3	0	1	0	0	0	1	0	1	0	0	1	02
4	0	1	1	0	1	0	1	0	1	0	1	0
5	0	1	1	1	0	1	0	1	0	0	1	0
6	0	1	1	1	1	0	1	0	1	0	1	0
7	0	1	1	1	1	0	0	1	0	1	1	0
8	0	1	0	0	0	1	0	0	0	1	1	0
9	0	1	1	0	1	0	0	1	0	1	1	0
10	0	1	1	0	0	1	0	0	0	1	1	2
11	0	1	1	0	0	1	0	0	0	1	1	2
12	0	1	1	1	0	1	0	1	0	1	1	0
13	0	1	1	0	0	1	0	1	0	1	1	0
14	0	1	1	0	1	0	1	0	1	1	1	2
15	0	1	1	1	1	0	1	0	0	0	1	0
16	0	1	1	0	1	0	0	0	1	0	1	2
17	0	1	1	0	0	1	0	1	0	1	1	1
18	0	1	1	1	0	0	0	1	0	1	1	0
19	0	1	1	1	0	1	0	0	0	1	1	2
20	0	1	1	1	0	1	0	1	0	1	1	2
21	1	1	1	1	0	0	0	0	0	1	1	2
22	1	1	1	1	0	1	0	0	0	1	1	2

23	0	1	1	1	0	1	0	1	0	1	0	1	1	1	2
24	0	1	0	0	0	0	0	1	1	1	0	1	1	1	2
25	0	1	0	0	0	1	0	1	1	1	0	1	1	1	0
26	0	1	0	0	0	0	0	0	0	0	0	1	1	1	0
27	0	1	0	0	0	1	0	1	1	1	0	1	1	1	0
28	0	1	1	1	1	1	1	1	1	1	1	0	1	1	0
29	0	1	1	1	1	1	0	1	0	1	0	1	1	1	2

Key to Abbreviations Used In Coding

Column 1: N = Number of causal attribution

Column 2: M = Multiple Statements

[2] = More than one outcome

[1] = More than one cause

[0] = Single cause and outcome

Column 3: D/A = Definite/Ambiguous

[1] = Definite

[0] = Ambiguous

Column 4: S/U = Stable/Unstable

[1] = Stable

[0] = Unstable

Column 5: G/S = Global/Specific

[1] = Global

[0] = Specific

Column 6: I/Es = Internal/External (Speaker)

[1] = Internal (Speaker)

[0] = External (Speaker)

Column 7: I/Et = Internal/External (Target)

[1] = Internal (Target)

[0] = External (Target)

Column 8: P/Us = Personal/Universal (Speaker)

[1] = Personal (Speaker)

[0] = Universal (Speaker)

Column 9: P/Ut = Personal/Universal (Target)

[1] = Personal (Target)

[0] = Universal (Target)

Column 10: C/Us = Controllable/Uncontrollable (Speaker)

[1] = Controllable (Speaker)

[0] = Uncontrollable (Speaker)

Column 11: C/Ut = Controllable/Uncontrollable (Target)

[1] = Controllable (Target)

[0] = Uncontrollable (Target)

Column 12: A/H = Actual/Hypothetical

[1] = Actual

[0] = Hypothetical

Column 13: P/N = Positive/Negative/Neutral Outcome

[2] = Positive outcome

[1] = Neutral outcome

[0] = Negative Outcome