

THE UNIVERSITY OF HULL

Anxiety in childhood: parental expectations, differential parenting and siblings

Being a Thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Clinical Psychology

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by

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A: Overview

The portfolio has three parts:

Part one is a systematic literature review, in which the empirical evidence for the association between parental expectations of their child's anxious cognitions and child anxiety was reviewed.

Part two is an empirical paper, which explores anxiety in siblings, perceived differential parenting, fairness of parenting and self-esteem.

Part three comprises the appendices, which provide further information regarding the systematic literature review and the empirical paper.

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Part One: Systematic Literature Review

This paper is written in the format for submission to the journal *Clinical Child and Family Psychology Review*. Please see Appendix B.1 for the “Guidelines for Authors”.

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**Parental expectations of their child's anxious cognitions and the relation
to child anxiety: a systematic literature review**

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Abstract

Anxiety is known to run in families and evidence suggests there is a high correlation between parent anxious cognitions and child anxious cognitions. It has been suggested that parental expectations of their child's anxiety may mediate this relationship. This systematic literature review aimed to investigate the relationship between parental expectations about their child's anxious cognitions and child anxiety. PsycInfo, Web of Science, Scopus, and the Cochrane Library were searched. Ten articles met the inclusion criteria. The review found support for the relationship between parent expectations of their child's anxious cognitions and child anxiety. Parental expectations also appeared to develop over time and within a reciprocal relationship with child cognitions. However, due to the limited data, methodological flaws, and heterogeneity of the studies, firm conclusions could not be made. This area warrants further research. The limitations of the review are discussed.

Keywords: Anxiety, cognition, parent, expectation, child.

Introduction

It is widely known that there is a high concordance between parents and their children for anxiety disorders (Turner, Beidel, & Costello, 1987). Many factors have been found to contribute to this transmission of anxiety, such as genetic predisposition (Stein, Jang, & Livesley, 2002), but environmental factors appear to be the largest contributor (Clark & Beck, 2010). These include parenting behaviours, such as over-involvement or lack of autonomy granting (McLeod, Wood, & Weisz, 2007), and parent's cognitions, such as parental expectations of their child (Barrett, Rapee, Dadds, & Ryan, 1996).

Anxiety and interpretation bias

Cognitive models of anxiety suggest that individuals with anxiety disorders display a high level of interpretations bias (Beck, Emery, & Greenberg, 1985). Individuals appraise situations as dangerous or threatening, triggering dysfunctional beliefs and schemas, resulting in increased levels of fear that are in excess of the real danger of the situation. Anxious individuals also exhibit a judgement bias, underestimating their ability to cope (Beck & Clark, 1988).

These cognitive biases can lead to avoidant behaviours, which in turn can result in a further increase in the perception of threat and lowered ability to cope. The level of anxiety experienced by individuals is suggested to depend on the perception of threat and their perceived ability to cope (Clark & Beck, 2010).

There is evidence that adults with anxiety demonstrate this interpretation bias. For example, Butler and Matthews (1983) found that adults with anxiety disorders overestimated threat compared to matched controls. Anxious children

share this threat interpretation bias (Barrett, Rapee, Dadds, & Ryan, 1996; Chorpita, Albano, & Barlow, 1996) and underestimate their ability to cope (Bögels & Zigterman, 2000). Cannon and Weems (2010) found that anxious children were more likely to exhibit negative interpretation biases and lower estimates of their ability to cope compared to non-anxious peers.

Interpretation bias and perceived ability to cope can be seen as anxious cognitions (these terms will be used interchangeably throughout the review). Studies have demonstrated that there is a correlation between parent and child anxious cognitions. For example, Schneider, Unnewehr, Florin, and Margraf (2002) found a greater threat interpretation bias in the children of parents with panic disorder and Creswell and O'Connor (2006) found a correlation between mother and child anxious cognitions.

Parental expectations of child anxious cognitions

There are a number of possible explanations for the correlation between parent and child anxious cognitions. It has been suggested that mothers who interpret their own experiences in a threatening way also expect their children to interpret situations in a similar way. This may influence how their children then interpret their own experiences (Lester, Seal, Nightingale, & Field, 2010). Children experience many ambiguous situations as they are growing up and parents are able to help their children disambiguate these, which can either be done in a threatening or non-threatening way. The more experiences the child has of their parent's interpretations of situations, and how they expect their child to also interpret the situation and respond, may result in the child beginning to adopt their parent's interpretation bias.

Parental expectations of their child can therefore be explored as a possible mediator between parental cognitions and child cognitions (Creswell & O'Connor, 2006). Specifically, parental expectations of their child's anxious cognitions have been found to have a strong association. The parent's expectations of their child's interpretation of situations and likely responses are influenced by the parent's own cognitions and how they interpret situations. This then influences the development or maintenance of child anxious cognitions and behaviours.

A growing body of research has provided support for the role of interpretation bias in the development and maintenance of anxiety. For example, Vassilopoulos, Banerjee, and Prantzalou (2009) trained children with high trait social anxiety to interpret social situations in a neutral sense rather than as threatening. They found that following their training there was a reduction in child social anxiety.

Parental expectations of their child may relate to certain parenting behaviours. Extensive research has indicated that parents of anxious children are likely to be overprotective and controlling in their parenting style (e.g. Siqueland, Kendall, & Steinberg, 1996; Chorpita & Barlow, 1998; McLeod, Wood, and Weisz, 2007). If parents have an expectation that their child will interpret a situation as anxiety provoking it may lead to overprotective and controlling behaviours in order to reassure the child and reduce their distress. For example, Creswell, O'Connor, and Brewin (2008) found that parents who had negative expectations of their child's anxiety were more involved than parents who had positive expectations. In turn, these expectations and

behaviours potentially result in the child developing a perception of threat and low coping abilities (Kortlander, Kendall, & Panichelli-Mindel, 1997).

Parental expectations of their child's anxious cognitions can be measured directly by assessing parents' expectations of their child's threat interpretations. As suggested by Beck and Clark (1988), anxious cognitions can also be assessed through estimates of coping ability. Furthermore, feelings of distress/physical anxiety symptoms and avoidant behaviours are often influenced by anxious cognitions. Therefore, parental expectations of anxious feelings/distress and anxious behaviours can be seen as indirect measurements of parental expectations of their child's anxious cognitions.

Parent expectations, parent anxiety and anxious cognitions, and child anxiety

To further assess the relationship between parental expectations of their child's anxious cognitions and child anxiety, it is important to consider the association between parental expectations and parental anxiety and anxious cognitions. The nature of parental expectations has been found to be associated with parental anxiety (Cobham, Dadds, & Spence, 1999) and parent's anxious cognitions (Creswell, Shildrick, & Field, 2011). This makes theoretical sense as, as discussed, if parent's threat interpretations extend into their child's environment (Lester, Field, Oliver, & Cartwright-Hatton, 2009) they are likely to expect their children to think and respond in the same way that they do. Hence, if a parent suffers from anxiety, they are likely to interpret situations as threatening (i.e. have anxious cognitions) and expect their children to think and do the same. This review aims to investigate the empirical support for these associations.

Reciprocal relationship between parent expectations and child anxiety

The 'looking glass hypothesis' (Cooley, 1902; Shaffer, 2005) states that children's appraisals of themselves are partly shaped by the evaluations of significant others, for example parents. It can therefore be suggested that parental expectations reinforce the child's anxious cognitions and behaviours (Dadds & Barrett, 1996). A reciprocal model may exist, where parents' expectations influence their child's anxiety but also that parental expectations are shaped by past experiences of the child's interpretations and behaviour. This reciprocal relationship can be assessed through longitudinal studies to explore how parental expectations and child cognitions develop over time. This is a further focus of the review.

Methods to assess parental expectations

Parental expectations have been most widely assessed using ambiguous situations. These were initially developed by Barrett et al. (1996). Ambiguous situations, either relating to a physical threat or a social threat, were used in interviews with both children and parents regarding their interpretations and planned response to those situations. All subjects were asked "What do you think is happening?"; "Which of the following explanations do you think is most likely?" (given a choice of two threat and two neutral interpretations); and "What would you do about it / what would your child do about it?". This task assesses parent and child threat cognitions and parent's expectations of their child's response to ambiguous situations.

More recently, the ambiguous situations interviews have been developed into questionnaires. Three forms of the questionnaire exist: one to assess child

interpretations and responses (Creswell, O'Connor, & Brewin, 2006); one to assess parental interpretations and responses (Creswell et al., 2006); and a third to assess parental expectations of their child's interpretations and responses (Creswell et al., 2006). Through using all three questionnaires links can be made between parental anxious cognitions, child anxious cognitions and the expectations of the parents.

The ambiguous situations have been criticised as they are generic and do not necessarily relate to the situations that are the most anxiety provoking for the individual (Cobham et al., 1999; Micco & Ehrenreich, 2008). Experimental tasks have been developed to attempt to make situations more applicable to real life and to further the quality of research in this area.

Clinical implications of the review

Cognitive-behavioural therapy (CBT) is the current recommended practice for the treatment of anxiety disorders for both adults (NICE, 2011) and children (James, Solar, & Wetherall, 2005). Family CBT is becoming more common with a high number of RCTs being carried out in this area. For example, Wood, McLeod, Piacentini, and Sigman (2009) found that there was a significant decrease in child anxiety after one year of completing a course of family CBT compared to child-focused CBT. This suggests that the involvement of the family in the treatment of childhood anxiety is beneficial. Reviews and further research into the role of parents' cognitions and expectations on the development and maintenance of their child's anxiety will be beneficial to targeting specific interventions in therapy.

Current review aims and research questions

There have been no reviews of the literature examining the relationship between parental expectations of their child and child anxiety. This review paper aims to synthesise all the literature in this area. In order to be able to provide effective clinical treatment to children experiencing anxiety disorders, it is important to be aware of the effect of parental expectations of their child in the maintenance of child anxiety.

This review aimed to address the following questions:

1. What is the empirical support for the relationship between parental expectations of their child's anxious cognitions and child anxiety?
2. What is the relationship between parental anxiety and parental anxious cognitions on parental expectations of their child's anxiety?
3. What is the empirical support for the reciprocal relationship between parental expectations of their child's anxious cognitions and child anxiety?

Method

Data Sources and Search Strategy

An electronic search was carried out between January 2011 and April 2011. The databases searched for relevant articles were: PsycInfo, Scopus, Cochrane Library and Web of Science. These databases were chosen as they cover a wide range of journals in psychology and related areas.

The search terms used were: parent*, mother*, father*, maternal, paternal, mum, dad AND child*, young, girl, boy, school age, adolescent AND anxi*, worry, panic, phobia, internalising AND cogniti*, threat, interpret*, bias,

think* AND expect*, belie*, predict*. The asterisk (*) truncation was used on some of the search terms due to possible multiple word endings and so to increase the number of articles retrieved.

Search limits were put in place on the databases where this was available. Search limits included journals available in the English language and articles published in peer-reviewed journals.

Study selection

The results from the database searches were included or excluded through reading the titles and/or abstracts. If it could not be ascertained if the article was relevant, the full text was accessed and assessed further for eligibility. Articles meeting the criteria were included in the review. Following the database searches, the references of relevant articles were searched for any papers that had been missed. These articles were assessed using the inclusion and exclusion criteria and if suitable, were included in the review. Key authors identified from the retrieved articles were contacted in order to enquire about any articles that were soon to be published or that had not been identified from the database search. No further articles were highlighted from this method.

The review included studies that met the following criteria:

1. Published in English;
2. Published in a peer reviewed journal;
3. The study had a primary source of quantitative data;
4. The study included child (aged 18 or below) and/or their parent(s);

5. The study included a measure of parental expectations of their child's anxiety (task or questionnaire).

Studies were excluded if they did not meet all of the inclusion criteria or if they met one of the following:

1. Focused on another aspect of cognition other than parental expectations;
2. Focused on parental behaviour;
3. Case studies;
4. Literature reviews;
5. Dissertations;
6. Discussion papers;
7. Papers aimed at developing a measure.

Study quality assessment

A quality assessment was carried on the articles included in the systematic literature review. Quality ratings were not used to exclude studies but were used to critique included studies. There are a range of quality assessment tools available but none of these checklists are applicable to all systematic literature reviews. Therefore, a bespoke checklist was devised for this review. The Downs and Black (1998) and STROBE (2007) checklists were adapted to form an assessment tool suitable for this review. This checklist consisted of 14 items that were considered to be relevant to the studies under review. A points system was used so a study meeting all 14 criteria would achieve a score of 14. The checklist was piloted on a small number of studies to ensure suitability (see Appendix D.1 for a copy of the checklist used).

An independent researcher rated some of the studies in order to assess inter-rater reliability and to control for potential researcher bias. Using a Pearson correlation, a score of .91 was obtained (see Appendix D.2 for the detailed quality ratings).

Data extraction

For each article included in the review, a protocol was followed to extract the required information. This included the research aims, participants (age, gender, sample size), research design, screening measures or diagnostic tools, outcome measures, the main findings, and limitations of the study (see Appendix D.3 for a copy of the extraction form).

Data synthesis

The data was synthesised qualitatively, due to the heterogeneity of the data.

Results

Overview of Search Results

Figure 1 illustrates the process of retrieving, selecting, accepting and rejecting articles at each stage. 619 articles were identified from the database searches. Following the review of the title and/or abstract, 568 of these were excluded due to not meeting all the inclusion criteria or meeting one or more of the exclusion criteria. Of the remaining articles, 27 were excluded due to being duplicates. The full text was obtained for 24 of the articles. Fifteen of these were excluded at this stage due to not meeting the criteria. A list of these studies and the reasons for exclusion can be found in Appendix D.4. One article was identified

from the reference lists of the full text articles. A total of ten articles were included in the review. Table 1 highlights the main details of these papers.

Figure 1: Overview of search process

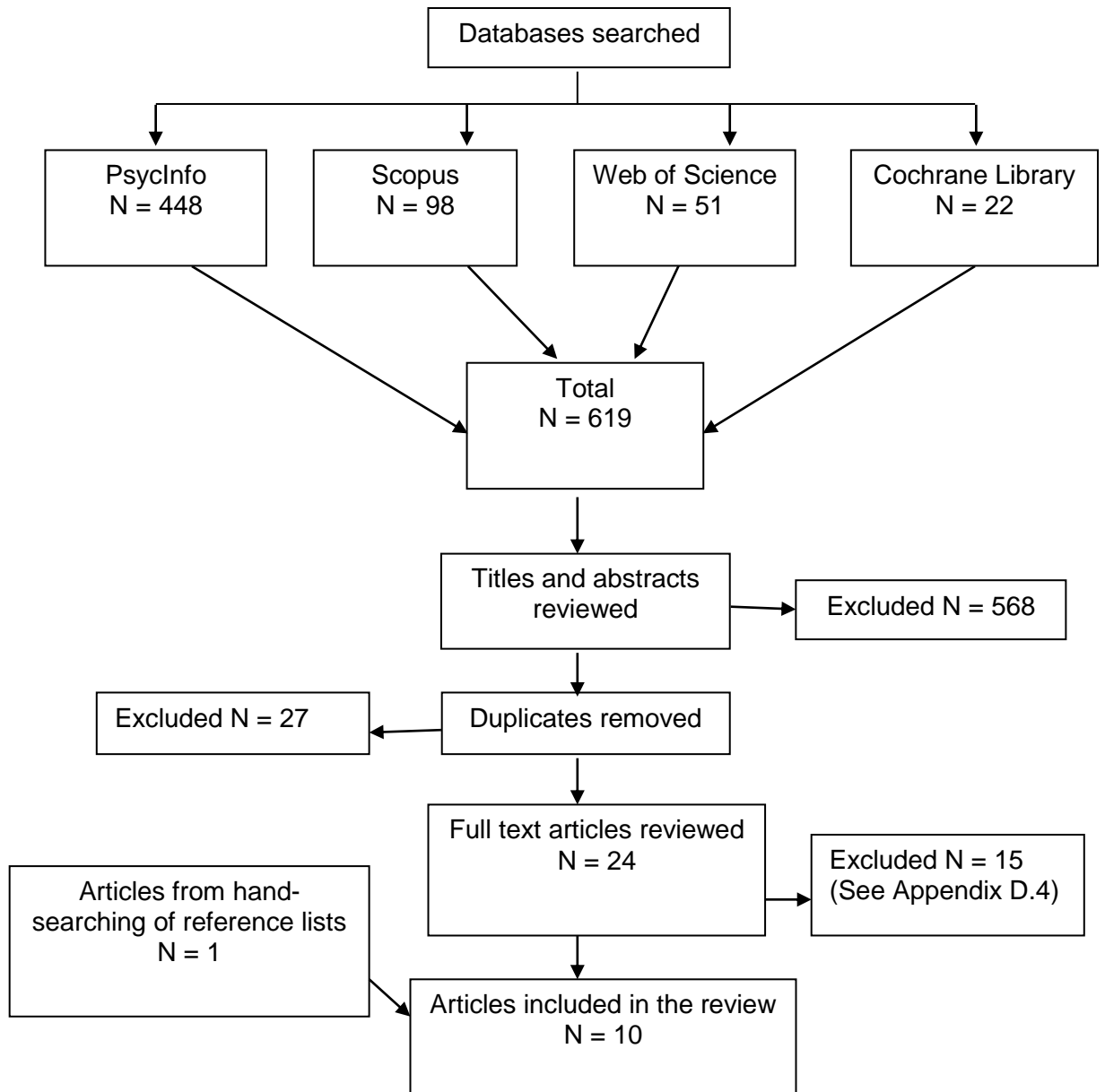


Table 1: Details of included studies

Author/ publication date/ country	Design	Participants age/ gender/ sample size	Aims	Anxiety measures	Cognitive task /outcome measures	Findings	Quality Score
Barrett, P.M., Rapee, R.M., Dadds, M.M., & Ryan, S.M. (1996) Australia	Cross- sectional	N = 205 children and their parents Anxious group: N =152. Separation anxiety disorder = 37 (M age = 9 yrs); Overanxious disorder = 57 (M age = 9.6); Simple phobia = 27 (M age = 9.5); social phobia = 31 (M age = 9.4) Nonclinical sample: N =26. Mean age = 10.2 yrs ODD sample: N = 27. Mean age = 10.0 yrs.	To examine parental predictions of their child's solutions to ambiguous scenarios.	ADIS-C ADIS-P CBCL	Ambiguous situations. Mean number of threat interpretations provided by child and parent. Mean number of aggressive, avoidant, proactive responses.	Parents of anxious children predicted their child would avoid the situations significantly more than the other two control groups.	11
Bögels, S.M., van Dongen, L., & Muris, P. (2003) The Netherlands	Cross- sectional	N = 25 children (13 f; 12 m). Mean age = 12.2 yrs Anxious group n = 6. Separation anxiety disorder = 3; social phobia = 3. Nonclinical control group n = 19 Parents: mother and father n = 11; mother only n=12; father only n= 2.	To examine the influence of parental anxiety and negative interpretations on child interpretations of ambiguous situations.	SCARED FSS-III	Ambiguous situations. Child rated self on interpretation and action and parent rated what a child what think and do.	Child negative interpretations related to parent's expectations of children. No evidence that anxious parents negatively influence interpretation bias of children.	10
Cobham, V., Dadds, M.R., Spence, S.H. (1999) Australia	Cross- sectional	N = 73 (41 m; 32 f). Mean age 9.55 yrs. Plus parents. Anxious group: N = 33. Separation anxiety disorder = 2; overanxious disorder = 19; generalised anxiety disorder = 1; simple phobia = 4;	To investigate the influences of the family on anxious children's behaviours and expectations. To examine parental	ADIS-C RCMAS STAI CBCL	Experimental task: five minute speech task. Parents and child to rate child's predicted performance, anxiety level and solution.	No differences between the three groups in child expectations. Mothers in child + parent anxiety group expected	12

		<p>agoraphobia = 1. Later split into anxiety only and child + parent anxiety. Clinical control group: N = 20. ODD = 18; ADHD =1; conduct disorder = 1. Nonclinical control group: N = 20 Both parents in 81.8% of anxious group; 40% of clinical control; 35% of nonclinical control. Mothers only in remaining.</p>	<p>anxiety as a possible mediator.</p>			<p>children to be more anxious and more likely to choose avoidant problem solution compared to mothers in anxiety only group.</p>	
<p>Cresswell, C., & O'Connor, T.G. (2006) UK</p>	<p>Cross-sectional</p>	<p>N = 65 (34 m; 31 f) Aged 10-11 years. Plus mothers.</p>	<p>To investigate the factors connecting mothers' and their children's anxious cognitions.</p>	<p>STAIC STAI</p>	<p>ASQ-C ASQ-P ASQ-PEC</p>	<p>Mother and child threat cognitions were significantly correlated. Mother distress was associated with expectations for child's distress. Mother's expectation for child distress was associated with child's self-reported distress.</p>	<p>10</p>
<p>Creswell, C., O'Connor, T.G, & Brewin, C.R. (2006) UK</p>	<p>Longitudinal</p>	<p>Time 1: N = 65 (30 m; 35 f) aged 10-11 yrs. Plus mothers Time 2: N = 54 children and mothers</p>	<p>Examine the longitudinal relationship between maternal anxious cognitions, expectations about their child, and child cognitions.</p>		<p>ASQ-C ASQ-P ASQ-PEC</p>	<p>Child cognitions associated with maternal expectations both cross-sectionally and longitudinally.</p>	<p>11</p>

Creswell, C., O'Connor, T.G. & Brewin, C.R. (2008) UK	Experimental	Group 1: N = 26 (14 m; 12 f). Mean age = 9.04 yrs. 1 father; 25 mothers Group 2: N = 26 (16 m; 10 f). Mean age = 9.08 yrs. 2 fathers; 24 mothers.	Experimental study to manipulate parent expectations of how their child would perform on a task. To assess parent behaviour and child distress/anxiety.	STAI STAIC	Difficult anagram task (Woodruff-Borden, Morrow, Bourland, & Cambron, 2002). Experimental manipulation: parents given either positive or negative expectations of child performance. Parent-child interactions coded. Child rated how difficult they found task and how worried and upset they were by it.	Child self-report of difficulty, worry and distress did not differ between the groups of positive and negative parental expectations.	12
Creswell, C., Shildrick, S., & Fields, A.P. (2011) UK	Longitudinal (T1, T2, T3)	Children aged 5-9 years. T1: N = 110 children (47 m; 63 f) and 104 parents. T2: N = 90 children and parents T3: N = 77 children and 72 parents.	To examine the association between interpretation biases and child anxiety over time and the influence of parental expectations on child cognitions.	Child: Adapted 10 item measure (CBCL; ARBQ) Parent: adapted 10 item measure (CBCL; ARBQ) STAI	ASQ-C ASQ-P ASQ-PEC	Over time, parent's expectations were significantly predicted by child anxiety and child threat cognitions. Parent's distress cognitions predicted their distress expectancies at all time points.	9
Kortlander, E., Kendall, P.C., & Panichelli- Mindel, S.M. (1997) USA	Cross- sectional	Anxiety group: N = 40 (m 21; 19 f). Mean age = 10.96 yrs. N = 40 mothers. Nonclinical controls: N = 40 (m 20; f 20). Mean age = 11.77 yrs. N = 40 mothers.	Examined maternal expectations and attributions about their child's ability to cope with a stressful situation.	CBCL CBCL-T STAI	Maternal expectations: thought listing; maternal coping ratings; confidence ratings. Coping Questionnaire – Child (Kendall, 1994) Experimental	Mothers of anxious children expected their child to be more distressed and had lower expectations for	12

					manipulation: assigned coping rating and attributions for assigned coping. Behavioural observations of 5 minute speech task.	their ability to cope. Mother's expectations for coping were congruent with child's self-report of coping.	
Micco, J.A., & Ehrenreich, J.T. (2008) USA	Cross-sectional	Clinical group: N = 40 (18m; 22 f). Mean age = 10.65. All diagnosed with anxiety disorder. Mothers (mean age = 44.33) Nonclinical group: N = 40 (19 m; 21 f). Mean age = 11.30. Mothers (mean age = 43.75).	To examine the threat perceptions and expectations of child coping ability in mothers of anxious and non-anxious children.	ADIS-C ADIS-P CBCL RCADS DASS	Cognitive and Avoidant Response Biases Questionnaire –Child Version Cognitive and Avoidant Response Biases Questionnaire – Parent Version	Anxious children had higher threat perception and lower coping expectations than controls. Mothers of anxious children had lower coping expectations of their child than control mothers. Mother's expectations of their child's coping predicted child's own coping expectations and threat perceptions.	12
Wheatcroft, R., & Creswell, C. (2007) UK	Cross-sectional	N = 104 parents (90% mothers). Mean age of child = 3.76 yrs (46% girls)	Association between parent and child anxiety and parent's cognitions and expectations about their child's	ARBQ STAI	The Preschool Scenarios Questionnaire (Wheatcroft & Creswell, 2009)	Higher child anxiety associated with parent's expecting child to respond to ambiguous scenarios with	11

responses to
ambiguous
scenarios.

greater anxiety
and more
avoidant
behaviours.

Key: ADIS-C = Anxiety Disorders Interview Schedule – child version (Silverman & Albano, 1996); ADIS-P = Anxiety Disorders Interview Schedule – parent version (Silverman & Albano, 1996); ARBQ = Anxiety Related Behaviour Questionnaire (Eley et al, 2003); ASQ-C = Ambiguous Situations Questionnaire: child self-report (Barrett et al, 1996); ASQ-P = Ambiguous Situations Questionnaire – parent self-report; ASQ-PEC (Ambiguous Situations Questionnaire: parent expectations of their child; CBCL = Child Behaviour Checklist (Achenbach & Edelbrock, 1991); CBCL-T = Child behaviour Checklist – teacher report (Achenbach & Edelbrock, 1991); DASS = Depression Anxiety Stress Scales (Lovibond & Lovibond, 1995); FSS-III = Fear Survey Schedule (Wolpe & Lang, 1964); RCADS = Revised Child Anxiety and Depression Scale (Chorpita et al, 2000); Revised Children’s Manifest Anxiety Scale (Reynolds & Richmond, 1978); SCARED = Screen of Anxiety Related Emotional Disorders (Birmaher, Khetarpal, Brent, Cully, Balach, Kaufman, & Neer, 1997); STAIC = State-Trait Anxiety Inventory for Children (Spielberger, 1973); STAI = State Trait Anxiety Inventory (Spielberger, Gorsuch & Lushene, 1970; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983).

Methodological quality

Quality ratings over the ten papers reviewed ranged from a score of nine (Creswell et al., 2011) to twelve (Cobham et al., 1999; Creswell et al., 2008; Kortlander et al., 1997; Micco & Ehrenreich, 2008) out of a total of fourteen (see Appendix D.2). The most common methodological flaw was not reporting reasons for participants not consenting to take part or for those that dropped out (apart from Creswell et al., 2006). The exclusion of these details impacted on the quality item assessing whether the participating sample was representative of the population it was recruited from. This makes it difficult to generalise the findings from the studies.

Design

Out of the ten studies reviewed, one was experimental in design (Creswell et al., 2008) and two were longitudinal (Creswell et al., 2006; Creswell et al., 2011). The remaining seven studies were cross-sectional.

Participants

The studies reviewed ranged in the types of participants included. Three studies reviewed included both a group with children who had an anxiety disorder and a non-clinical control group (Bögels, van Dongen, & Muris, 2003; Kortlander et al., 1997; Micco & Ehrenreich, 2008). Two studies included a clinical control group in addition to the anxiety and non-clinical groups. This group consisted of children diagnosed with Oppositional Defiant Disorder only (Barrett et al., 1996) and Oppositional Defiant Disorder,

Attention-Deficit Hyperactivity Disorder, or Conduct Disorder (Cobham et al., 1999). The remaining studies used community samples.

One study included only the parents of children (Wheatcroft & Creswell, 2007) and the remaining nine studies included both parent-child dyads. In four of these studies only mothers and their child took part (Creswell & O'Connor, 2006; Creswell et al., 2006; Kortlander et al., 1997; Micco & Ehrenreich, 2008) but in five studies either the mother and/or father of the child were included (Barrett et al, 1996; Bögels et al., 2003; Cobham et al., 1999; Creswell et al., 2008; Creswell et al., 2011). Where fathers were included they only accounted for a small proportion of the parents e.g. only three fathers took part in Creswell et al.'s (2008) study out of a total of fifty-two parents and sometimes due to their small numbers their data was excluded from the analysis (e.g. Cobham et al., 1997).

Sample sizes ranged from a total of 25 participants (Bögels et al., 2003) to 205 (Barrett et al, 1996). In the cross-sectional and experimental studies, where the children participated, mean ages of the children ranged from 9.06 years (Creswell et al., 2008) to 12.2 years (Bögels et al., 2003). In the longitudinal studies, Creswell et al. (2011) assessed children annually starting at 5/6 years old and ending when the children were 8/9 years old and Creswell et al. (2006) assessed children aged 10-11 years at time one and six months later. The mean ages of the children at each stage were not given in either of these longitudinal studies. Wheatcroft and Creswell (2007) did not directly assess the children but the parents involved in their study had a child with a mean age of 3.76 years, so assessing preschool children.

Anxiety measures

In the studies using a clinical population, a diagnostic tool was often used to interview the children and/or parents to diagnose the type of anxiety disorder the child had. The Anxiety Disorders Interview Schedule – child version (ADIS-C) and parent version (ADIS-P) were used by Cobham et al. (1999; child version only), Barrett et al. (1996) and Micco & Ehrenreich (2008). A further tool used was the Screen of Anxiety Related Disorders (SCARED; used by Bögels et al., 2003). Even though Micco and Ehrenreich (2008) used a diagnostic tool, they did not report details of the type of anxiety disorder. Kortlander et al., (1997) did not use a tool to diagnose the type of anxiety disorder of the children in their anxiety group.

Of the three studies that reported details on the type of anxiety disorder of their anxious participants, the range of anxiety disorders included separation anxiety disorder (n=42); social phobia (n=38); simple phobia (n=33); overanxious disorder (n=76); generalised anxiety disorder (n=1); and agoraphobia (n=1).

None of the reviewed studies gave details regarding the length of diagnosis of the clinical participants or regarding any therapeutic input. This information would have been useful in order to assess clinical severity and duration.

Further screens of anxiety were also used in the studies assessing an anxious population, even though they did not use these to diagnose the type of anxiety disorder. These included the Revised Children's Manifest Anxiety Scale, used by Cobham et al. (1999), the Revised Child Anxiety and Depression Scale, used by Micco and Ehrenreich (2008), and the Child

Behaviour Checklist, used by Barrett et al. (1996), Cobham et al. (1999), Kortlander et al. (1997), and Micco and Ehrenreich (2008).

In the studies using community samples, anxiety in the children was assessed using standardised measures including the State-Trait Anxiety Inventory for Children (STAIC; used by Creswell & O'Connor, 2006; Creswell et al., 2008), the Anxiety Related Behaviours Questionnaire (ARBQ; used by Creswell et al., 2011; Wheatcroft & Creswell, 2007), and the Child Behaviour Checklist (CBCL; used by Creswell et al., 2011).

Parental anxiety was measured using the State-Trait Anxiety Inventory (Cobham et al., 1999; Creswell, & O'Connor, 2006; Creswell et al., 2008; Creswell et al., 2011; Kortlander et al., 1997; Wheatcroft & Creswell, 2007), the Fear Survey Schedule (Bögels et al., 2003) and the Depression, Anxiety, Stress Scale (Micco & Ehrenreich, 2008). Two of the studies did not assess parental anxiety.

Cognitive tasks and questionnaires

The ambiguous situations task was used by two studies. The studies using this task differed in the number of ambiguous situations they used e.g. Barrett et al. (1996) originally used 12 situations but Bögels et al. (2003) used only nine of these.

Three studies used questionnaires based on the ambiguous situation scripts (Creswell & O'Connor, 2006; Creswell et al., 2006; Creswell et al., 2011). They all used the child, parent, and parent expectations of their child forms of the questionnaire. Wheatcroft and Creswell (2007) used a

questionnaire form but adapted the situations so they were age appropriate to use with parents of preschool children.

An alternative questionnaire was used by Micco and Ehrenreich (2008). Child and parent versions of the Cognitive and Avoidant Response Biases Questionnaire were used. These measured both parent and child threat interpretations of six situations (three personally salient to the child and three non-salient) they had likely encountered. It also assessed the child's belief in their ability to cope with these situations as well as the parent's expectations in their child's ability to cope.

Experimental tasks were also used to measure parent's expectations of their child. Creswell et al. (2008) experimentally manipulated parental expectations within a community sample. This resulted in the parents either being positive about the task, and expecting their child to do well, or expecting their child to find the task challenging. However, parents followed a script about how to act and what to say. Even though this meant the parents in each group were displaying similar cognitions and behaviours, they may not have been natural.

Parental expectations about their child's anxious cognitions and child anxiety

As discussed, parental expectations about their child's anxious cognitions can be measured directly and indirectly. Direct measurements assess parental expectations of their child's threat interpretation and coping ability. Indirect measurements assess parental expectations of their child's anxious behaviour and distress/anxiety feelings. All four areas have been addressed here.

Parent expectations about their child's threat interpretations

Four studies investigated mother's expectations of their child's interpretation of ambiguous situations (Creswell & O'Connor, 2006; Creswell et al., 2006; Creswell et al., 2011; Bögels et al., 2003). An association was found between maternal expectations and child anxiety in all of the four studies. Creswell and O'Connor (2006) proposed a mediation model where mother's expectations mediated the link between mother cognitions and child anxious cognitions. This suggests that mothers interpret their child's environment in the same way that they interpret their own i.e. as threatening. They expect their child to make this same interpretation and through these expectations the child adopts this way of interpreting their own experiences.

Parent expectations about their child's coping ability

Two studies reviewed in this paper investigated parental expectations of their child's ability to cope when confronted with potentially anxiety provoking situations. Both Micco and Ehrenreich (2008) and Kortlander et al. (1997) found that the mothers of anxious children had lower expectations of their child's ability to cope compared to mothers of non-clinical children. The mother's coping expectations also correlated with the child's expectations of their own coping abilities in both studies. In addition, the child's perception of threat of situations that were personally salient were positively associated with their mother's coping expectations (Micco & Ehrereich, 2008). This supports the Beck and Clark (1988) model of the link between threat perceptions and coping ability in anxious cognitions.

Parent expectations about their child's anxious behaviour

Three studies examined parental expectations of their child's anxious behaviour/response. Creswell et al. (2008) used an experimental design in which parents were assigned to either a positive expectations group or a negative expectations group. Despite parents acting in a positive or negative way with their child completing a difficult task, there were no differences between the groups on the child's observed behaviour in the task. However, Barrett et al. (1996) found that parents of anxious children were more likely to expect their child to choose an avoidant response compared to the mothers of non-clinical controls. Cobham et al. (1999) did not find a significant difference between the anxious group and clinical and non-clinical controls in mothers' expectations of their child choosing an avoidant response. However, a significant difference was found between the child anxiety only group and child plus parent anxiety group, where mothers in the child plus parent group more frequently expected their child to opt for an avoidant response to the ambiguous situation. This suggests that parental anxiety may be a mediating factor.

Parent expectations about their child's distress/anxiety

Four studies looked at the parental expectations of their child's distress or anxiety from the ambiguous situations. Creswell et al. (2008) found that following the parents displaying either positive or negative expectations (experimentally manipulated), the distress levels in the children did not differ between the two groups. However, Wheatcroft and Creswell (2007) and Creswell et al. (2011) found that parental distress expectancies were

associated with child distress/anxiety. Through the longitudinal design of Creswell et al. (2011), this association was seen to develop over time. In a clinical population, Cobham et al. (1999) found that anxious mothers expected their child to experience significantly more anxiety than non-anxious mothers, despite them both having anxious children.

Relationship between parental expectations and parental anxiety and parental anxious cognitions

Relationship between parental expectations and parental anxiety

Eight studies assessed parental anxiety. However, only four of the eight studies commented on the association between parental expectations and parental anxiety. In those four that did not comment, the parental anxiety measure was used as either a screening tool or simply for descriptive purposes. Out of the studies that did investigate the relation between parental anxiety and parental expectations, three of the studies found no significant correlation between parental anxiety and parental expectations (Bögels et al., 2003; Creswell et al., 2011; Wheatcroft & Creswell, 2007). However, Cobham et al. (1999) found that there were significant differences in the expectations of anxious mothers compared to non-anxious mothers, even though they both had anxious children.

Relationship between parental expectations and their cognitions

Surprisingly, only two studies directly assessed the relationship between parental cognitions and their expectations for their child. Creswell et al. (2011) found that parents' own distress cognitions predicted their distress

cognitions about their child. However, Creswell et al. (2006) found that even though there was a mediation model between parent cognitions, parent expectations and child cognitions, child cognitions were more consistently linked with mother's expectations than with mother's cognitions.

Reciprocal relationship between parental expectations and child anxious cognitions

The reciprocal relationship between the development of parental expectations and child cognitions was examined by two studies. Both Creswell et al. (2006) and Creswell et al. (2011) used longitudinal designs to investigate this relationship. Creswell et al. (2006) discovered that parental expectations of their child's distress predicted a change in the child's threat cognitions over time. They also found that threat perceptions in girls predicted changes in their mother's expectations over time. Creswell et al. (2011) also noticed this pattern but it was not specific to just girls and it occurred later on in their study, when the children were at the same developmental stage to those participating in Creswell et al.'s (2006) study. Early on, when the children were 5/6 years, child anxiety predicted parental expectations but this changed to child threat cognitions being predicted by parental expectations later. Therefore, this suggests that mothers appear to develop and change their expectations of their child in response to their child's anxiety and cognitions in addition to the child's cognitions adapting as a result of their mother's expectations.

Discussion

This systematic literature review aimed to examine the empirical support for the relationship between parental expectations of their child's anxious cognitions and child anxiety. Ten articles were reviewed. Those included in the review directly measured parental expectations. There was support for the first research question as parental expectations of their child's anxious cognitions i.e. threat interpretations and coping abilities, were associated with child anxiety. However, there was mixed support for this association when studies used indirect measures of parental expectations of their child's anxious cognitions i.e. assessed parental expectations of child anxious behaviour and distress/anxiety feelings. There were limited studies assessing the second research question. Even though there was partial support for the relationship between parental anxiety and parental anxious cognitions and parental expectations, conclusions cannot be drawn due to the limited number of studies. Finally, the third research question was supported by the review but again there were limited studies assessing it.

In consideration of the first research question, parental expectations of their child's anxious cognitions were highly associated with child self-reported interpretation bias (Creswell & O'Connor, 2006; Creswell et al., 2006; Creswell et al., 2011; Bögels et al., 2003). In addition, there was a strong link between mother's expectations of their child's coping ability and the child's perception of their own coping ability (Micco & Ehrenreich, 2008; Kortlander et al., 1997). This suggests that mother's expectations are a true reflection of their child's own perception of their abilities. In one study, maternal expectations of coping also related to the child's perception of

threat in situations that were personally anxiety provoking for them (Micco & Ehrenreich, 2008). This supports Beck and Clark's (1988) model that coping abilities and threat perception are linked to anxious cognitions and here it appears that both are affected by maternal expectations.

However, there was mixed support for the link between parental expectations of their child's anxiety/distress and behaviour and child self-reported anxiety symptoms. This suggests that these indirect measures of anxious cognitions do not have as strong a link with direct ways of assessing anxious cognitions i.e. through threat perceptions and perceived coping abilities. It also provides evidence that parental expectations of their child's anxious cognitions have a greater relation to child anxiety than anxiety/distress and behaviour expectations. A possible explanation for this finding is that parent and child cognitions are highly correlated (Creswell & O'Connor, 2006) and parent cognitions extend into their child's environment (Lester et al., 2010). Parental expectations of their child's anxious cognitions can be seen as an extension of the parent's own anxious cognitions. Therefore, it is likely that parental expectations are also correlated with child anxious cognitions. Cognitions are the driving force to anxiety, over any of the other symptom, (Beck et al., 1985) and result in the development and maintenance of anxiety in the child.

In relation to the second research question, only one study found an association between parental anxiety and the expectations parents had for their children (Cobham et al., 1999). However, only a small proportion of the studies reviewed commented on this association (four studies). Due to the evidence to support the link between parental anxiety and interpretation

bias/cognitions (Butler & Matthews, 1983; Barrett et al., 1996), it was expected that anxiety and expectations would also be related. It was also anticipated that there would be evidence to support the link between parental cognitions and parental expectations. Only two studies investigated this association and there was evidence to support the relationship (Creswell et al., 2006; Creswell et al., 2011). However, one study found that child cognitions had a stronger relationship to parental expectations than parent's own cognitions. It appears that the experiences parents have with their child in terms of the child interpreting threat and their perceived coping strongly influences the development of parental expectations for that child, more so than the parent's own cognitions.

There was evidence to support the third research question of the reciprocal relationship between parental expectations and child cognitions. Mother's expectations of their child predicted a change in the child's threat interpretations over time and child cognitions predicted change in mother's expectations over time (Creswell et al., 2006; Creswell et al., 2011). This suggests that mother's respond to their child's vulnerabilities as well as mother's expectations partly shaping their child's anxiety. This supports the 'looking glass hypothesis' (Cooley, 1902; Shaffer, 2005) where our cognitions and behaviours are shaped by significant others, including family members. One study found this association was only apparent when the children were aged 8/9 years old (Creswell et al., 2011). This suggests that developmental stage is important in the impact of parent's expectations. Children at this age may give more weight to what their parents expect of them as they are able to anticipate negative outcomes (Vasey, Crnic, &

Carter, 1994). In addition, at this age Piaget's formal operational stage of thinking may begin (Carr, 2006). The child starts to predict the logical consequences of their actions, which may mean that parental expectations have a greater influence on the child's cognitions.

Seven out of the ten studies used the ambiguous situations to assess parental expectations, using either interviews or questionnaires. The ambiguous situations have been criticised for being generic and hypothetical (Micco & Ehrenreich, 2008). Recently, alternative questionnaires and experimental designs have begun to be used, such as Micco and Ehrenreich (2008) developed a questionnaire involving situations that were personally salient for the child. However, the experimental study reviewed here (Cresswell et al., 2008) did not find any effect of manipulating parental expectations on a group of non-clinical children. This suggests that parental expectations may develop over time and so manipulating them on a single occasion does not result in a change in the child's anxious cognitions or behaviour. This supports the results found from the longitudinal studies concluding that parental expectations did develop over time (Cresswell et al., 2006; Cresswell et al., 2011).

Overall, the above results suggest that there is a relationship between child anxiety and parental expectations of their child's anxious cognitions. There was a stronger relationship when directly assessing parental expectations of anxious cognitions i.e. through threat interpretation and coping ability, compared to when indirectly assessing them through behaviour and distress. Despite anxious behaviour and anxious feelings/distress being important elements of cognitive models of anxiety

(e.g. Beck et al., 1985), this review suggests that anxious cognitions appear to play a more crucial role in the relationship between parent and child anxiety. The relationship between parental expectations and child anxiety appears to be reciprocal where each influences the other and both change and develop over time. In addition, parental anxiety and parental anxious cognitions seem to partially influence these parental expectations, however, firm conclusions cannot be drawn from the limited research available.

Despite the limited number of studies, the findings have face validity as they fit with existing models of child development and parenting. For example, with regards to the reciprocal relationship, it is known from family systems theory that all members of a family interact and influence each other's thoughts and behaviours (Bowen, 1978). Therefore, it is expected that the relationship between parental expectations and child anxiety will each influence the other.

Limitations of the studies

There were a number of limitations of the studies included in the review. All of the studies had a sample of participants who volunteered to take part in the research. This bias results in the participating sample not necessarily being representative of the population they were recruited from. Furthermore, as reported in the results section, the quality checklist results indicated that the majority of the studies failed to report the reasons for families not consenting or withdrawing from the study. This makes it difficult to assess if the sample is representative of the population. These factors

affect internal validity of the studies. External validity is also impacted on as the results cannot be generalised to the whole population.

In addition, fathers were generally understudied in the articles reviewed. There are a number of possible reasons for this, for example, mothers being seen as the primary caregiver in the family and the majority of literature in this area focusing on maternal cognitions and behaviours in relation to child anxiety. This makes it difficult to generalise the findings to both the mother and father in the family.

The ecological validity of the ambiguous situations has been questioned (Micco & Ehrenreich, 2008) as the situations are not personally relevant to all the participants. Anxiety is diverse in the range of situations that will be anxiety provoking for a given individual. Therefore, having potentially personally irrelevant situations, which the child and their parent know will not be anxiety provoking for them, may result in not obtaining a true reflection of the times that are anxiety provoking i.e. parents may have different expectations of their child depending if the situation is personally salient for them or not. Furthermore, the majority of the studies used hypothetical situations rather than real-life tasks. This contributed further to the limited ecological validity of the studies.

Cross-study comparisons were difficult due to the variety of participant groups, cognitive tasks, and the type of parental expectation measured. This made it difficult to draw firm conclusions across studies.

Furthermore, studies were conducted in a variety of countries. Even though five of the studies took place in the UK, two were carried out in Australia, two in the USA, and one in the Netherlands. Even though anxiety

issues may not differ between these countries, parental expectations may differ due to the variety of cultures. In addition, there is a lack of validity across research settings and healthcare systems in varying countries which made it difficult to generalise the findings.

Clinical implications

CBT is the recommended practice for the treatment of childhood anxiety with family CBT becoming more evidence-based and more widely used (e.g. Wood, McLeod, Piacentini, & Sigman, 2009). This review highlights two important associations: one between parental expectations for their child's anxious cognitions and child anxiety. A further important finding is the reciprocal relationship between parental expectations and child anxiety. These factors have important implications for therapy in targeting specific issues that may be maintaining the anxiety in the family. Interventions can be usefully directed at both the child and parent, to ensure optimal outcomes. Clinicians can also use this information to anticipate potential obstacles within the family during therapy. For example, when carrying out exposure tasks at home, the clinician will have a greater awareness that the child's parent's expectations of them may influence progress in therapy. If this is noted as a difficulty, these expectations could then be a focus of therapy. Further, methodologically robust, research is needed in this area.

Limitations of the review

There are a number of limitations to the review carried out. Firstly, although a wide range of search terms were used, some relevant studies may have

been missed due to researchers using specific tasks that may not have been identified by the search strategy. This may have excluded some studies that provided support for or against the conclusions drawn from this review.

A further limitation was that the data was collected and reviewed by only one researcher. This may have resulted in the process being subjective. This needs to be taken into consideration when thinking about the conclusions and implications of the review.

Only peer-reviewed journals were accessed to obtain relevant studies for the review. This may have excluded a large number of studies that have been unpublished but have provided results in this area. Studies with null findings are less likely to be published. This publication bias may have resulted in an unrepresentative sample of papers. In addition, only articles published in English were accessed and included in the review. Again, this bias in study selection may have resulted in foreign studies in this area being excluded and hence the conclusions drawn here may not reflect that if all the available data was included.

Further research

Generally, more robust research is needed in this important area. Further research is required to examine the link between parental cognitions, expectations, and child anxiety. In particular, it was surprising to find the limited number of studies that examined the association between parent cognitions and their expectations. Additional research is needed to investigate the development of parental expectations.

Considering the methodological limitations of the studies reviewed, researchers carrying out further research should consider studies that are quasi-experimental or longitudinal in design, assessing personally salient situations, and examining a clinically anxious population, including non-clinical controls. Through this methodology, firmer conclusions could be drawn that will be ecologically valid. It is important that parental anxiety and parental anxious cognitions are also assessed and the results are used to examine the association with parental expectations. This will aid in filling the current gap in the literature.

No study to date has looked at anxious cognitions within the whole family, including siblings of the children with anxiety difficulties. If anxiety is thought to run in families, then it is important to investigate whether the same expectations are made for all the children in the family. In addition, fathers are widely understudied. It would be interesting to investigate whether father's expectations of their child's anxious cognitions have the same effect for the child as mother's expectations do.

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**Part two: Anxiety in siblings, perceived differential parenting, fairness
of parenting and self esteem**

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**Anxiety in siblings, perceived differential parenting, fairness of
parenting and self-esteem**

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Abstract

This pilot study aimed to investigate the differences in childhood anxiety between siblings and the relationship to perceived differential parenting. Perceived fairness of parenting and self-esteem were also examined. Twenty nine families participated in the study. Two siblings from each family completed an anxiety measure. One child in each sibling dyad completed two further questionnaires: one regarding differential parenting and perceived fairness of parenting and another assessing self-esteem. Results showed that there was no relationship between the difference in anxiety between siblings and perceived differential parenting. In addition, perceived differential parenting was not associated with low self-esteem and there was no relationship between perceived fairness of parenting and self-esteem. However, a range of anxiety levels were found in the community sample assessed and there was variation in the difference in anxiety between siblings. The results are discussed with regards to limitations of the pilot study and areas for further research are highlighted.

Keywords: anxiety; child; sibling; parenting; self-esteem; fair

Introduction

Anxiety is one of the most common childhood mental health problems with one in ten children experiencing an anxiety disorder before the age of 18 years (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003). For many individuals their anxiety remains relatively stable throughout childhood and adolescence (Boyd, Kostanski, Gullone, Ollendick, & Shek, 2000). Recently the importance of the family in childhood anxiety has been recognised but this has been limited to the anxious child and their parents (Chorpita & Barlow, 1998; Manassis, 2001). There is a large evidence base to suggest that anxiety is transmitted from parent to child (e.g. Turner, Beidel, & Costello, 1987) and environmental factors, particularly the family, are seen as the largest contributor in this transmission (Clark & Beck, 2010). The impact on siblings in the family has been largely overlooked.

Family Cognitive-Behavioural Therapy (CBT) has recently gained a wide interest in the treatment of childhood anxiety (James, Solar, & Wetherall, 2005). Its evidence base is expanding with the majority of studies concluding that family CBT is more beneficial than individual CBT for anxiety. For example, Wood, McLeod, Piacentini and Sigman (2009) found there was a significant decrease in child anxiety after one year of completing a course of family CBT compared to individual child-focused CBT. Therefore, recent research has indicated the importance of the family in the development, maintenance and treatment of anxiety.

Parenting the anxious child

Research on parenting the anxious child has found that anxious children are more likely to have families who are less accepting or granting of autonomy (Siqueland, Kendall, & Steinberg, 1996), who do not promote independence (Messer & Beidel, 1994), and provide few opportunities for the child to experience control (Chorpita & Barlow, 1998).

A meta-analysis found that parental control demonstrated a stronger effect on child anxiety compared to parental rejection (McLeod, Wood, and Weisz, 2007). This study also found that low levels of autonomy granting, and to a lesser degree over-involvement, were strongly associated with childhood anxiety. Furthermore, a review by Van der Bruggen, Stams, and Bögels (2008) concluded that there was a strong association between child anxiety and parental control. It is difficult to conclude however whether these parental styles cause, or are in response to, the child's anxiety, or are an expression of the parent's own anxieties (Fox, Henderson, Marshall, Nichols, & Ghera, 2005).

Various models have suggested a cyclical or reciprocal relationship between parenting behaviour and child anxiety (Chorpita & Barlow, 1998; Hudson & Rapee, 2004). Hudson and Rapee (2004) suggested that a child with an anxious temperament may elicit overinvolved parenting in order to reduce distress. This style of parenting results in an increase in the child's perception of threat and lack of control in reducing threat and, therefore, reinforces the parental need to be overinvolved.

Recent experimental studies have begun to confirm this reciprocal relationship. In non-clinical populations, controlling parental behaviours

significantly increase anxiety in the child (Thirwall & Creswell, 2010), particularly when children are faced with doing a task alone (De Wilde & Rapee, 2008). The higher the child's trait anxiety level, the larger this effect becomes (Thirwall & Creswell, 2010). Controlling parenting can therefore be seen as a risk factor in the development of child anxiety.

Differential parenting and anxiety

Behavioural genetic models argue that the non-shared environment has a significant influence on development (Dunn, Stocker, & Plomin, 1990). Non-shared environment can be defined as environmental features that differ for children in the same family and influence outcomes for those children (Feinberg & Hetherington, 2001). Differential parenting is one aspect of this non-shared environment (Daniels & Plomin, 1985).

In family systems theory the family is seen as an interactional unit where each member influences the other (Bowen, 1978). A change in one individual's functioning has a reciprocal effect on the rest of the family, providing support again for the reciprocal relationship between parenting behaviours and child anxiety. Furthermore, if parents are controlling in their parenting style towards the anxious child, this may result in other children in the family being parented differently.

Within a non-clinical sample the perception of differential treatment was found to predict higher emotional distress and internalising symptoms (Daniels, Dunn, Furstenberg, & Plomin, 1985; Dunn, Slomkowski, Beardsall, & Rende, 1994; Reiss et al., 1995). These studies focused on adjustment

difficulties as a concept rather than specific emotional difficulties, but they indicate an important association between anxiety and differential parenting.

Limited research has been carried out on a clinically anxious population. Observational studies have reported that mothers of anxious children are more intrusive and overinvolved than mothers of non-anxious children, and these behaviours are also apparent with siblings of the anxious child (Hudson & Rapee, 2002). However, questionnaire based studies have found that children diagnosed with an anxiety disorder reported greater levels of differential parenting compared to a non-anxious control group (Lindhout, Boer, Markus, Hoogendijk, Mingay, & Borst, 2003).

Differential parenting and self-esteem

Family systems theory explains how not only individuals in the family interact with each other, but also how sibling dyads influence and interact with each other (Feinberg & Hetherington, 2001). Parenting behaviours affect the child they are directed towards, but also the other sibling(s) in the family. For example, negativity towards one child can be interpreted by the sibling as the family not being a secure emotional environment. Conversely the child may identify with their sibling and perceive this parenting to be directed at them too (Feinberg & Hetherington, 2001). Therefore, differential parenting towards one sibling can also have an effect on the other sibling.

Social comparison theory (Festinger, 1954) explains why differential parenting may lead to adjustment difficulties and negative effects on self-esteem (Feinberg & Hetherington, 2001). Feinberg, Neiderhiser, Simmens, Reiss, and Hetherington (2000) found that individuals compare themselves

to others for a variety of reasons such as self-assessment, self-enhancement and affiliation. Furthermore, this study also found that those with low self-esteem or high emotional arousal tended to use social comparison to a greater degree.

Differential parenting between adolescent siblings contributes highly to adjustment difficulties (Feinberg & Hetherington, 2001), low self-esteem, behavioural problems and unsatisfactory sibling relationships (McGuire, Dunn, & Plomin, 1995). In addition, earlier-borns tend to be more sensitive to differential parenting than later born siblings (Feinberg & Hetherington, 2001; Shebloski, Conger, & Widaman, 2005).

Similarly, research into differential parenting in families with disabled siblings has been carried out extensively. For example, siblings of children with disabilities have reported feeling deprived of parental time and attention (Corter, Pepler, Stanhope, & Abramovitch, 1992). In particular, siblings of disabled children are at a greater risk of both externalising and internalising problems (e.g. McHale & Gamble, 1989; Fisman et al., 1996).

However, differential treatment which is perceived to be fair is not associated with negative sibling relationships (McHale, Updegraff, Jackson-Newsom, Tucker, & Crouter, 2000) or parent-child relationships (Kowal, Krull, & Kramer, 2004).

Aims and Hypotheses

Parents of anxious children tend to be more controlling (see McLeod et al., 2007 for a review). There is mixed evidence regarding the link between anxiety and differential parenting with questionnaire studies supporting an

association (e.g. Lindhout et al., 2003) but observational studies not (Hudson & Rapee, 2002). Lindhout et al. (2003) proposed that the anxious child may be more sensitive to differential parenting. The anxious child may notice slight differences in parenting between themselves and their sibling and amplify them. This questions whether differential parenting truly does exist in these families.

This pilot study aimed to examine the relationship of anxiety between siblings in the same family. If the anxiety level between siblings is similar, then it could be predicted that parents treat the children in the family similarly, particularly in terms of maternal control. This pilot study therefore examines the difference in anxiety between siblings in the same family and the relationship to perceived differential parenting. It was hypothesised that the greater the difference in anxiety between two siblings, the greater the level of perceived differential parenting would be, particularly for maternal control.

There is a new and important literature emerging on preventing and identifying mental health difficulties in schools rather than health services, for example, the Targeting Mental Health in Schools (TaMHS) project (Department for Children, Schools and Families, 2008) and the Social and Emotional Aspects of Learning (SEAL) initiative (Department for Education and Skills, 2005). It has therefore been recognised that anxiety is a normal feature of childhood and its prevention and recognition can take place within the school environment. Consequently, this study investigated a community sample in order to indicate the range of anxiety levels present in a population who are not seeking intervention from mental health services.

Much of the research has indicated that differential parenting can have negative consequences for children in the family, including lowered self-esteem (e.g. Daniels et al., 1985; McGuire et al., 1995; Fisman et al., 1996). To provide support for or against this finding, this study aimed to investigate whether self-esteem was related to the level of perceived differential parenting. In addition, perceived fairness of parenting has also been found to be important in relation to negative symptoms (Kowal et al., 2004) and the final aim of this study was to examine the association between perceived fairness of parenting and self-esteem. It was hypothesised that the greater the fairness of parenting, the higher the self-esteem in the child.

Method

Participants

Participants were recruited through informal networks of the two authors. For families to take part there needed to be at least two siblings in the family, who lived together, with at least one of their biological parents and was in contact with their other biological parent, and was able to read and speak English. One of the siblings was aged between 11 and 16 years (Child A) and their brother or sister was aged between 8 and 18 years (Child B). The age range was dictated by the norms of standardised questionnaires used and to reduce confounding effects of developmental stage. Additionally, neither the child nor sibling had physical disabilities, chronic illness or learning disabilities. Where there was more than one sibling in the family who met the criteria, the siblings closest in age were chosen. If either of the

children could be Child A or Child B the family chose which child would be A and which would be B.

174 families were sent information packs inviting them to participate in the study. 29 families responded and consented to take part in the study (response rate = 16.7 %). All families who consented met the inclusion criteria and no families withdrew from the study. The final group consisted of 29 sibling dyads (Child A: 55.2% boys; Child B: 48.3% boys). Of the pairs 27.6% were both boys; 24.1% were both girls; 48.3% were a boy and a girl. The mean age of Child A was 13.2 years (SD = 1.50) and Child B had a mean age of 11.8 years (SD = 3.03). The mean age gap between the siblings was 2.9 years (SD = 1.16). In 22 of the sibling dyads, Child A was older than Child B. Two children had previous contact with Child and Adolescent Mental Health Services (CAMHS).

Most (93.1%) of the participating families classed their ethnicity as white British. The children were living with both their biological mother and biological father in 82.8% of cases and 13.8% were living in single parent households. Half of mothers (55.1%) and 19.1% of fathers had a first degree or higher level of education. Two fathers had previous contact with mental health services.

The primary research question was to examine the relationship between the difference in anxiety scores between the two siblings and perceived differential parenting. No research to date has investigated this so there was no information on which to base a power calculation. It was therefore hypothesised that a moderate correlation of 0.5 would exist. This led to a required total sample size of 29 to obtain 80% power to achieve a

statistically significant correlation using a 5% significance level (GPower Version 3.0.10; Buchner, Erdfelder, Faul, & Lang, 2008).

Procedure

Ethical approval was obtained from the local NHS Research Ethics Committee (see Appendix C.1 for approval letter). Participants were recruited from informal networks of the researchers. These informal contacts identified potential participants and handed out information packs on behalf of the researchers. Information packs contained an invitation letter, (Appendix E.1), information sheets for both the parents (Appendix E.2) and each child taking part (Appendix E.3), parent consent (Appendix E.4) and child assent forms (Appendix E.5), a demographic questionnaire (Appendix E.6), and two copies of the Multidimensional Anxiety Scale for Children -10 item (MASC-10; one for each child taking part to complete; see Appendix E.7 for a copy). If the MASC-10 scores for either child indicated high levels of anxiety, this was discussed with the respective child and their parent. Advice was given about support agencies for the family to follow up if they wished to and the family were asked if they would like to continue in the project. No families withdrew from the study following this. Following gaining consent, the family's GP was informed that they were participating in the study (see Appendix E.10 for a copy of the letter sent to GPs).

Families were invited to return the relevant forms to the researcher in the freepost envelope provided. Once received, the researcher contacted the family to arrange an appointment to meet with Child A to complete two further questionnaires. This was usually at their home. Before completing the

questionnaires, verbal consent was gained to check that they still wanted to take part and confidentiality was re-emphasised. The opportunity for questions at this point was also offered. All measures were completed in the presence of the researcher only. Following the completion of the questionnaires, the child was given the opportunity to discuss anything they wished and to ask any further questions. The child was asked if they would like to receive a summary report of the study on completion.

Measures

Demographics

A parent completed a demographic questionnaire which addressed various demographic variables. These included family status, ethnic origin, age and gender of the children taking part as well as details of any contact with CAMHS, educational status of parents and parental history of contact with mental health services.

Multidimensional Anxiety Scale for Children – 10 item (MASC-10; March, Parker, Sullivan, Stallings, & Conners, 1997)

Both children in the sibling dyad completed the Multidimensional Anxiety Scale for Children – 10 item. This is a 10 item self-report questionnaire for children aged eight to nineteen years. This questionnaire is brief, easy to complete and suitable for use in a community sample. March et al. (1997) reported moderate internal reliability ($\alpha = .67$ to $.68$) and high test-retest reliability ($r = .83$). The MASC-10 assesses various anxiety disorders including social anxiety, obsessive compulsive anxiety and generalised

anxiety disorder. Each item is rated on a scale of 0 to 3, where 0 = never true about me, 1 = rarely true about me, 2 = sometimes true about me, and 3 = often true about me. The total of all the items gives an overall anxiety score. This raw score is converted into a T score, taking age and gender in account. This T score was used for the analysis.

*Sibling Inventory of Differential Experiences – Parental Treatment
Subscale (SIDE; Daniels & Plomin, 1985)*

Child A completed the Parental Treatment subscale of the Sibling Inventory of Differential Experiences (SIDE; Daniels & Plomin, 1985). The SIDE is generally used to assess perceived differences in experiences between siblings. The subscale of parental treatment in particular looks at differences in the way the child thinks they are parented compared to their sibling. This measure has been used with children aged 10 years and above (Pike, Manke, Reiss, & Plomin, 2000). It comprises of 9 items, each of which are split to assess the item for both mother and father. Each item is rated on a scale of 1 to 5, whereby 1 = the parent has been much more this way towards my sibling than me, 2 = this parent has been a bit more this way towards my sibling than me, 3 = this parent has been the same towards my sibling and me, 4 = this parent has been a bit more this way towards me than my sibling, and 5 = this parent has been much more this way towards me than my sibling. Five of the items measure maternal and paternal affection and the remaining four items assess maternal and paternal control. This results in four independent scores. The total score of the sum of the relevant items is divided to provide an average score, which indicates the direction of

difference (if any) (i.e. an average of 2 on the maternal affection subscale suggests the child thinks their sibling receives a bit more maternal affection than them). The test-retest reliability scores are high, ranging from .77 to .85 (Daniels & Plomin, 1985).

The Parental Treatment Subscale of the SIDE was adapted to assess the child's opinion of the fairness of the parenting being assessed (Kowal et al., 2004). For each item, and for both maternal and paternal parenting, the child circled Yes or No to whether they thought the way they were parented was fair. Each item was scored dichotomously with 1 = yes and 0 = no. These scores were added in relation to the items they were assessing e.g. sum of those relating to maternal control items.

Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965)

Child A also completed the Rosenberg Self-Esteem Scale (RSES, Rosenberg, 1965). This is a well-used 10 item self-report measure of self-esteem. It is validated for children aged 8 and above. Each item is rated on a 0 to 3 scale where 3 = strongly agree, 2 = agree, 1 = disagree, and 0 = strongly disagree. Half of the items are reverse scored i.e. strongly disagree = 3 and so on. Scores range from 0 to 30 with the normal range between 15 and 25 and scores below 15 suggestive of low self-esteem (Rosenberg, 1965). There is a large set of data on the reliability and validity of this measure (e.g. Bagley & Mallick, 2001) and it has been considered in research to be the most widely used measure of self-esteem (Mruk, 1999). Using a population of school children, high internal reliability ($\alpha = .77$ to $.88$) and high test-retest reliability ($r = .82$ to $.88$) were found (Rosenberg, 1965).

Results

Anxiety

In order to assess the range of anxiety in the participating community sample, descriptive statistics were obtained as outlined in Table 1.

	Mean	Standard Deviation	Minimum	Maximum
Child A	47.03	8.57	29	66
Child B	48.10	11.69	29	73
Total	47.57	10.17	29	73

Table 1: Means, standard deviations, minimum and maximum anxiety scores

A T score of 65 or above on the MASC-10 is likely to indicate clinically significant symptoms of anxiety (March et al, 1997). Four individuals obtained scores within this clinical range.

Using the raw scores from the MASC-10, an independent t-test found there was a significant difference between genders for child A ($t(27) = -2.17$, $p = .038$) but no significant difference between genders for child B ($t(27) = .69$, $p = .49$). In addition, a Pearson correlation showed there was no significant correlation between anxiety score and age for child A ($r = -.22$, $p = .26$) or child B ($r = .08$, $p = .70$).

The difference in anxiety scores between the two siblings was calculated. To calculate this child B anxiety score was taken away from child A anxiety score. A positive difference indicated child A was more anxious than child B and a negative difference score indicated child A was less anxious than child B. The mean difference between child A and child B was

-1.07 ($SD = 12.40$) and ranged from -38 to 19. Using a paired t-test there was no significant difference between child A and child B anxiety scores ($t(28) = -.46, p = .65$).

Further analyses were carried out to test if the difference in anxiety scores between the siblings were related to other predictor variables including age gap between siblings and gender combination in sibling dyad. A Spearman's correlation found no significant effect of age gap ($\rho = -.17, n = 29, p = .39$) and using a one-way analysis of variance, there was no significant effect of gender combination ($F(3, 25) = .49, p = .69$).

Difference in anxiety scores and differential parenting

Table 2 provides the means and standard deviations for each of the four dimensions of perceived differential parenting.

	Mean	Standard Deviation	Minimum	Maximum
Maternal affection	2.95	.28	2.00	3.60
Maternal control	3.09	.29	2.50	3.75
Paternal affection	3.02	.30	2.40	4.00
Paternal control	3.05	.46	2.00	4.50

Table 2: Means, standard deviations, minimum and maximum scores for differential parenting dimensions

Multiple regressions were carried out, using the enter method, to analyse the proportion of variance accounted for by the predictor variables of age, age gap between siblings, gender, and birth order on perceived differential parenting. A non-significant model emerged for maternal affection ($F(4, 24) = 1.68, p = .19$), maternal control ($F(4, 24) = .42, p = .79$), and paternal control ($F(4, 24) = .05, p = .99$). Although there was a non-significant model for maternal affection, as can be seen in table 3, the age of child A was a significant predictor in this model. A significant model emerged for paternal affection ($F(4, 24) = 6.55, p = .001$). As can be seen from Table 3, the age of child A and birth order were significant predictors of paternal affection. The scatterplots in Appendix F.1 illustrate the direction of the significant relationships with perceived paternal affection increasing with the age of the child but perceived maternal affection decreasing with the age of the child. The scatterplot for birth order shows that there is greater perceived paternal affection for the younger child in the sibling dyad.

	Maternal affection		Maternal control		Paternal affection		Paternal control	
	<i>Beta</i>	<i>p</i>	<i>Beta</i>	<i>p</i>	<i>Beta</i>	<i>p</i>	<i>Beta</i>	<i>p</i>
	Age of child A	-.47	.02*	.03	.89	.51	.003*	-.09
Age gap	.14	.49	-.22	.30	-.26	.09	.02	.93
Gender of child A	-.13	.49	-.13	.55	-.12	.48	-.004	.98
Birth order	-.18	.34	.08	.70	.45	.005*	-.03	.88

*Table 3: Beta values and significance values for the predictor variables for the four dimensions of perceived differential parenting. * = significant result above 0.05 significance level*

Four separate one-way analyses of variance were carried out for each of the parenting dimensions with gender combination. There was no significant effect of gender combination for maternal affection ($F(3, 25) = .25, p = .86$), maternal control ($F(3, 25) = .51, p = .68$), paternal affection ($F(3, 25) = .93, p = .44$), and paternal control ($F(3, 25) = .01, p = .99$).

Spearman's correlations were calculated in order to assess the relationship between the difference in anxiety scores between the siblings and perceived differential parenting. There was no significant correlation for maternal affection ($\rho = -.05, n = 29, p = .80$), maternal control ($\rho = -.02, n = 29, p = .94$), paternal affection ($\rho = -.08, n = 29, p = .68$), and paternal control ($\rho = -.05, n = 29, p = .78$).

After assessing the scatterplots (see Appendix F.2), it could be seen that the differential parenting scores did not vary considerably. The majority of the data points were clustered around a score of 3 (indicating no perceived differences in parenting). Therefore, a linear regression model was not carried out for the relationship between differential parenting and difference in sibling anxiety (Brace, Kemp, & Snelgar, 2003).

Differential parenting and self-esteem

The mean self-esteem score was 22.2 (SD = 3.5) and ranged from 13 to 30.

To assess the relationship between the four dimensions of differential parenting and self-esteem, Spearman's correlations were carried out. No significant correlation was found for maternal affection ($\rho = .03, n = 29, p = .87$), maternal control ($\rho = -.27, n = 29, p = .16$), paternal affection ($\rho = .23, n = 29, p = .23$), and paternal control ($\rho = -.09, n = 29, p = .65$).

Following the assessment of the scatterplots for this dataset, a linear regression was not carried out due to a lack of variation in the data (Brace, Kemp, & Snelgar, 2003).

Fairness of parenting and self-esteem

Spearman's correlations were calculated to investigate the relationship between perceived fairness of parenting and self-esteem. There was no significant correlation between self-esteem and fairness of maternal affection ($\rho = .01$, $n = 29$, $p = .95$), fairness of paternal affection ($\rho = -.13$, $n = 29$, $p = .51$) and fairness of paternal control ($\rho = .10$, $n = 29$, $p = .56$). However, perceived fairness of maternal control did approach statistical significance ($\rho = .32$, $n = 29$, $p = .09$).

Discussion

This pilot study explored the relationship between the differences in sibling anxiety and perceived differential parenting. The results do not provide support for this relationship as no significant correlations were found. It was found that the age of child A was a significant predictor of perceived maternal and paternal affection. No support was found for the other research questions. There was no significant relationship between differential parenting and self-esteem. In addition, perceived fairness of parenting was not related to self-esteem scores. There was however evidence for a range of anxiety in the community population assessed. Furthermore, there appeared to be a large range of difference between the anxiety scores of siblings in the same family.

The primary research question of this study was not supported. There were no significant correlations between the difference in anxiety scores between the siblings and the four dimensions of perceived differential parenting. Literature examining parenting children with anxiety has consistently found that mothers of anxious children are more controlling than children of non-anxious mothers (McLeod et al., 2007; Van der Bruggen et al., 2008). A correlation between maternal control and differences in anxiety between siblings was not found. This suggests that mothers who are controlling towards their anxious child may also be controlling towards other siblings in the family despite their level of anxiety. However, this is contradictory to the findings from Lindhout et al. (2003) where differential parenting occurred in anxious families, as perceived by the anxious child.

A community sample was used in this pilot study which may provide an explanation for the null finding. Differential parenting may only occur in families where one child has severe levels of anxiety and the family are not successfully managing the anxiety and require input from services. In these cases parenting style may be maintaining or exacerbating the anxiety. Although a range of anxiety was apparent in the community sample assessed here, including those above the clinical level for anxiety, none were in current contact with mental health services. This suggests that the anxiety was not seen as a 'problem' in these families and as a result parenting was not altered due to the anxiety levels of the children.

The age of Child A was found to be a significant predictor of maternal and paternal affection. This finding suggests that age is important in the perception of parental affection. The scatterplots (appendix F.1) suggest that

older children perceive greater maternal affection towards the sibling but greater perceived paternal affection towards themselves. In addition, birthorder was found to be a significant predictor of paternal affection, with child A perceiving more paternal affection towards themselves when they are younger than child B. These mixed findings may be a result of too many independent variables being factored onto the same model when there was only a small sample size. This may have led to statistically significant results which need to be interpreted with caution. It is possible that these findings relate to the developmental stage of the child. According to a model of family lifecycle, when children in the family reach adolescence parent-child relationships change to allow for greater autonomy for the adolescent (Carter & McGoldrick, 1999). This adjustment in the parent-child relationship may account for an increase in perceived maternal affection towards the younger sibling with an increase in child age and a higher level of perceived paternal affection towards the younger sibling. The finding of greater perceived paternal affection towards them in older children does not fit with this explanation.

The majority of the participating children perceived no differences in parenting between themselves and their sibling. It is possible that the children did not feel comfortable reporting differences in parenting. Furthermore, the parental treatment subscale of the SIDE may not have been sensitive enough to detect any differences. The scale lacked potential for variation as it was a five point scale and the scores were averaged rather than accumulated. However, significant differences between siblings using the same scale have been found by other studies using non-clinical

populations (Daniels et al., 1985; Wichers et al., 2001). When examining the sample sizes of other studies, however, large sample sizes have been used, for example 348 families were included in Daniels et al. (1985) study. This suggests that correlations using this scale could be weak and so in order for these to be detected a large sample size is required.

A large range of anxiety scores was found across the children who took part in the study, including children who were clinically anxious. This provides support for anxiety being on a continuum and that it can be a normal feature of childhood. It is estimated that 1 in 10 young people will have suffered with an anxiety disorder by the age of 18 years (Costello et al., 2003) but the UK mental health survey found only 18% of these children access CAMHS (Ford, Goodman, & Meltzer, 2003). Therefore, these individuals may not be being identified and suffering alone, or may be managed within their family or school environment. These findings support this evidence and the need for the recent developments in identifying and preventing mental health difficulties in community settings such as schools.

The difference in anxiety between siblings ranged widely, despite the mean difference being small. None of the predictor variables assessed significantly contributed to this difference. No study to date has examined the difference in anxiety between siblings in the same family. This finding provides a new insight to the transmission of anxiety within families. Previous research has focused on the high correlation between parent and child anxiety (e.g. Turner et al., 1987). However, this finding suggests a different mechanism for siblings. It was found here that even if one sibling in the family had high anxiety the other sibling did not necessarily also have high

anxiety as there was a wide range of difference between sibling anxiety scores. It is possible that non-shared environmental factors outside of the family, such as peer relationships, and the individual temperament of the child may be additional contributors to the development and maintenance of anxiety.

There was no support for a relationship between perceived differential parenting and self-esteem. This does not provide evidence for earlier research (Daniels et al., 1985; McGuire et al., 1995; Fisman et al., 1996). A null finding may have been due to the limited variability in the differential parenting measure. As discussed, scores on the differential parenting measure were clustered around no difference in parenting. This means that it is difficult to detect an association with self-esteem when the data is not varied. Furthermore, the sample size may not have been large enough in order to detect a significant finding, particularly if the association between these two variables is weak.

It was found that there was no relationship between perceived fairness of parenting and self-esteem. This appears to contradict Kowal et al. (2004) who found that fairness of parenting was associated with negative parent-child relationships. However, perceived fairness of maternal control was approaching statistical significance. This suggests that the limited sample size may have accounted for this finding. In addition, there was limited variation in the data of assessing fairness of parenting. Kowal et al. (2004) suggest that children are reluctant to state that the way they are parented is unfair. According to Maslow's hierarchy of needs, safety is the second most fundamental level of need (Maslow, 1954). Through admitting

that their parenting is unfair the child may be fearful of the threat this poses to the security of their family.

Limitations

This study was based on 29 participants. Even though this was the target sample size, the power calculation was not based on previous research. This means that the calculation may not be accurate for the measures that were being used in the current pilot study. There is the possibility that the correlation between these measures is weak and in order to detect a significant correlation a large sample size is required.

A consequence of this is that the statistical tests carried out may have been under-powered and significant differences may not have been detected due to reduced sensitivity. One of the analyses carried out was approaching statistical significance indicating the possibility of type 2 errors. The results need to be interpreted with some caution and further examination with increased power may be required before firm conclusions can be made.

An additional limitation was possible selection bias of the participants included in the study. Families were recruited through informal contacts of the researchers. This resulted in the majority of participating families being associated with the University or working in the NHS and were typically middle class and well educated. Small scale non-funded research projects can result in challenges recruiting participants. As can be seen by the demographic data in the method section, the sample in the current pilot study is not representative of the UK population and hence findings cannot be generalised.

Parental anxiety is a possible confounding variable. The level of anxiety in both mother and father in the family was not directly assessed. Parents were asked if they had previous contact with mental health services, and two fathers did, but details of this input were not gained. Research suggests that parental anxiety affects parenting cognitions and behaviours (Cobham, Dadds, & Spence, 1999). Assessing parental anxiety would have been useful to gain further understanding of whether perceived differential parenting and the anxiety level in siblings is related to parent anxiety.

The parental treatment subscale of the SIDE did not allow for significant variation in the data. There were only five possible response choices when comparing parenting between siblings and the total score was an average of the items. Fairness of parenting was assessed using a 'Yes' / 'No' response. Again this limited the number of potential responses and as a result the data lacked variability. The reliability of a scale increases as does the number of response choices (Nunnally & Bernstein, 1994).

Clinical implications

This pilot study found that in a community sample, differential parenting is not related to the difference in anxiety between children in the same family. Furthermore, there was limited variation in perceived differential parenting in the participating children. This suggests that systemic interventions are not required when providing intervention for anxiety at a primary care level, such as within the school environment, where there is a range of anxiety level but the family are coping. It is not clear whether these findings are generalisable to clinical samples so any clinical implications should be cautiously

considered. It is possible that as the anxiety becomes more severe and the family becomes involved in CAMHS, or other secondary care services, a thorough assessment of systemic elements, such as differential parenting, will be necessary.

This study illustrates the range of anxiety present in the general population. This provides support for the current initiatives of introducing wellbeing classes to the curriculum as well as using the school environment in the identification and prevention of mental health difficulties (e.g. TaMHS and SEAL projects). Through these programmes previously unidentified children may begin to receive the support that they require. It is important that these projects continue to be resourced and financed.

Additionally this pilot study found that the anxiety levels of children ranged from non-anxious to clinically anxious. All these children were being cared for in families, without the help of outside agencies, suggesting that there are resilient families who manage difficulties positively. It would be interesting to know more about which factors contribute to these families' resilience, so in clinical practice such characteristics could be built upon in the more vulnerable families. More questions need to be addressed in research to clarify this resilience, and its concomitant characteristics.

The difference in sibling anxiety scores varied considerably. This suggests that despite the evidence for the transmission of anxiety in families, this may only be apparent between parent and child, rather than between siblings. Clinicians working with children and adolescents with anxiety difficulties need to be mindful of the sibling of that child and not assume they share a similar anxiety level. Within clinical practice this difference in anxiety

between the siblings could be used within the intervention. For example, the sibling with a non-clinical level of anxiety could aid their brother or sister in thinking of alternative ways of coping and helping them to implement strategies at home. However, it is still important for clinicians to assess the sibling's anxiety as if it is at a clinical level they may also require input from services. Similarly, family based approaches are useful in identifying strengths and weaknesses in different family members, other than anxiety. This aids the families understanding of family roles and the importance of each member contributing in their own way, with their own personality, needs and desires.

Further research

The findings from the current pilot study provide information for the direction of further research. Firstly, large sample sizes are required. This is to ensure that significant results are not being missed through the statistical tests being underpowered. Additionally, the SIDE in future research should be used with caution. The data from this measure provided limited variation in this pilot study which reduced the chance of obtaining a significant finding. There is a limited selection of standardised measures for assessing differential parenting. The Sibling Relationship Inventory (Stocker & McHale, 1992) has been used as a measure of differential parenting but only one subscale ('rivalry') assesses differential parenting. Alternatives should be considered. Researchers should also consider using Likert scales when assessing fairness of parenting. This will widen the variation of the data and potentially

increase the likelihood of participants' answers being a true reflection of the level of fairness they attribute to the parenting they receive.

Further research is required regarding siblings and anxiety. In particular, it would be interesting to investigate a clinical population using the above method. This would aid in drawing conclusions about whether differential parenting is more apparent in families where one child is clinically anxious and receiving input from services. As siblings are often understudied, it would be interesting for the perception of differential parenting to be gained from the sibling of the anxious child. The findings could be compared to a control group.

The pilot study only examined perceived differential parenting in one of the siblings in the dyad. Through assessing perceptions from both siblings comparisons could be made between these perceptions of differential parenting and the anxiety scores of the siblings. This would give further insight into whether anxious children are more likely to perceive differential parenting within the family. Furthermore, future research would benefit from investigations using a longitudinal design, starting in middle childhood and ending in late adolescence. Considering the finding of the relationship between age and parental affection, this would provide invaluable information regarding the development of differential parenting and its relationship to anxiety over time.

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Part three: Appendices

Appendix A: Reflective Statement

Reflective Statement

This reflective statement illustrates my research journey. I have focused on the initial development of the project, the challenges with recruitment, and writing up the thesis. I have ended with my reasons for my journal choices and a summary of the research process.

Initial stages

The initial stage of exploring ideas for potential research projects was exciting. I had a positive experience of research at undergraduate level and I was looking forward to being involved in research again. I was aware that I was interested in doing a project within child psychology and was interested in systemic factors so the process of literature searching began. I think it was at this point that I realised the difficulty of obtaining the balance between finding a gap in the literature, something I was interested in, and something that was feasible to carry out within the limited time period.

The original study differed from the final empirical project written up for submission. During the developmental stage of the project, it was decided that the main research question would be examining the perceptions of differential parenting in the siblings of children with anxiety difficulties. It was envisaged that a clinically anxious group would be recruited through Child and Adolescent Mental Health Services (CAMHS) and a control group would be recruited through informal networks. The original project was presented to

a group of Clinical Child Psychologists in the local area who were in agreement that the study was feasible.

Ethics and Research Governance

Following this presentation, and gaining estimates of the number of potential participants in the local area from a Consultant Clinical Psychologist, the project was submitted to an NHS Research Ethics Committee (REC). Approval was gained for the project to go ahead.

A challenge in the research journey was gaining Research and Development approval from the NHS trusts that I proposed to recruit from. Two of the trusts in particular made the process very frustrating and time consuming. Many emails were sent to enquire about the progress of the application and on many occasions this prompting resulted in further documentation being requested. One of the trusts asked for an amendment to my child consent form which led to an amendment being submitted to ethics. Ethics rejected this amendment and following many emails and phone calls to both ethics and the R&D department, R&D eventually decided that the amendment was no longer required. For me this illustrated the lack of communication between ethics committees and R&D departments and the overlap in their procedures. I was aware that the process could be lengthy but now realise a lot more time is required to allow for such obstacles.

Recruitment

Local CAMHS and Primary Care Mental Health Teams were contacted and I presented my research project to the teams. A mixture of

responses was gained from the presentations that I did. Some teams appeared to be on board with helping out with recruitment and took information packs for them to distribute. However, other teams felt that the inclusion criteria were too strict, the families they saw would not want to engage with research, or change was going on within the trust and they were not in a position to help out with recruitment. Many of the teams were helpful in suggesting other agencies/services to contact, but when these were contacted those services suggested the ones who had suggested them! At times it felt like I was being bounced from one to another and back again.

One suggestion that frequently came up from services was to recruit from schools. This was not in my original REC form so an amendment was submitted to Ethics. Unfortunately, this amendment was rejected from Ethics. The rejection letter outlined the reasons for the rejection in a series of questions from subcommittee, including wanting to know the support in place for children with anxiety at schools. It felt like some of the questions that the subcommittee had were unnecessary as the information had already been provided in the original REC form or had been discussed in the ethics meeting and did not reflect someone with knowledge of clinical psychology or of working with children. This rejection made it difficult to move forward with the project and to open up new avenues for recruitment.

After months of chasing CAMHS teams through emails, phone calls, and face-to-face visits, no completed information packs were received back from families in contact with CAMHS. After reflecting on this, there are a number of potential reasons for this happening. One is that the exclusion criteria were too strict to meet the clients who were in contact with services

during the six month recruitment period. However, this may be a factor in limiting numbers but does not explain why no information packs were given out or received back. A further possible reason is the demographics of the localities. The two main recruitment sites were socially and economically deprived areas. Clients in contact with services in these areas may be from a variety of chaotic backgrounds. Many families have children classed as children in need or children with additional needs, many children were from one parent households with no contact from their father or no certain knowledge who he was. The families in these areas also tend to be, difficult to engage with services. This may have accounted for many families not being included. An additional factor may have been due to the current NHS context. Many teams are under stress with high caseloads due to frozen posts and closer case management, their jobs are at risk, they are moving Trust, or moving base. These factors contribute in their ability to see research as a priority and to keep it in focus.

An open and flexible mind was required in order for the project to change. In a way it was difficult to move on and give up on recruiting from CAMHS as I felt that so much effort had been put in to the project so far. I soon realised, and learnt, however that this was the process of research and it was just an additional modification to the ones that had already been made along the way (even if it felt more significant than any of the others at the time).

In the final few months of recruitment, energy was channelled into recruiting for the control group. There was interest in the project which felt very encouraging at the time. However, despite the interest, many families

did not return the information packs. This was disheartening and it was a struggle to continue chasing those families who were interested and thinking of new avenues to take.

Writing up

When it came to writing up the project it felt like there wasn't enough time to write it in a way that illustrated all the hard work that had been put in and to do it justice. However, seeing the portfolio coming together was very rewarding and it gave me that last piece of motivation to get it finished. I feel a sense of relief now that it is almost ready for submission. The changes that were made were not ideal but I think that I have made the most out of the data I managed to collect and I am proud of the end result.

Choice of Journals

Clinical Child and Family Psychology Review was chosen due to my Systematic Literature Review presenting information regarding children and parents. The systemic elements covered by my review would be suitable for this journal. In addition, the journal covers clinical psychology issues, which would include anxiety.

Clinical Child Psychology and Psychiatry was chosen for the empirical paper as it is a peer reviewed British journal. Some aspects of the empirical paper cover UK policy and strategy and so it was considered appropriate to submit to a British journal. The topic of the empirical paper is suitable for this journal and previous articles published by this journal have included childhood anxiety.

Summary

The process of carrying out the empirical project has given me the opportunity to reflect on the highlights and challenges of undertaking research. I feel I have gained a great insight into the process of research, including the need to consider practicalities when recruiting and the importance of awareness of your own expectations for what your research should achieve. I have realised that what you end up with isn't always what you intended! Overall, my confidence in carrying out research has grown and this has been an experience I will never forget.

Appendix B: Guidelines for Authors

Appendix B.1: Clinical Child and Family Review Guidelines

Instructions for Authors

Clinical Child and Family Psychology Review

General

In general, the journal follows the recommendations of the 1994 Publication Manual of the American Psychological Association (Fourth Edition), and it is suggested that contributors refer to this publication.

Manuscript Submission

Manuscripts (by invitation only), in triplicate and in English, and editorial inquiries should be submitted to the Editors:

- Ronald J. Prinz, Ph.D.
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Columbia, South Carolina 29208
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- Thomas H. Ollendick, Ph.D.
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Manuscript Style

- Type double-spaced on one side of 8-1/2 × 11 inch white paper using generous margins on all sides, and submit the original and two copies (including copies of all illustrations and tables). All copies must be dark, sharp, and clear. Computer-generated manuscripts must be of letter quality (not dot-matrix).
- A title page is to be provided and should include the title of the article, author's name (no degrees), author's affiliation, and suggested running head. The affiliation should comprise the department, institution (usually university or company), city, and state (or nation) and should be typed as a footnote to the author's name. The suggested running head should be less than 80 characters (including spaces) and should comprise the article title or an abbreviated version thereof. For office purposes, the title page should include the complete mailing address, telephone number, fax number, and e-mail address of the one author designated to review proofs.
- An abstract is to be provided, preferably no longer than 100-200 words.
- A list of 4-5 key words is to be provided directly below the abstract. Key words should express the precise content of the manuscript, as they are used for indexing purposes.

- All acknowledgments (including those for grant and financial support) should be typed in one paragraph (so-headed) on a separate page that directly precedes the References section.
- Tables should be numbered (with Arabic numerals) and referred to by number in the text. Each table should be typed on a separate sheet of paper. Center the title above the table, and type explanatory footnotes (indicated by superscript lowercase letters) below the table.
- Illustrations (photographs, drawings, diagrams, and charts) are to be numbered in one consecutive series of Arabic numerals. The captions for illustrations should be typed on a separate sheet of paper. All illustrations must be complete and final, i.e., camera-ready.

Photographs should be large, glossy prints, showing high contrast. Drawings should be high-quality laser prints or should be prepared with india ink. Either the original drawings or good-quality photographic prints are acceptable. Artwork for each figure should be provided on a separate sheet of paper. Identify figures on the back with author's name and number of the illustration.

Electronic artwork submitted on disk should be in the TIFF or EPS format (1200 dpi for line and 300 dpi for half-tones and gray-scale art). Color art should be in the CYMK color space. Artwork should be on a separate disk from the text, and hard copy must accompany the disk.

- List references alphabetically at the end of the paper and refer to them in the text by name and year in parentheses. References should include (in this order): last names and initials of all authors, year published, title of article, name of publication, volume number, and inclusive pages.

The style and punctuation of the references should conform to strict APA style—illustrated by the following examples:

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Romano, J. M., Turner, J. A., & Jensen, M. P. (1997). The family environment in chronic pain patients: Comparison to controls and relationship to patient functioning. *Journal of Clinical Psychology in Medical Settings*, 4, 383–395.

Book

Schlinger, H. D., Jr. (1995). *A behavior analytic view of child development*. New York: Plenum Press.

Contribution to a Book

Daugherty, T. K., & Shapiro, S. K. (1994). Behavior checklists and rating forms. In T. H. Ollendick, N. J. King, & W. Yule (Eds.), *International handbook of phobic and anxiety disorders in children and adolescents* (pp. 331–347). New York: Plenum Press.

- Footnotes should be avoided. When their use is absolutely necessary, footnotes should be numbered consecutively using Arabic numerals and should be typed at the bottom of the page to which they refer. Place a line above the footnote, so that it is set off from the text. Use the appropriate superscript numeral for citation in the text.

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After a manuscript has been accepted for publication and after all revisions have been incorporated, manuscripts should be submitted to the Editor's Office as hard copy accompanied by electronic files on disk. Label the disk with identifying information -- software, journal name, and first author's last name. The disk must be the one from which the accompanying manuscript (finalized version) was printed out. The Editor's Office cannot accept a disk without its accompanying, matching hard-copy manuscript.

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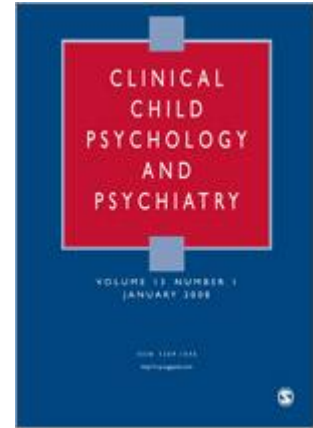
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Appendix B.2: Clinical Child Psychology and Psychiatry Author Guidelines

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Clinical Child Psychology and Psychiatry

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Consent and confidentiality. Disclosure should be kept to a minimum necessary to fulfil the objective of the article. All identifying details should be omitted if they are not essential. The

material should be further disguised so that none of the individuals involved could recognise themselves. Some material that is particularly distinctive should be omitted or aggregated. Patient consent to publish should be sought whenever possible, even if the data are anonymized. In case reports where ensuring anonymity is impossible, written consent must be obtained from the clients described, or their legal representative, and submitted with the manuscript. Contributors to the journal should be aware of the risk of complaint by individuals in respect of defamation and breach of confidentiality. If there is concern, then authors should seek legal advice. Authors submitting research reports should confirm that approval from the appropriate ethical committee has been granted.

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7. Acknowledgements

Any acknowledgements should appear first at the end of your article prior to your Declaration of Conflicting Interests (if applicable), any notes and your References.

All contributors who do not meet the criteria for authorship should be listed in an 'Acknowledgements' section. Examples of those who might be acknowledged include a person who provided purely technical help, writing assistance, or a department chair who provided only general support. Authors should disclose whether they had any writing assistance and identify the entity that paid for this assistance.

7.1 Funding Acknowledgement

To comply with the guidance for Research Funders, Authors and Publishers issued by the Research Information Network (RIN), **Clinical Child Psychology and Psychiatry** additionally requires all Authors to acknowledge their funding in a consistent fashion under a separate heading. Please visit our [Funding Acknowledgement](#) on the SAGE Journal Author Gateway for funding acknowledgement guidelines.

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Only electronic files conforming to the journal's guidelines will be accepted. Word DOC is the preferred format for the text and tables of your manuscript. Please also refer to additional guideline on submitting artwork [and supplemental files] below.

9.2 Journal Style

Clinical Child Psychology and Psychiatry conforms to the SAGE house style. [Click here](#) to review guidelines on SAGE UK House Style

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Torbay Hospital Annexe
187 Newton Road
Torquay, TQ2 7BA, UK
Email: r.karamatali@nhs.net

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Appendix C: Ethics and Research Governance Approval

Appendix C.1: NHS Ethical Approval letter

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Appendix C.2: Humber Research Governance approval letter

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Appendix C.3: Lincolnshire Partnership Research Governance Approval letter

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Appendix D: Supplementary Information for the Systematic Literature Review

Appendix D.1: Quality Assessment Checklist

Quality Checklist for the Systematic Literature Review

Authors and Title of the paper

	Question	Yes = 1	No = 0	N/A
1	Does the abstract provide an informative summary of what was done and what was found?			
2	Has the scientific background and rationale of the study been clearly reported?			
3	Is the hypothesis/aim/objective of the study clearly described?			
4	Are the characteristics of the participants included in the study clearly described?			
5	Were the participants representative of the entire population from which they were recruited?			
6	Is there a comparison group? Are their characteristics clearly described?			
7	Are all the statistical tests used described?			
8	Are the reasons for drop-out or non-consent provided?			
9	Are the main outcomes to be measured clearly described in the Introduction or Method section?			
10	Were the main outcomes measures used valid and reliable?			
11	Are the main findings of the study clearly described?			
12	Are actual probability values reported for the main outcomes (except where less than 0.001)?			
13	Are the findings discussed in relation to the aims/objectives of the study?			
14	Do they discuss the limitations of the study?			

Appendix D.2: Quality assessment ratings

Article	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total
Barrett et al. (1996)	1	1	1	1	1	1	1	0	1	1	1	0	1	0	11
Bögels et al. (2003)	1	1	1	1	0	1	1	0	1	1	1	0	1	0	10
Cobham et al. (1999)	1	1	1	1	1	1	1	0	1	1	1	0	1	1	12
Cresswell & O'Connor (2006)	1	1	1	0	0	0	1	0	1	1	1	1	1	1	10
Cresswell et al. (2006)	1	1	1	1	0	0	1	1	1	1	1	0	1	1	11
Creswell et al. (2008)	1	1	1	1	1	1	0	0	1	1	1	1	1	1	12
Creswell et al. (2011)	1	1	1	1	0	0	0	0	1	1	1	0	1	1	9
Kortlander et al. (1997)	1	1	1	1	1	1	1	0	1	1	1	0	1	1	12
Micco & Ehrenreich (2008)	1	1	1	1	1	1	1	0	1	1	1	0	1	1	12
Wheatcroft & Creswell (2007)	1	1	1	1	0	0	1	0	1	1	1	1	1	1	11
Total	10	10	10	9	5	6	8	1	10	10	10	3	10	8	

Appendix D.3: Data Extraction Form

Data Extraction Form

Author(s)		
Title of article		
Research aim(s)		
Study design		
Participants	Sample size	
	Age, gender of children	
	Type of population (clinical or non-clinical)	
	Anxiety diagnosis	
	Parent details	
Anxiety questionnaire(s)		
Cognitive task/questionnaire(s)		
Other questionnaire(s)		
Statistical analyses		
Main findings		
Interpretation of findings		
Key links to theory/model/literature		
Limitations		

Appendix D.4: Information of excluded studies

Excluded studies and reasons for exclusion

Reference of excluded study	Reason for exclusion
Becker, Ginsburg, Domingues, & Tein (2010).	Not assessing parental expectations about child anxious cognitions. Focus on parental behaviour.
Burstein & Ginsburg (2010).	Not assessing parental expectations about child anxious cognitions. Focus on parental modelling.
Chorpita, Albano, & Barlow (1996).	Not assessing parental expectations of their child's anxiety.
Creswell, Schniering, & Rapee (2005).	Not assessing parental expectations of their child's anxiety.
Creveling, Varela, Weems, & Corey (2010).	Not assessing parental expectations of their child's anxiety. Focus on parenting behaviours.
Francis & Chorpita (2011).	Not assessing parental expectations of their child's anxiety.
Gallagher & Cartwright-Hatton (2009).	Not assessing parental expectations of their child's anxiety.
Gifford, Reynolds, Bell, & Wilson (2008).	Not assessing parental expectations of their child's anxiety.
Laskey & Cartwright-Hatton (2009).	Not assessing parental expectations of their child's anxiety. Focus on parenting behaviours.
Lester, Field, Oliver, & Cartwright-Hatton (2009).	Not assessing parental expectations of their child's anxiety.
Lester, Seal, Nightingale, & Field (2010).	Assessing child expectations of their mother, not parental expectations of their child.

McGinn, Jerome, & Nooner (2010).	Not assessing parental expectations of their child's anxiety.
Schreier & Heinrichs (2010).	Not assessing parental expectations of their child's anxiety.
Shortt, Barrett, Dadds, & Fox (2001).	Not assessing parental expectations of their child's anxiety.
Thirlwall & Creswell (2010).	Not assessing parental expectations of their child's anxiety. Focus on parental behaviour.

Appendix E: Supplementary Information for the Empirical Paper

Appendix E.1: Invitation letter

To whom it may concern

I am a trainee clinical psychologist, studying at the University of Hull, and part of my training involves carrying out research. I would like to invite you to take part in my research project. The research is about whether children perceive any differences in parenting between themselves and their sibling with anxiety difficulties and the impact this may have for them.

Your family has been identified as potential participants to take part in the research as there are no known anxiety difficulties in your family. You will be part of the comparison group. You have been selected through an informal contact of the researcher. This person has sent out this information pack to you on my behalf.

Please find the information sheets enclosed in this pack. There is one for the parents and one for each child that may take part. Please read these sheets carefully. If you have any questions or queries, please do not hesitate to contact me on the number below.

It is up to you if you would like to take part. If you agree to do so you can withdraw at any point. If you would like to talk things over before you decide, please contact me on

I look forward to hearing from you.

Kind regards

Sarah Sutherland

Trainee Clinical Psychologist

Perceived differences in parenting in brothers and sisters of young people with anxiety difficulties

Parent Information Sheet

Information about the research

My name is Sarah Sutherland and I am training to be a Clinical Psychologist. As part of my training I am required to carry out a research project. I would like to invite you and your children to take part in my research. Before you decide if you want to take part it is important that you understand what it is about. Please take time to read this sheet carefully. Please contact me if there is something you don't understand or you have any questions.

What is this study about?

Research suggests that parenting a child with anxiety difficulties can be hard. This can sometimes lead parents to parent the anxious child differently in comparison to other children in the family. This difference in parenting is a result of meeting the varying needs of the children in the family. I am looking at whether children perceive any differences in parenting between themselves and their sibling and the impact this may have for them.

Why have I been asked to take part?

You have been invited to take part because you have at least two children and **anxiety is not a difficulty** in your children. Your family will be part of the comparison group. 31 other families will be part of this group.

Who in my family will be involved?

- You (parents) will be required to complete one questionnaire on behalf of your family. This includes questions about your family.
- Two children from your family will also be involved – they will be known as Child A and Child B. Child A will be aged between 11-16 years. Child B will be aged less than 18 years old and no more than 4 years older or younger than Child A. If you are unsure about which children in your family could be Child A or Child B or if you have any queries please feel free to contact me on

Do I have to take part?

No. It is up to you if you want to take part or not. If you have any questions you can contact me at any time. If you do decide to take part, you can stop at any time without giving a reason.

What will happen if I take part?

If you decide to take part, the following needs to be carried out:

1. You need to fill in the consent form and demographic questionnaire included in this pack.
2. Child A and Child B need to read and sign the assent forms included (after reading the child information sheets).
3. Child A and Child B each need to complete an anxiety questionnaire (MASC-10) included in this pack.
4. You need to send back the consent form, both child assent forms, the demographic questionnaire and both completed anxiety questionnaires (MASC-10) in the stamped addressed envelope provided.

Once I receive these, I will contact you to discuss the children that will be involved in the study. We will arrange a suitable time to meet with Child A. This can be at your home or somewhere else. At this session I will be assisting your child to complete two questionnaires. This should take no longer than 20 minutes.

The results from the anxiety questionnaire may indicate that there are high levels of anxiety in one of your children. Advice will be given if your family wish to get further support regarding this. Following this anxiety score, it may be considered for your family to be part of the experimental group. If you still agree to take part, the same procedure outlined above will be carried out.

What if I change my mind?

You can withdraw your family from the study at any point without giving a reason. The anonymised data already collected will be retained by the researchers.

Will taking part help me or my children?

This study will provide an opportunity for your family to discuss and reflect on parenting in your family as well as the strengths and difficulties within your family. This process may be helpful.

This research will widen clinical knowledge and understanding of the impact of a child's anxiety on the family system. This may result in changes in services such as support groups for siblings or parents. The results of the study may help families where one child has anxiety difficulties. This may not be of relevance to all families involved.

Are there any disadvantages to taking part?

In a few cases it is possible that answering questions about perceived differences in parenting may make adults or children feel upset or worried. In the unlikely event this does happen the researcher is available to talk with you about this and let you know where you can more support.

Will what I and my children say be kept private?

Yes. Ethical and legal practice will be followed. Personal information that you and your children give will not be shared with anyone else. However, with your permission, your children's GP(s) will be informed they are taking part in the study. The GP will also be informed if either of your children are at risk of harm to themselves or others. No personal information will be published. All personal information will be stored securely and will be destroyed once the research is completed.

Did anyone check the study is ok to do?

All research carried out in the NHS is looked at by an independent group of people called the Research Ethics Committee. This protects your safety, rights, wellbeing and dignity. This research has been checked and given a favourable opinion by the local Research Ethics Committee.

What will happen after we have taken part?

You will be asked if you would like a summary report of the results from the study. This can be obtained from the researcher after the completion of the study.

What will happen if either of my children disclosed to the researcher they were being bullied or abused?

If either of your children told the researcher they were being bullied, the researcher would encourage the child to inform their parents/carers. If they did not want to tell the parents, following the Children's Act the researcher would have to tell the parent/carer.

If either of the children told the researcher they were being abused, the researcher would have to tell the parent/carer as this is required under the child protection law. The researcher would also help put the family in contact with relevant helping agencies.

If you would like to discuss the research before consenting, please do not hesitate to contact me by phone or email.

My phone number (used for research purposes only) is:

My email address is:

If you would like to talk to someone independent to talk about what research is you may wish to contact your local Patient Advice and Liaison Service on: 01904 726262

THANK YOU

**Differences in parenting between brothers and sisters of
young people with anxiety difficulties**

Child A and Child B information sheet

Information about the research

My name is Sarah and I am training to be a Clinical Psychologist. As part of my training I have to do a research project. I would like to invite you to take part in my research. Research is about trying to find answers to questions. Before you decide if you want to take part it is important that you understand what it is about. Please read this sheet carefully. You can talk to your parents about it if you wish. Please contact me if there is something you don't understand or have any questions. Thank you for reading this.

What is this study about?

Sometimes brothers and sisters in the same family are treated differently by their parents. Often this is because the children each have different needs. I am looking at how young people think about the way they are treated by their parents compared to their brother or sister. This is important because it may have a good or bad effect on you.

Why have I been asked to take part?

We are asking young people who have a brother or sister to take part. Some of these families will have a young person with anxiety difficulties; other families will not. Your family has been chosen because there are **no known difficulties**.

Who in my family will be involved?

1. Your parents
2. You and your brother or sister (Child A and Child B)

- a. One of you needs to be aged 11-16 years (you will be known as Child A)
- b. One of you needs to be aged under 18 years and no more than 4 years older or younger than Child A (you will be known as Child B)

Do I have to take part?

No. It is up to you if you want to take part or not. If you have any questions you can contact me at any time. If you do decide to take part, you can stop at any time without giving a reason. If you agree, your doctor will be told you are taking part.

What will happen if I take part?

If you decide to take part (and your parents agree), you first need to read and complete the assent form and MASC-10 questionnaire included in this pack.

You then need to send back in the stamped addressed envelope:

1. The assent forms completed by you and your brother or sister who is also taking part (Child A and Child B)
2. The consent form and demographic questionnaire filled in by your parents
3. The MASC-10 questionnaires filled in by you and your brother or sister who is also taking part (Child A and Child B)



This information will help me to know if your family is suitable to take part in the study. If you can take part I will contact your parents. I will arrange a time to meet with Child A to complete two questionnaires. This can be at your home or somewhere else. This should take no longer than 20 minutes. You are free to stop at any time without giving a reason. Child B does not need to do anything else.

Will taking part help me?

This study will give you the opportunity to talk about parenting in your family and the impact this has for you. You may find that this is helpful. The information we get may help brothers and sisters where one child in the family has anxiety difficulties. It



may provide suggestions to help change services such as providing support groups for siblings.

Will what I say be kept private?

Yes. Only the researcher will know your answers. Your parents will not be told unless you want them to. You can put your completed questionnaire in the separate envelope to keep it private. However, if you tell me someone has hurt you, or if you have hurt yourself or someone else, or your answers are concerning, then your parents and other people, such as your doctor, will have to be told.

Did anyone check the study is ok to do?

Before research can be done it needs to be checked by a group of people called the Research Ethics Committee. They make sure that it is ok. This research has been checked by the local Research Ethics Committee.

What if I change my mind?

You can stop at any point in the study without giving a reason. The information you have given so far will be kept by us.

Will anything upset me?

It is unlikely that this will happen. If it does I will talk about it with you.

Any questions?

If you have any questions before taking part you can contact me by:

Email:

Or phone:



THANK YOU

Assent form for children

Differences in parenting in brothers and sisters of young people with anxiety difficulties

Family identification number:

Child to circle all they agree with:

Have you read about this project or has someone read it to you?

Yes/No

Do you understand what this project is about?

Yes/No

Have you asked all the questions you want?

Yes/No

Have all your questions been answered?

Yes/No

Are you happy to take part?

Yes/No

Are you happy for your GP to be told you are taking part?

Yes/No

If you would like to take part, can you please write your name below:

Your name:

Date:

Demographic questionnaire

Date:

Family Identification number:

Name of GP:

GP address:
.....
.....

Family

How many children (under 18 years old) are living in your household?

1 2 3 4 5 5+

Do the children share the same biological mother and father? Yes/No

What is your current family status:

- Both biological parents living in the household
- Biological mother/father and step-mother/father
- Biological mother/father and partner
- Single-parent household
- Other (please specify):
.....

Ethnicity:

- White British Asian Mixed Other (please specify)
- White other Black Chinese

Is English your household's first spoken language? Yes/No

Child A

Gender: Male/Female

Date of Birth:

Has Child A had any contact with mental health services? Yes/No

If so, please provide details (e.g. service accessed; date of first appointment; date discharged; reason for accessing services; treatment undertaken)

.....
.....

Does Child A have any of the following:

- | | |
|---|--|
| <input type="checkbox"/> Learning disability/difficulties | <input type="checkbox"/> Down's Syndrome |
| <input type="checkbox"/> Physical disability | <input type="checkbox"/> Autism/Asperger's |
| <input type="checkbox"/> Chronic illness e.g. diabetes | |

Child B

Gender: Male/Female

Date of Birth:

Has Child B had any contact with mental health services? Yes/No

If so, please provide details (e.g. service accessed; date of first appointment; date discharged; reason for accessing services; treatment undertaken)

.....
.....

Does Child B have any of the following:

- | | |
|---|---|
| <input type="checkbox"/> Learning disability/difficulties | <input type="checkbox"/> Down's Syndrome |
| <input type="checkbox"/> Physical disability | <input type="checkbox"/> Autism/Aspergers |
| <input type="checkbox"/> Chronic illness e.g. diabetes | |

Parents

Mother:

What is your highest level of education?

- | | | |
|--|---------------------------------------|--|
| <input type="checkbox"/> No qualifications | <input type="checkbox"/> BTEC | <input type="checkbox"/> Postgraduate degree |
| <input type="checkbox"/> GCSEs or equivalent | <input type="checkbox"/> Diploma | <input type="checkbox"/> Other (please specify): |
| <input type="checkbox"/> A-level or equivalent | <input type="checkbox"/> First degree | |

Have you had any personal contact with mental health services? Yes/No

Father:

What is your highest level of education?

- | | | |
|--|---------------------------------------|---|
| <input type="checkbox"/> No qualifications | <input type="checkbox"/> BTEC | <input type="checkbox"/> Postgraduate degree |
| <input type="checkbox"/> GCSEs or equivalent | <input type="checkbox"/> Diploma | <input type="checkbox"/> Other (please specify) |
| <input type="checkbox"/> A-level or equivalent | <input type="checkbox"/> First degree | |

Have you had any personal contact with mental health services? Yes/No

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE

Appendix E.7: Multidimensional Anxiety Scale for Children (MASC-10)

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Appendix E.8: Sibling Inventory of Differential Experience (SIDE) – parental treatment subscale

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Appendix E.9: Rosenberg Self-Esteem Scale

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Appendix E.10: GP letter

Dear Dr

I am a trainee Clinical Psychologist studying at the University of Hull. Part of my doctorate requires a research project to be undertaken. It has had NHS ethical approval from the Sheffield Research Ethics Committee. I am writing to inform you about the research as the following family who are taking part in the study are under your care.

Parent Name(s):

Child A:

Child B:

Address:

The title of my research project is: **Perceived differences in parenting in the siblings of young people with anxiety difficulties and the effect on self-esteem.**

Research suggests that parenting a child with anxiety difficulties can be hard. This can sometimes lead parents to parent the anxious child differently in comparison to other children in the family. This difference in parenting is a result of meeting the varying needs of the children in the family. I am looking at whether children perceive any differences in parenting between themselves and their sibling and the impact this may have for them on their self-esteem.

There is an experimental group and a control group. The experimental group is being recruited from CAMHS. The control group is being recruited through informal networks. The family taking part that is under your care is part of the **control group. This family have no known anxiety difficulties.** Two children in the family will be taking part in the study (Child A and Child B). Informal networks of the researcher have identified this family and sent out an information pack on my behalf. The information pack included assent and consent forms, information sheets, demographic questionnaire, and an anxiety measure (MASC-10; March et al 1997) for the two children taking part in the study to complete. The family have consented to take part and gave permission for their GP to be informed. I will be meeting with Child A. They will be required to complete two further questionnaires: a self-esteem measure (Rosenberg, 1966); and a differential parenting measure (subscale of the Sibling Inventory of Differential Experiences; Plomin & Daniels, 1985). Due to the nature of the study there are potential risks of distress. This may be from the family as a whole or either of the children taking part in the study. If there are concerns regarding risk of harm to self or others, or data collected from the measures cause concern, then you will be informed. This may be directly by myself or I may advise the family to contact you for further support.

If you would like any more information regarding the study or have any questions or concerns, please do not hesitate to contact me.

My email address is:

Yours sincerely

Sarah Sutherland
Trainee Clinical Psychologist

Appendix F: Data Analysis for the Empirical Paper

Appendix F.1: Scatterplots to illustrate the significant predictor variables for maternal affection and paternal affection.

Figure 1: Scatterplot for the age of child A as a predictor of perceived maternal affection.

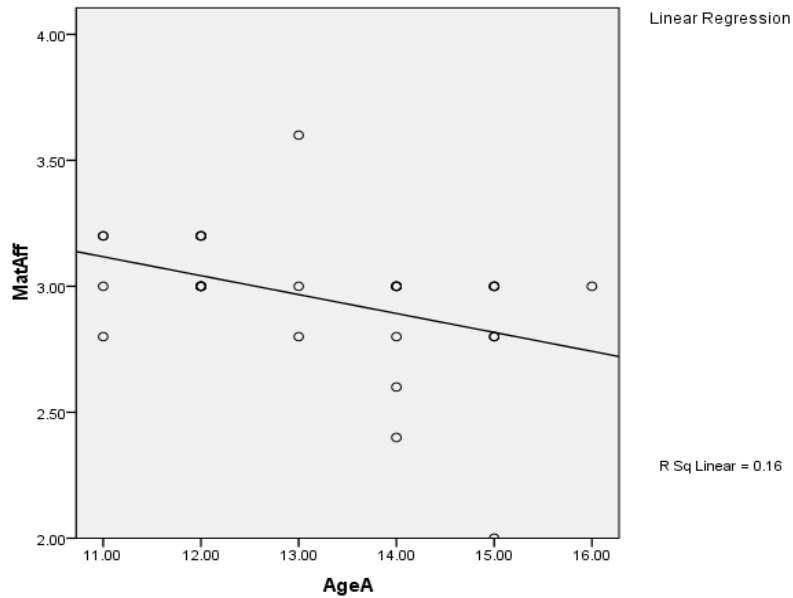


Figure 2: Scatterplot for age of child A as a predictor of perceived paternal affection

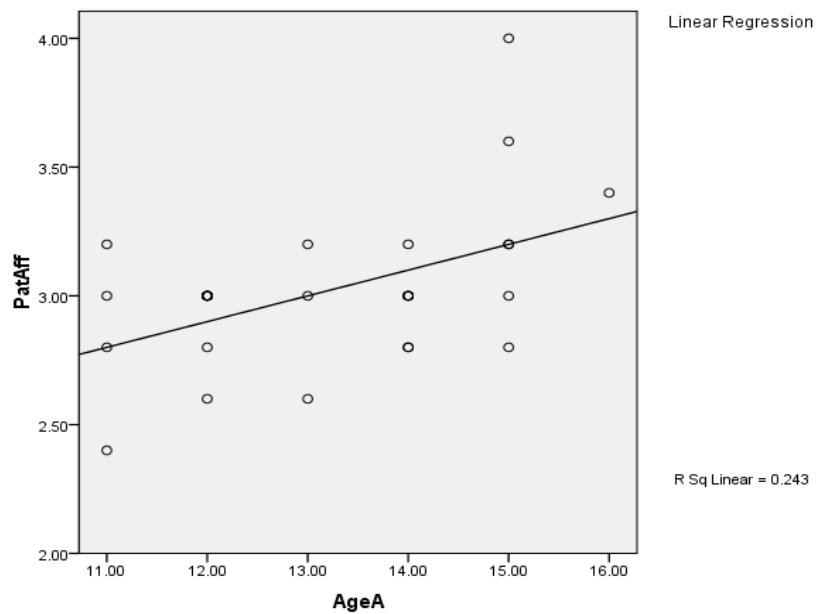
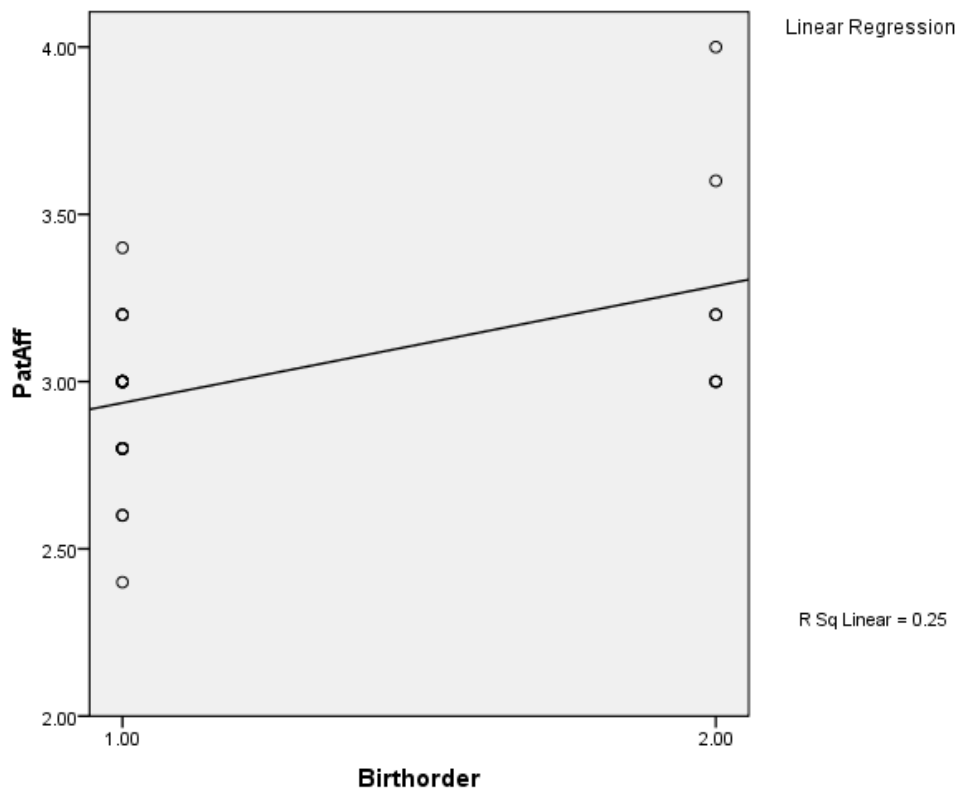


Figure 3: Scatterplot for birthorder as a predictor of perceived paternal affection (1 = Child A older than Child B; 2 = Child A younger than Child B)



Appendix F.2: Scatterplots for the relationship between difference in anxiety scores between siblings and the four parenting dimensions

Figure 4: Scatterplot to illustrate the relationship between difference in anxiety scores and maternal affection

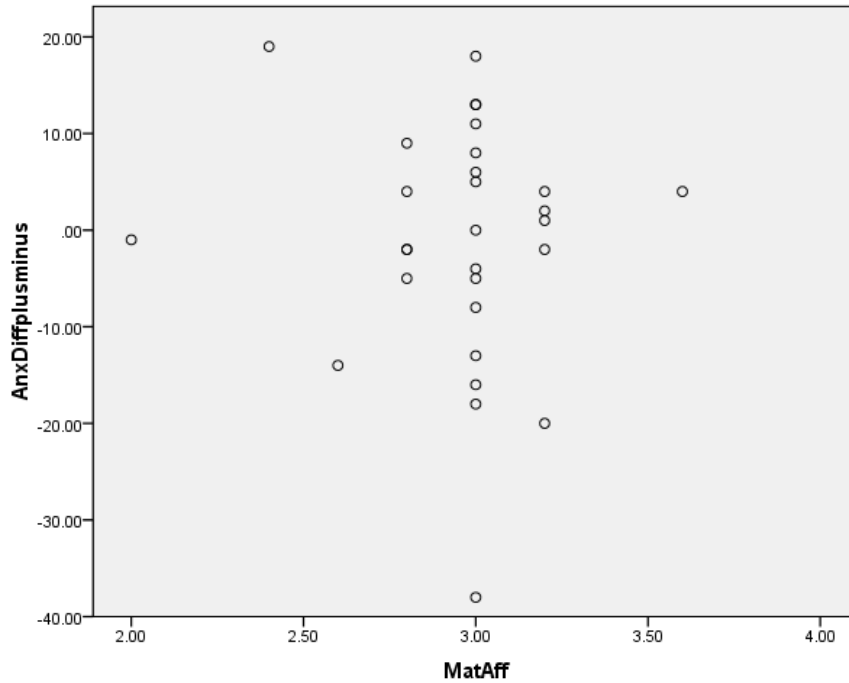


Figure 5: Scatterplot to illustrate the relationship between difference in anxiety scores and maternal control

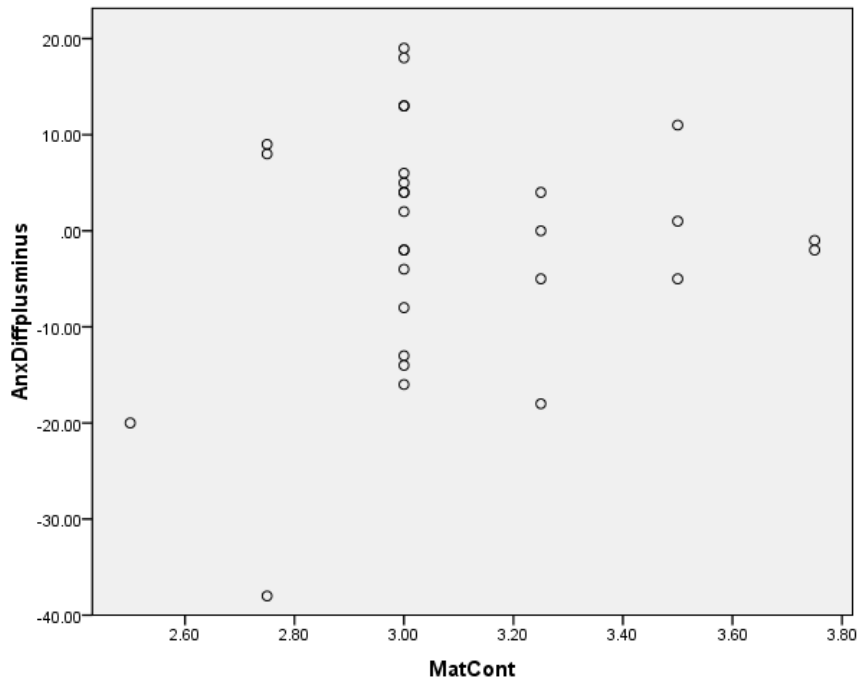


Figure 6: Scatterplot to illustrate the relationship between difference in anxiety scores and paternal affection

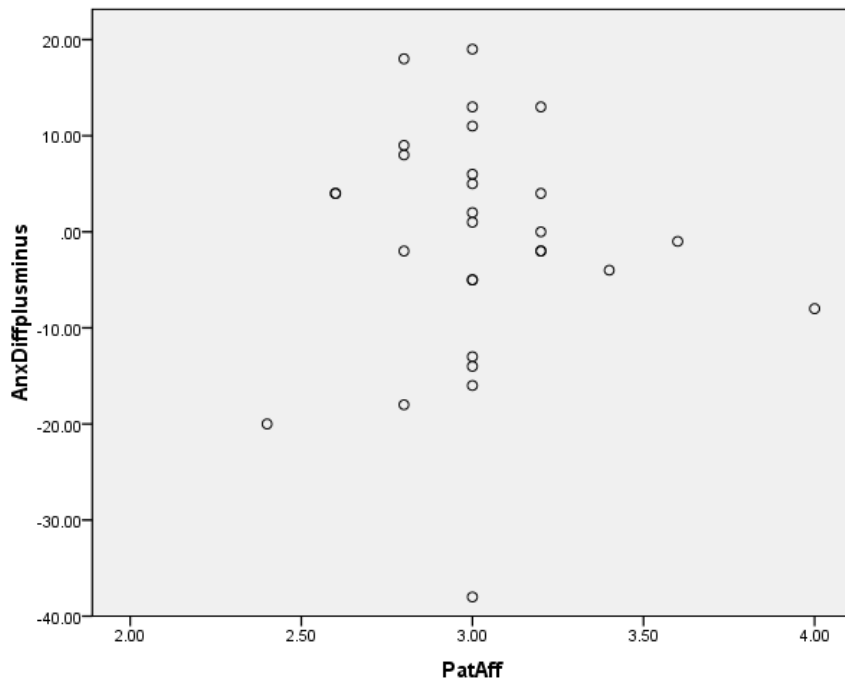


Figure 7: Scatterplot to illustrate the relationship between difference in anxiety scores and paternal control

