

**Volume 1: Research**

**The role of parenting in the development of narcissism**

**&**

**Parental illness perceptions of ADHD**

**Justin Savage**

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Literature Review

**The role of parenting and overindulgence in the development of narcissism: A review of the literature**

**Department of Clinical Psychology**

**School of Psychology**

**The University of Birmingham**

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## **Abstract**

This review explores the relationship between parenting and the development of narcissism with a specific focus on the role of overindulgence. 13 empirical studies were identified for the review. A quality assessment was completed for each study. The papers are examined for the strength of their findings and the constructs they purport to measure are considered in relation to each other and overindulgence. A distinction is also drawn between ‘healthy’ and ‘unhealthy’ narcissism. Overall, both types of narcissism were found to be associated with low levels of parental monitoring and higher levels of overvaluation. ‘healthy’ narcissism was also associated with higher levels of warmth and empathy whereas ‘unhealthy’ narcissism was associated with parental coldness, less empathy and harsher treatment. However, all individual effects were weak to moderate and several limitations were observed in each study. Research is recommended to examine potential influences of such parenting factors in combination, which together may provide a more clinically significant understanding of the role of parenting in narcissism. Overindulgence remains rather unexamined in a reliable and complete way in relation to narcissism, despite claims to the contrary. Clinically, it is important for health care professionals to be aware of the potentially detrimental effects of overvaluation and overindulgence alongside the lack of monitoring and empathy, which are perhaps better established as areas for concern.

*Keywords:*

*Narcissism, parenting, overindulgence*

## Introduction

Narcissism attracts a great many personal theories as to its nature and development which proliferate on the internet and in 'pop psychology' books. However, many of these are not supported by empirical evidence. Campbell and Foster (2007) state that there are a variety of different theoretical perspectives on narcissism, and there is much to be done to resolve many of the controversies in the field of narcissism research. One of the key areas of controversy surrounds whether narcissism develops through, as Campbell and Foster (2007) put it, the child being either 'wounded or spoiled' in childhood. A further issue is whether narcissism is essentially a 'healthy' or 'unhealthy' characteristic for the individual. In the proposal for DSM-5, narcissism is defined as: 'Vanity/boastfulness/exaggeration of one's achievements and abilities; self-centeredness; feeling and acting entitled, firmly holding the belief that one is better than others and deserves only the best of everything in life' (Skodol, Bender, Oldham, Clark, Morey, Verheul, Krueger, & Siever, 2011). Several theories have been put forward to explain the development of narcissism and one common conception, which is supported by the psychoanalytic theory of Kohut (1977) and the social learning theory of Millon (1996), is that parental overindulgence or excessive gratification of a child's needs can lead to the child becoming narcissistic as an adult. The suggestion is that those who are taught that they can have whatever they want at a young age will continue to believe and act in such ways that seek to maintain such treatment.

To date, only one empirical paper has specifically studied narcissism and 'overindulgence' per se (Capron, 2004), yet evidence for the relationship is suggested in several reviews (Ronningstam, 2010; Thomaes, Bushman, Orobio de Castro, & Stegge, 2009) and papers (e.g. Horton, Bleau, & Drwecki, 2006; Otway and Vignoles, 2006). Overindulgence presents an unclear picture as to what parenting behaviours it precisely refers to. Various alternative terms are employed such as 'pampering' 'overvaluing' and 'permissive parenting', which may or may not allude to the same construct. Such varying terminologies make it hard to determine whether there is any validity to the proposal that overindulgence fosters narcissism. Therefore, this review sets out to consider the nature of both narcissism and overindulgence and to explore the evidence for a relationship between them, as well as to consider the wider picture of the potential role of parenting in the development of narcissism.

Thomaes et al. (2009) suggest evidence for parental overindulgence as a contributory factor in their review of research on narcissism. They cite three empirical studies, which they

say show support for overindulgent or overvaluing parenting in the development of narcissism in adulthood. They summarise the papers by suggesting that adult narcissists report childhood recollections of their parents putting them on a pedestal, believing they had exceptional talents, often praising and rarely criticising them (Otway and Vignoles, 2006); their parents being permissive and failing to set restrictions (Ramsey, Watson, Biderman, & Reeves, 1996); and that young adult narcissists report that their parents currently are excessively indulgent, without setting restrictions for them (Horton, Bleau, & Drwecki, 2006). A review of narcissistic personality disorder by Ronningstam (2010) offers only two studies in support of the role of overindulgence in the development of narcissism, but suggests that tentative evidence is there. One cited study is that of Imbesi (1999), a theoretical paper based on case studies, which suggests that narcissists have been ‘overly gratified or indulged’ as children. The other is that of Otway and Vignoles (2006), as above, which Ronningstam summarises as finding that ‘parental coldness and overvaluation’ were key factors in predicting narcissism.

The importance of ‘parental coldness’ reflects an alternative theoretical perspective on the development of narcissism that will later be discussed in this review but essentially refers to displaying a lack of interest in the child, being somewhat neglectful of their needs. Thomaes et al. (2009) also suggest evidence for cold or unsupportive parenting in fostering the development of narcissism. They highlight findings that show narcissists reporting childhood recollections of their parents being cold and indifferent (Otway & Vignoles, 2006); authoritarian (Ramsey et al., 1996); and lacking empathy toward them (Trumpeter, Watson, O’Leary, & Weathington, 2008). Older adolescent and young adult narcissists report that their parents are psychologically controlling and often use strategies such as love withdrawal and guilt induction to exert their influence (Horton et al., 2006). The seemingly contradictory or opposing sets of parenting behaviours (i.e., overindulgence and cold parenting), being proposed as important in the development of narcissism, have been brought together via the principle of ‘equifinality’, such that Thomaes et al. (2009) describe multiple pathways leading to the same end point. However, the pathways from parenting to narcissism and the mechanisms involved in translating parenting behaviours into child-adolescent-adult narcissism remain unclear.

A number of problems may arise from simply accepting the claims about overindulgence from the above two reviews. Neither of them are systematic reviews; their method for selecting relevant studies and reviewing the evidence is unclear. They are also more broad-ranging than a focus on parenting. Hence, perhaps due to the complexities and

variety of factors involved, such reviews do not examine the quality and strength of such findings. Relations to ‘types’ of narcissism are also not discussed. Additionally, none of the cited studies state that they are measuring ‘overindulgence’ per se, rather their findings are later interpreted as such by the authors of the reviews and/or the authors of the studies. Therefore, careful consideration of such parenting constructs, particularly those related to overindulgence, is important to do before accepting evidence for them either way. It is likely that this will work to guide future research in these areas by providing some clarity.

In summary, parenting has been implicated as a factor in the development of narcissism, with different aspects of parenting identified across studies. Unfortunately, the two reviews that have been conducted in this area are poor with regard to their search methodology and critique of the quality of studies, hence the findings identified and claims made are, at best, speculative. So, to further our understanding on the presence, nature and extent of any relationships between aspects of parenting and the development of narcissism, a systematic review of the literature is required. All studies purporting to offer some evidence for the presence or absence of a relationship between parenting and narcissism will be included in this review. However, before examining the studies and the quality of the evidence, a brief look at theories of parenting in the development of narcissism is required.

#### *Theories on the role of parenting in the development of narcissism*

Numerous authors have theorised as to the nature and development of narcissism, with resulting theories being largely based on clinical practice and case studies. The most prominent theories, such as those of Kohut (1977) and Kernberg (1975), tend to converge on the importance of gratification of children’s wishes, but there is a divergence at the polarity of that gratification into two rather opposing views: needs either being met too much or not enough. Theorists such as Imbesi (1999) and Millon (1996) fall into the former camp. They suggest that the excessively gratified or ‘spoiled child’, having been overindulged by parents, grows up to expect to be treated accordingly as an adult. Kohut (1977) viewed this in terms of the child not being ‘frustrated enough’ in order to learn to tolerate frustration and to rein in their sense of grandiosity. As well as demands being met and being given what he/she wants, the child may also be praised excessively or made to feel more special than others. In a similar way, this could help to explain the continuing need for admiration found in adult narcissists.

The main alternative view on the development of narcissism is of a child receiving

*insufficient* early praise and gratification – the ‘not enough’ camp (Kernberg, 1975). Kohut also concurred with this perspective, theorising that narcissism could develop through either of the above two routes. He saw this second route as essentially comprising ‘chronic frustration’ of the child’s wishes (Kohut, 1977). This ‘frustration’ results in the adult who demands the best treatment and excessive admiration from others in order to compensate for the lack of this while growing up, as well as defending against the expectation that needs will not be met. Additionally, Kernberg (1975) suggested that the parental message to the child of ‘specialness’, in combination with harsh treatment (or insufficient gratification), produces the inflated yet brittle personality configuration he envisages as ‘the narcissist’. This seemingly mixed message is thought to create a high sense of self-importance, but without commensurately high self-esteem, as the specialness may not be tied to anything inherent in the child or may be conditional. The relationship between narcissism, self-esteem and general mental health is complex. Thus, it is therefore important to consider conceptions of narcissism in order to be able to explore what types of narcissism overindulgence may be related to and whether overindulgence is ultimately a helpful or unhelpful parenting style in the healthy development of the child, adolescent and adult.

### *Narcissism*

Narcissists are identified as exhibiting pervasive patterns of grandiosity and self-importance, and as invested in demonstrating their superiority. Yet, despite the grandiosity, these individuals are also described as craving attention and admiration; they are particularly concerned with how well they are doing and how favourably others regard them (Morf and Rhodewalt, 2001). The picture of narcissists having an extremely positive yet simultaneously fragile self-view some might see as perplexing. In order to make sense of this, Morf and Rhodewalt (2001) hypothesise a self-regulatory model for narcissism, suggesting that:

*“The very fact that the narcissistic self is such a grandiose and bloated structure builds in an inherent vulnerability. It is a self that cannot stand on its own, as it is not grounded in an objective reality, thus it needs constant shoring up and reinforcement.” pp 179.*

If parental overindulgence is important in the development of narcissism, it is important to consider how it fits with this idea of ‘an inherent vulnerability’. As Campbell and Foster (2007) suggest, the issue of narcissism being ultimately beneficial for the narcissist is contentious. A number of studies examined in this review distinguish between ‘healthy’ (or adaptive) and ‘unhealthy’ (or maladaptive) narcissism. Narcissism positively correlates with

self-esteem at around .30 (Brown & Zeigler-Hill, 2004) and studies have found inverse relationships between narcissism and depression and anxiety (Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004; Watson & Biderman, 1993). Narcissism is not equivalent to high self-esteem; many individuals with high self-esteem do not endorse the presence of narcissistic traits. Differences in relationships with adjustment have been found between the subscales of the most widely used measure of narcissism, the Narcissistic Personality Inventory (NPI; Raskin and Hall, 1979; Raskin and Hall, 1981). Designed to measure narcissism (as defined by the DSM III), the NPI views narcissism as a normally distributed trait. A seven-factor structure was proposed: autonomy, entitlement, exhibitionism, exploitation, self-sufficiency, superiority, and vanity. 'Exploitativeness' (e.g. manipulation of others), 'Entitlement' (e.g. a sense of deserving more than others) and 'Exhibitionism' (e.g. feeling the need to be centre of attention) have been considered maladaptive, based on their associations with poor social adjustment (Emmons, 1984; Raskin & Terry, 1988). Conversely, subscales of 'Autonomy' and 'Self-sufficiency' have been found to correlate with measures of confidence and assertiveness and have been considered to be relatively adaptive traits (Raskin & Terry, 1988). Emmons (1987) also found contrasting mental health implications between the subscales of the NPI using a four-factor structure. An exploitativeness/entitlement dimension was related to anxiety and depression; but the leadership/authority, superiority/arrogance, and self-absorption/self-admiration dimensions often predicted greater self-esteem and less mental health problems. Obviously then, it is important to consider the subscales of the NPI rather than taking the full scale at face value and a simplistic notion of narcissism as a discreet entity.

Such distinctions are important in order to consider whether overindulgence is ultimately related to adaptive or maladaptive functioning in adult life and whether it is something that parents and society in general should be concerned about. How these types relate to parental overindulgence shall be considered in relation to each study in this review. All empirical research exploring the role of parenting in the development of narcissism has been conducted on the trait of narcissism rather than 'Narcissistic Personality Disorder'. For this reason, the review shall focus on the trait of narcissism unless otherwise specified. The relative term 'healthy narcissism' shall be taken as meaning it is associated with positive mental health indicators, such as normal levels of self-esteem for the individual. Conversely, 'unhealthy narcissism', shall be understood as that which is associated with low self-esteem, depression and anxiety.

## *Overindulgence*

Bredehoft, Mennicke, Potter, and Clarke (1998) specifically studied parental overindulgence and attempted to define it. They distinguished overindulgence from ‘spoiling’ and ‘permissiveness’ by suggesting that the latter two result from giving in to child’s demands whereas overindulgence happens irrespectively of the child’s demands, being more a way for a parent to meet their own needs. They have subsequently conducted further studies and, based on their findings, Bredehoft and Ralston (2008) proposed a refined definition with three interrelated but separable aspects of overindulgence:

*Too Much:* too many toys, clothes, activities, sports, lessons, camps, privileges, entertainment.

*Over-nurture:* doing things for children that they can and should be doing for themselves at each developmental stage. It also involves excessive parental time and attention (hovering and smothering).

*Soft structure:* not having rules, not enforcing rules, not having chores, giving too much freedom, allowing children to dominate the family.

The ‘soft structure’ element of this definition appears to cover the concept of yielding to the child’s demands that they earlier saw as ‘spoiling’ or ‘permissiveness’. The above definition puts overindulgence in concrete terms and allows this conception to be compared with other ostensibly similar constructs, such as parenting associated with ‘spoiled’ or ‘pampered’ children. The concept of giving too much attention and material things too often is also similar to Adler’s (1964) conception of overindulgence, which he also described as an aspect of ‘pampering’. He thought that this lead to materialism, manipulateness and demandingness in adults. In relation to ‘spoiling’, McIntosh (1989) sees the lack of imposing limits or boundaries as the key issues in the development of ‘spoiled children’. He suggests that indulgence and overindulgence are positive parenting practices, suggestive of love, whereas Bredehoft et al. (1998) and Adler suggest that children can be indulged too much, being given too much attention and too many things resulting in negative developmental consequences. Both perspectives do however agree that there are difficulties with parental permissiveness of children’s behaviours and in allowing them too much freedom. The above definition of overindulgence shall be considered in relation to the findings of studies in this review. Overindulgence therefore refers to a parent providing much more time, attention, material things and freedom to their child on a regular basis. The relative merits of such a definition will be further considered in the discussion in light of the reviewed articles.

## Methodology

The aims of this review are to:

1. Examine if and how overindulgence relates to healthy or unhealthy types of narcissism.
2. Consider the wider picture of the role of parenting in the development of narcissism.

In order to consider the relationship between narcissism and overindulgence a literature search was performed comprising of narcissism plus various synonyms of overindulgence. The search was conducted on scientific databases of: Psycinfo, Embase, and Ovid between 1980 and May, 2011. Specifically, search terms by title were entered for: narciss\* OR \*indulg\* OR pamper\* AND parent\* OR child\* OR develop\*. 430 papers were returned. Removal of duplicates resulted in 261. Results were then limited to empirical papers with a survey design and relevant to the title question, i.e. those studying the relationship between narcissism and parenting factors implicated in its development or those studying overindulgence (or related constructs) and its developmental trajectory (case studies were not included as there was only one of these). This resulted in 11 papers. Additionally, spoil\*AND child\* were searched as above returning 11 results after de-duplicating and 0 results after assessing for relevance. No studies empirically examined the outcomes of ‘spoiling’ children. Google was also used to search for overindulgence and narcissism respectively returning 2 further results from [www.overindulgence.info](http://www.overindulgence.info) (Bredehoft, & Leach, 2006; Bredehoft, & Ralston, 2008). These were not published in peer-reviewed journals but were included due to their relevance to the study and the limited amount of published findings, particularly in relation to overindulgence.

Table 1 below summarises the main features of the resultant 13 studies. The quality of each study is given an overall rating of either ‘weak’, ‘moderate,’ or ‘strong,’ based on the number of confounds and problems with the study as presented within the table and covering the areas of: sample size, sample representativeness/selection bias, validity of measures, response bias, study design, and relevance of findings. A score of 1 is attributed for each confound. Scores of 1 or 2 are considered strong, 3 is moderate, and 4-5 or more are weak. These scores are of course not absolute, but they are indicators of relative bias and usefulness with regards to the review aims.

**Table 1:** Methodological Quality Assessment Table for: The relationship between parental overindulgence and the development of narcissism.

|    | Study  | Aims and findings  | Design and Sampling  | Confounds/ problems   | Quality of study. |
|----|--|--|--|---|-------------------|
| 1. | Capron (2004).   | <p>‘Pampering’ types: <b>Overindulgence, Overpermissiveness, Overprotectiveness, Overdominance</b> (unpublished measure), were tested for correlation with <b>narcissism</b> (NPI).</p> <p>The strongest relationships were overindulgence positively correlating with the unhealthy subscales of the NPI.</p>   | Retrospective cross-sectional survey. 100 male; 100 female undergraduates.   | <p>Pampering measure not validated and not presented with only one item per type of pampering. Retrospective self-reports. Limited sample variation.</p> <p>Weak correlations</p>   | 3                 |
| 2. | Bredehoft, Mennicke, Potter, & Clarke (1998).  | <p>Explored relationship between <b>overindulgence</b> (using definition) and <b>various childhood factors and current problems</b> in adults (author-generated questions).</p> <p>Parental overindulgence related to various feelings in childhood: they felt guilty, bad or sad, loved, confused. As adults, the following were problem areas: knowing normal limits, insecurity, feeling the need for praise and material rewards to feel worthy.</p> | Retrospective cross-sectional survey. 730 identified through convenience sampling at colleges and classes on overindulgence. Ages 17 – 83, 86% female. | Self-identification of sample through definition perhaps biased responses. Largely female sample and found through classes on overindulgence. Items and data analysis strategy not presented. No comparison data to those not overindulged. | 4                 |
| 3. | Bredehoft, & Leach, (2006). From: <a href="http://www.overindulgence.info">www.overindulgence.info</a> | <p>Investigated the relationships of <b>overindulgence</b> (using author-developed questionnaire) with <b>self-esteem, self-efficacy, self-righteousness</b> and <b>dysfunctional attitudes</b>.</p> <p>Overindulgence significantly correlated with lower self-efficacy, more self-righteousness, and more dysfunctional attitudes.</p>   | Retrospective cross-sectional survey. 74 undergraduates aged 18-25, 43 female, 31 male.  | <p>Overindulgence based on own scale with one low alpha subscale. Retrospective self-reports. Not in peer reviewed journals but published on own website. Limited sample size and variation.</p> <p>Weak correlations.</p>                  | 4                 |

|    |   |  |  |   |   |
|----|---|--|--|---|---|
| 4. | Bredehoft & Ralston, (2008).<br>From:<br><a href="http://www.overindulgence.info">www.overindulgence.info</a> | Investigated the relationship of <b>overindulgence</b> (using author-developed questionnaire) with <b>life aspirations</b> (extrinsic and intrinsic goals) using The Aspiration Index (Kasser & Ryan, 1993).<br><br>Overindulgence correlated with External life aspirations of wealth, fame and image rather than internal goals (eg relationships, sense of community). Subscale of ‘Too Much’ predicted 33% variance in external aspirations via path analysis.               | Retrospective cross-sectional survey.<br>369 web participants (80.5% female, 19.5% male; ages 14-81.       | Retrospective self-reports.<br>Overindulgence based on own scale with one low alpha subscale. Largely female sample and website may attract those interested in Overindulgence. Not in peer reviewed journals but on website.<br><br>Weak correlations. | 4 |
| 5. | Watson, Little, & Biderman (1992).  | Explored relationships between <b>narcissism</b> (NPI) and <b>3 parenting styles</b> using the Parental Authority Questionnaire (PAQ; Buri, 1989; Buri, Louiselle, Misukanis, & Mueller, 1988).<br><br>More authoritative associated with less ‘unhealthy’ narcissism, permissiveness correlated with more ‘unhealthy’ narcissism. Further research is recommended.  | Retrospective cross-sectional survey.<br>324 undergraduates, 125 male; 199 female. Mean age: 19.6 years.   | Retrospective self-reports. Limited sample variation. Poor measure of parental permissiveness correlated with authoritative.<br><br>Very weak correlations  | 3 |
| 6. | Watson, Hickman, Morris, Milliron, & Whiting (1995).  | Explored the relationships between <b>parental nurturance</b> (as measured by the Parental Nurturance Scale; Buri, 1989), <b>narcissism (NPI)</b> and <b>Self-esteem</b> (the Rosenberg Self-Esteem Scale; Rosenberg, 1965).<br><br>More parental nurturance correlated with lower levels of unhealthy traits and higher levels of the ‘healthy’ traits of the NPI. Authors do not make much of the results but rather discuss concepts of healthy and ‘unhealthy’ narcissism.   | Retrospective cross-sectional survey.<br>459 undergraduates. 287 female and 172 male. mean age: 18.8 years | Retrospective self-reports. Limited sample variation. Limited clinical significance of ‘nurturance’.<br><br>Weak correlations   | 3 |
| 7. | Ramsey, Watson, Biderman & Reeves (1996).   | The relationship between <b>parenting styles</b> (Parenting Assessment Questionnaire; PAQ; Buri, 1989 and the Combined Parenting Styles Index; CPSI; author developed) and <b>‘unhealthy’ narcissism</b> (O’Brien Multiphasic Narcissism Inventory; OMNI; O’Brien, 1987) was explored.<br><br>Perceived parental permissiveness and authoritarianism predicted higher ‘unhealthy’ narcissism. Higher scoring narcissists were less likely to have authoritative style parenting. | Retrospective cross-sectional survey.<br>370 undergraduates. 52% female, 48% male.                         | Retrospective self-reports. Limited sample variation.<br>Poor measure of parental permissiveness – though recognised by authors.<br><br>Weak correlations.  | 3 |

|     |  |   |   |   |   |
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| 8.  | Barry, Frick, Adler & Grafemen (2007). | <p>Aimed to explore the effects of <b>healthy and 'unhealthy' narcissism</b> (child version of the NPI; author developed) in children upon later delinquency. <b>Parenting practices</b> (Alabama Parenting Questionnaire; APQ; Shelton, Frick, &amp; Wootton, 1996) were measured as control variables.</p> <p>'unhealthy' narcissism positively correlated to a combined parent/child report of negative parenting styles, including lack of supervision, inconsistent discipline, and corporal punishment.</p>   | <p>Concurrent cross-sectional survey. Parent and child ratings of parenting. 98 pairs. Child ages 9-15. Female 47%, male 53%.</p>                     | <p>Parenting was not the major focus of the study: Limited applicability and presentation of relevant results. 'Positive' parenting undifferentiated.</p> <p>Weak to moderate correlations</p>  | 2 |
| 9.  | Cramer (2011).                         | <p>Investigated the role of <b>parenting styles</b> (Child Rearing Practices Report; CRPR; Block, 2008) in the development of <b>healthy and 'unhealthy' narcissism</b> (California Q-set; CCQ; Block &amp; Block, 1980 &amp; CAQ; Block, 1961/1978) measured at two time points 20 years apart.</p> <p>Permissive and authoritative parenting styles had a direct effect on the development of 'healthy' narcissism, but 'unhealthy' narcissism depended on the child's initial 'proclivity towards narcissism' in combination with the authoritarian style.</p> | <p>Longitudinal, observer rating and parenting-style self-reports. 89 parent-child dyads from nurseries and crèches.</p>                              | <p>Unclear method of observation assessment - Permissiveness and authoritative highly correlated.</p> <p>Weak to moderate correlations</p>  | 2 |
| 10. | Otway & Vignoles (2006).               | <p><b>Parental coldness</b> and <b>overvaluation</b> (both author developed with all items and their component loadings presented. Alphas: .92 and .68) were tested for correlation with <b>narcissism</b> (NPI) respectively.</p> <p>Narcissism was predicted by more parental coldness and overvaluation. The effects of each were stronger when modelled together than separately in regression analysis.</p>  | <p>Retrospective cross-sectional survey. 120 adults (92 undergraduates, 27 employed. Mean age: 28, SD: 8. Opportunity sample. 59 female, 60 male.</p> | <p>Retrospective self-reports. No distinction between healthy and unhealthy overt types.</p> <p>Weak to moderate correlations</p>   | 2 |
| 11. | Joubert (1992).                        | <p><b>Parental practices</b> (author developed) were explored in relation to <b>narcissism</b> (NPI) and 'psychological reactance'.</p> <p>Narcissism correlated with having fathers who used monetary rewards and having fathers who encouraged independence. Author suggests results '<i>are contrary to those expected from Kernberg's and Kohut's views linking narcissism to less nurturance by parents</i>'.</p>  | <p>Retrospective cross-sectional survey. 49 male, 120 female, undergraduates. Mean age: 21.</p>   | <p>Retrospective self-reports. Limited sample variation. Parenting measure developed by author and not validated or presented. No differentiation of narcissism types/ subscales of NPI. Limited applicability/relevance of findings.</p> <p>Weak correlations.</p> | 5 |

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| 12. | Horton, Bleau & Drwecki (2006).                   | <p>Investigated the relationship between <b>healthy and ‘unhealthy’ narcissism (NPI)</b> and the parenting dimensions of <b>monitoring, warmth</b> (both from Lamborn et al., 1991) and <b>psychological control</b> (Children’s Report of Parental Behavior Inventory; CRPBI; Barber, 1996).</p> <p>Monitoring associated <i>negatively</i> with both types of narcissism. More parental warmth was associated with the development of ‘healthy’ narcissism. The authors suggest that: <i>‘Indulgent, permissive parenting is linked to ‘healthy’ narcissism.</i> For women, psychological control was associated with ‘unhealthy’ narcissism</p> | <p>Retrospective/ Concurrent (high school), cross-sectional survey.<br/>222 undergraduates &amp; 212 high school students. 55% female, 45% male.</p> | <p>Self-reports (half retrospective). ‘Indulgence’ not explicitly measured or defined. No NPI subscales.</p> <p>Weak correlations.</p> | 2 |
| 13. | Trumpeter, Watson, O’Leary, & Weathington (2008). | <p>Explored relations between <b>parental empathy</b> (Interpersonal Reactivity Index; Davis, 1983) <b>and love inconsistency</b> (Love Inconsistency Scale; Schwarz and Zuroff, 1979) with <b>healthy and ‘unhealthy’ narcissism (NPI)</b>, depression, and self-esteem.</p> <p>More parental inconsistency and less empathic concern correlated with ‘unhealthy’ narcissism. ‘healthy’ narcissism correlated with more mother’s perspective taking and less father’s inconsistency.</p>  | <p>Retrospective cross-sectional survey.<br/>232 undergraduates. 78 males, 153 females.</p>  | <p>Retrospective self-reports. Limited sample variation.</p> <p>Weak correlations</p>  | 2 |

## Review of studies

### *Overview of papers*

All of the studies are from either the UK or the USA and span the years 1992 to 2011. No empirical studies were found on developmental factors associated with narcissism before this time as it appears research efforts were more focused on the measurement and theoretical conceptions of narcissism. No studies were found on the 'spoilt child', only one study was found on 'pampering' and only three studies on overindulgence relating to narcissism-related constructs were found, only one of which was published in a peer-reviewed journal. This obviously reflects a dearth of research in this area. As the table shows, all studies have at least 2 confounding problems. Many of the studies utilised convenience sampling of undergraduate students, thereby limiting the generalisability of findings. Most (all but three) also rely on retrospective self-reports of parenting experiences, which of course could be susceptible to self-protective bias, particularly by more narcissistic individuals. This point will therefore not be laboured in each case.

### *Overindulgence and narcissism*

A study by Capron (2004) used Adler's (1964) ideas of four types of 'pampering': overindulgence, overpermissiveness, overdomineering, and overprotection to explore their relationship with narcissism in 200 undergraduates. Based on the results, the author suggests that there is support for the hypothesis that individuals who are overindulged in childhood are more likely to possess narcissistic personality traits in adulthood. Overall correlations between narcissism (as measured by the NPI), although weak, were significant for overindulgence (.23) and overpermissiveness (.14), but not for the two other types. Interestingly, gender differences were found in the relationships between recalled parental overindulgence and narcissistic traits. For women, parental overindulgence correlated significantly with the 'unhealthy' traits of exhibitionism (.37), exploitativeness (.31) and entitlement (.24), and also with the 'healthy' trait of authority (.30). For men, overindulgence correlated significantly with 'unhealthy' traits of exhibitionism (.36) and entitlement (.27), and negatively with the 'healthy' trait of self-sufficiency (-.20). The author suggests that the self-sufficiency finding may be due to the sample of college students obtained within a geographical area where there are expectations of men being 'breadwinners,' which is challenged by their dependent status. The converse may be true in relation to women's

‘authority’ scores as they may feel more empowered by going to college. Perhaps predictably, overindulgence and overpermissiveness also correlate with each other (.25), which appears to fit with Bredehoft’s conception of overindulgence having a subscale closely related to permissiveness (i.e. soft structure).

What seems to be most important in the interpretation of these data is that all significant correlations, except for ‘authority,’ in women, point to ‘unhealthy’ traits and therefore negative developmental outcomes for parental overindulgence. However, it is recognised that the correlations are only weak to moderate, and thus the amount of variance explained in narcissistic traits by parental overindulgence is limited and thereby indicating that there are other factors which may contributed to or be associated with narcissistic traits. However, the major problem with this study is that the measure of pampering used is not validated and from an unpublished dissertation with only one item referring to each pampering type. Nonetheless, this study seems to show evidence of a weak to moderate relationship between overindulgence and ‘unhealthy’ narcissism, but the validity of the measure limits the conclusions that can be drawn.

#### *Overindulgence and narcissism-related concepts*

In the Bredehoft et al (1998) study, they attempted to define parental overindulgence and explore its relationship with a number of variables. Seventeen percent of 724 people (recruited through colleges and classes on overindulgence) identified themselves as being overindulged as children using an extended version of the following definition: *‘Overindulgent parents inundate their children with family resources such as material wealth, time, attention, experiences, or lack of responsibility at developmentally inappropriate times’*. This self-identified sample then answered a series of questions about overindulgence in relation to a wide range of developmental experiences and current feelings. They reported recalling as children: no consistent chores expected (53%), having lots things done for them (53%), having lots of clothes, toys and privileges (40 – 35%), being allowed to dominate in the family (32 %), feeling confused and guilty (44%). 27% also indicated that physical violence was present in their childhood homes. Qualitative responses about current experiences were also gathered suggesting various current problems including feeling insecure, not knowing appropriate limits, and feeling the need for praise and material rewards to feel worthy. Overall, the authors suggest that the effects of overindulgence are serious and last into adulthood resulting in various problems. They cite inconsistent family environments as closely related to overindulgence and suggest that effects of physical violence in

combination with overindulgence may be greater because of the difficulty children have in predicting inconsistent parental responses. Unfortunately, it is very hard to make sense of this data without having comparison data with those who did not consider themselves as overindulged. The lack of clarity of items also makes it impossible to compare, for example, the current sample's rate of physical violence with general population rates. Of those who considered themselves to have been overindulged, 43% reported being overindulged by both parents, 42% reported this by mothers only and 11% reported this by fathers only. It may have been useful to compare these groups for differences as overindulgence by both parents may have created stronger effects. This study is also fraught with other problems, however, this was at least a start in attempting to define and study overindulgence. This paper is probably best used conceptually in order to guide further thinking.

Following on from their 1998 study, Bredehoft and colleagues subsequently conducted several studies on parental overindulgence, two of which are relevant to narcissism and are included here. The implications and limitations of each shall be considered jointly. Bredehoft and Ralston (2008) investigated the relationship of perceived parental overindulgence with adults' life aspirations. 369 participants completed two self-report questionnaires on the authors' web page. A 14-item 'Overindulged' scale (Bredehoft, Clarke, Dawson, & Walcheski, 2004) assessed perceived parental overindulgence to produce an aggregate score and three subscale scores ('Too much', 'Over-nurture' and 'Soft structure', as per definitions presented above). The Aspiration Index (Kasser & Ryan, 1993) assessed two broad aspirations: extrinsic aspirations (wealth, fame, and image) and intrinsic aspirations (meaningful relationships, personal growth, and community contributions). The results showed that overindulgence significantly positively correlated with extrinsic aspirations ( $r = .34$ ) and negatively with intrinsic aspirations ( $r = -.13$ ). Additionally, path analysis showed that the subscale of 'Too Much' predicted 33% of the variance in external aspirations through its combination with the other two subscales. The authors emphasise the importance of this given that having strong relative aspirations for extrinsic outcomes has been associated with negative mental health indicators such as depression; whereas, placing more importance on intrinsic aspirations has been found to be associated with positive mental health indicators (Kasser, 2002; Kasser & Ryan, 1993; 1996). Such extrinsic values are rather reminiscent of narcissists as they lack empathy, favouring self-enhancement over helping others and they are more likely to be materialistic, seeking attention, fame and physical attractiveness (Twenge & Campbell, 2003).

A further study (Bredehoft & Leach, 2006) investigated overindulgence in relation to adult dispositions in 74 undergraduates. Results showed that more overindulgence (as measured above) was significantly correlated with more dysfunctional attitudes, lower self-efficacy and more self-righteousness. The strengths of correlations were .23 to .25 and no relationship was found with self-esteem. Examples of dysfunctional personal beliefs include: 'If others dislike you, you cannot be happy'; 'I cannot be happy unless most people I know admire me'; and 'It is difficult to be happy unless one is looking good, intelligent, rich, and creative.' Such beliefs have been linked to depression and emotional vulnerability (Weissman & Beck, 1978; Weissman, 1980). The authors suggest that the more people recall being overindulged in childhood the more they report cognitive distortions that underlie depression and make them emotionally vulnerable. Across the two studies the developmental consequences seem to be related to a paradoxical combination of high aspirations and high valuation of own opinions, but low self-efficacy and conditional perceptions of self worth. These findings appear reminiscent of 'unhealthy' narcissism and the vulnerability-sensitivity construct. However, low self-esteem would be an important factor in this so the lack of relationship found in this study is inconsistent with this profile. In all though, some significant problems temper the conclusions that can be drawn from these two studies. The studies are not published in peer-reviewed journals and the internal consistency for the over-nurture subscale is unacceptably low at .45 calling in to question its construct validity as measured by the questionnaire. These three studies do not provide clear or strong evidence of a link between parental overindulgence and narcissism, but they did not set out to do so. However, the Bredehoft definition of overindulgence, as measured by the questionnaire, appears to factor in unhealthy traits associated with narcissism and suggest that further, more rigorous research may well be warranted.

#### *Evidence for parenting styles in the development of narcissism*

Watson, Little, & Biderman (1992) theorised that the permissive parenting style would be associated with the later development of narcissism as it would be associated with excessive gratification and overindulgence (or lack of frustration), as mentioned above. Using retrospective self-reports of 324 undergraduates they found that the permissive parenting style significantly correlated with the 'unhealthy' exploitativeness/entitlement traits of narcissism as measured by the NPI but only very weakly at .12. The authoritative style was negatively correlated with exploitativeness/entitlement at -.24. However, the permissive style

was positively correlated with the authoritative style, which gave the authors cause to question the construct validity of their measure of permissiveness as theoretically, there should not be so much overlap. The authors also suggest that parenting styles may require additional scrutiny and they may be too broad to encapsulate the precise factors associated with narcissism. Other than being suggestive that further research may be warranted, there is little that can be gleaned from this study due to the weaknesses of the measures and the small correlations

In another retrospective self-report study of undergraduates (n= 459), Watson, Hickman, Morris, Milliron, & Whiting (1995) concentrated on narcissism in relation to parental ‘nurturance,’ which they suggest is an important discriminating factor between parenting styles. They found that more perceived parental nurturance was significantly correlated with lower levels of exploitativeness/entitlement and higher levels of the ‘healthy’ traits of the NPI (i.e. leadership/authority, superiority/arrogance, and self-absorption/self-admiration). Unsurprisingly, greater levels of nurturance (the parent being warm, caring, understanding) were associated with lower levels of ‘unhealthy’ narcissistic traits and higher levels of traits associated with greater self-esteem. High levels of nurturance do not seem to be indicative of overindulgence. The five point scale used would, in the case of parents being warm and caring for example, simply indicate that the respondent strongly agreed that their parent provided this, and not to an indulgent or at least not ‘overindulgent’ degree. Again the correlations were weak (< .17) and the authors made more of the relative merits of conceptualising narcissism as ‘healthy’ or ‘unhealthy’ than they considered issues of development.

In order to try to improve upon the methodological rigour of the above studies, Ramsey, Watson, Biderman & Reeves (1996) used the OMNI (O’Brien, 1987) suggesting it to be a clearer measure of ‘unhealthy’ narcissism, rather than the more ‘ambiguous’ NPI. Additionally, the authors used two measures of parental permissiveness. Unfortunately, the PAQ (Buri, 1989) measure of permissiveness correlated at .47 with authoritativeness and their own measure of permissiveness (the CPSI) did not significantly predict scores on the OMNI. The two permissive measures also only correlated at .20 with each other and the authors admitted that permissiveness is a difficult construct to operationalize. Indeed, on inspection of the items given, it appears that ‘indifference’, particularly about educational achievement may have been a better way to describe the construct measured by the CPSI. Despite these difficulties, using multiple regression analyses they found that parental

permissiveness and authoritarianism combined to predict greater narcissistic tendencies to a significant but small degree ( $R^2=.33$ ). Bivariate correlations also showed that the higher scoring students on the OMNI (more narcissistic) were more likely to report having authoritarian and permissive parents and less likely to have authoritative parents. However, again, all correlations were rather weak. Overall, these studies suggest tentative evidence for a somewhat minor role for both parental permissiveness and authoritarianism in the development of narcissism.

Thus far, the focus on distinct parenting styles seems to have resulted in disappointing findings and a somewhat confusing picture of contradictory parenting styles (i.e. permissiveness vs authoritarianism) being simultaneously associated with the development of narcissism, albeit fairly weakly. Interestingly, a web-based study of 311 parents by Walcheski, Bredehoft, and Leach (2007), found that overindulgent parents can be permissive, authoritarian, or both. Overindulgent parenting, as measured by the authors' scale, was significantly positively correlated with authoritarian (.14), and permissive (.60) parenting styles. No significant correlation was found with being authoritative. Clearly, the permissiveness scale has the much larger correlation with overindulgence than does the authoritarian, which is very small, but still, this mixed picture may suggest that this measure of overindulgence comprises a unique combination of factors, which do not ally to any particular parenting style. Such a combination of coldness found in the authoritarian style alongside indulgence seems to fit with Kohut's and Kernberg's theories of paradoxical parenting resulting in narcissism.

Somewhat similarly, a combined parent/child report of 'negative' parenting styles, including lack of supervision, inconsistent discipline, and corporal punishment was found to be positively related to child and adolescent 'unhealthy' narcissism, as assessed with a self-report child version of the NPI (author adapted). The sample consisted of 98 parent-child (ages 9-15) dyads. 'Unhealthy' narcissism was comprised of the Entitlement, Exploitativeness, and Exhibitionism subscales. A composite score of negative parenting style significantly correlated with 'unhealthy' narcissism at .37, but no relationship was found with 'healthy' narcissism. Unfortunately, the main focus of this study was not on parenting styles, thus the correlations between NPI subscales and narcissism were not analysed. The influence of any 'positive' parenting practices (i.e. involvement and positive reinforcement) may then have been lost within the positive composite scale, which did not show any significance. Constructs of overindulgence, aside from permissiveness, do not seem to have been

measured. However, the three given negative behaviours do seem to suggest a combination of permissive and authoritarian styles, including corporal punishment. In sum, harsh and indifferent parenting is therefore shown to have a weak to moderate relationship with ‘unhealthy’ narcissism. The validity of these results is strengthened by concurrent reporting as well as the use of a combined parent-child report of parenting, which somewhat addresses the possibility of biased reporting styles of narcissists. The correlations between parent and child report of positive parenting ( $r = .44$ ), and of negative parenting ( $r = .32$ ), were significant, though moderate in strength. An opportunity was also missed, it appears, to compare the degree of discrepancies in the dyads with the levels of narcissism in the children. This could have shed light on whether narcissists distort reports of parenting experiences compared to non-narcissists.

Also attempting to address the possible confound of reporting bias in many of the above studies, research by Cramer (2011) assessed narcissism in eighty-nine 23-year-olds. This was compared with data from twenty years earlier on their parents’ parenting styles as well as observer-ratings of their narcissistic characteristics as three year olds. Respective child and adult versions of the observer-rated California Q-set (CCQ; Block & Block, 1980 & CAQ; Block, 1961/1978) were used at ages 3 and 23 to assess a range of personality characteristics, including narcissistic traits, based on their interactions with others. Unfortunately, the precise nature of these observations was not detailed, but the alpha values for the scales ranged from .70 to .94 for the children and .80 to .89 for adults. ‘Precursors of narcissism’ (i.e. traits of children associated with later development of narcissism) were identified by Carlson & Gjerde (2009). They were thus used in this study as a measure of proclivity towards developing narcissism. Parenting styles were assessed at age 3 using the self-report Child Rearing Practices Report (CRPR; Block, 2008). Four parenting styles were examined comprising those of Authoritarian/Autocratic, Authoritative/Responsive, Indulgent/Permissive, and Indifferent/Uninvolved. Two sub-scales of narcissism, originally identified from the CAQ by Wink (1992), were studied: The *Wilfulness* scale correlated positively with measures of pathology and Wink identifies this scale as ‘unhealthy’ narcissism. The *Autonomy* scale correlated positively with inventory measures of self-assurance, confidence, empathy, and energy, and did not correlate with measures of pathology. This scale is characterized as ‘healthy’ narcissism’ (Wink, 1992).

Authoritative and Indulgent/Permissive mothers’ parenting styles were positive predictors of ‘healthy’ narcissism at age 23 ( $\beta$  s = .46 and .41). Fathers’ Authoritative

parenting score was also a positive predictor of 'healthy' narcissism ( $\beta = .28$ ). However, the fathers' Authoritative score and age 3/4 Narcissism Precursors interact to create this effect. In contrast, the use of an Authoritarian style was a negative predictor of subsequent 'healthy' narcissism for both mothers and fathers. The effect of parenting on adult narcissism was significant even after controlling for early child narcissism precursors. Authors suggest their findings show that healthy, adaptive narcissism in young adulthood is predicted by early gratification of physical and psychological needs.

It is important to note that authors state that their conception of the 'Indulgent/Permissive' parenting style is characterised by providing emotional/physical gratification rather than by providing 'indiscriminate praise'. Some of the most characteristic items of the Indulgent/Permissive style include: *Feels child should have time to think/daydream/loaf; Lets child make many decisions for himself/herself; Child should be comforted when scared*. These are ipsitive ratings (i.e. true/ false) rather than scaled so they cannot capture extremes of for example, letting child make decisions, which would perhaps equate to permissiveness in the extreme but authoritative in the middle and authoritarian at the 'no decisions' end. Some of the items may also be shared with the authoritative style. Therefore, these items do not seem to suggest overindulgence in the same sense that Bredehoft et al do. Rather, they appear to be more characteristic of loving, caring parenting, perhaps very similar to those of authoritative parenting. This would explain the very similar Betas between these two styles and narcissism. Additionally, they correlate with each other at .82 for mothers and .85 for fathers. Therefore, this does not clearly suggest a significant role for overindulgence in the development of 'healthy' narcissism as it does not appear that this is what has been studied. It does not seem surprising that the children whose needs were responded to are those that grow up to feel good about themselves. With regards to 'unhealthy' overt narcissism, this was significantly related to authoritarian parenting ( $\beta = .62$ ), but this was only when both the mother had a high authoritarian score (1 SD above the mean) and the 3 year old child scored highly on narcissism precursors. It could be that the authoritarian mother had already exerted an influence on the child prior to age 3.

Of further interest is data pertinent to answering the question of whether the child's narcissistic behaviours could influence parenting style. This is a question obviously relevant to the role of parenting on narcissism as a whole and which no other studies have addressed. In this study there was no relation found between age 3 narcissism precursors and age 3 parenting styles. Authors suggest therefore that it does not appear that the presence of narcissism precursors at age 3 influenced the style of parenting adopted by the parents. How

much influence a 3 year old can have is hard to judge but there remains a possibility that the child's influence upon the parent increased after this age. The implication of parental causality of adult narcissism is of course much more robust with early parenting scores from parents themselves rather relying on retrospective self-reports of childhood. Another point of note is that the presence of traits of narcissism at an early age, irrespective of the parenting style, suggests that factors other than parenting are involved in their development. Thus, other studies should ideally control for narcissism precursors in order to determine respective influences of parenting and other factors more accurately.

#### *More specific parenting behaviours and narcissism*

One of the strongest studies in this field, that of Otway and Vignoles (2006), tested hypotheses of relationships between recollections of parental coldness and overvaluation with narcissism (NPI) in a retrospective survey of 120 adults. Narcissism was predicted by recollections of parental coldness (e.g., acting indifferently, aggressively or rejecting) and recollections of excessive parental overvaluation (e.g., excessive praise and admiration). Using structural equation modelling, the effects of each upon narcissism were much stronger together than separately. Alone, parental coldness did not predict overt narcissism and parental overvaluation provided a relatively weak prediction ( $\beta = .30$ ). Modelled together, the path for parental coldness made a significant positive contribution ( $\beta = .37$ ) and the contribution of parental overvaluation was considerably strengthened ( $\beta = .58$ ). The authors suggest that narcissism is fostered by childhood experiences of constant praise from parents in combination with implicit messages of coldness and rejection rather than warmth and acceptance. Praise is also indiscriminate and may come to seem unreal, hence contributing to feelings of insecurity. They further go on to warn against the 'self-esteem movement' of encouraging copious amounts of unconditional praise. However, the authors did not really consider discriminating between healthy and 'unhealthy' narcissism, but they did assess the NPI subscales. Path analysis revealed largest effects for the combination of coldness and overvaluation upon entitlement ( $R^2 = 22.3$ ), authority ( $R^2 = 16.0$ ), and exhibitionism ( $R^2 = 15.1$ ). Two of these are of course unhealthy traits but they are all small effects. The picture therefore remains rather mixed. It may have added clarity to include a self-esteem measure.

Only 4 ‘overvaluation’ items were used, which asked one to state whether parents:

..put me on a pedestal  
...believed I had exceptional talents..  
praised me for everything..  
..rarely criticised me.

Whilst the relations with narcissism have some value, the construct of ‘overvaluation’ appears weakly elucidated. It is described as ‘excessive praise and admiration’ but this is not clearly either assimilated or differentiated from overindulgence. This is curious due to their citing of Millon’s theory implicating, ‘parental indulgence and admiration.’ It appears that only ‘half’ of his theory has been investigated, overindulgence has not been directly examined.

The weakest study in the review (Joubert, 1992), hypothesised that less nurturance from parents would be associated with more narcissism, as measured on the NPI. Parental behaviours were measured retrospectively by undergraduates on a scale devised by the author. The psychometric properties, the method of responding and the precise items are not presented. Only two significant correlations were found. Total NPI scores correlated with having fathers who used monetary rewards ( $r=.18$ ) and having fathers who encouraged independence ( $r=.17$ ). The author stated: ‘*These results are contrary to those expected from Kernberg's and Kohut's views linking narcissism to less nurturance by parents*’. However, these theories do not specify that use of money and encouragement of independence are ‘nurturing’ behaviours. In contrast, authors such as Bredehoft cite the use of ‘external rewards’ such as money as forms of overindulgence. The way that money was used was not specified by Joubert. In addition, encouraging independence could be viewed in two ways: as an authoritative encouragement of developing one’s own abilities in the world or conversely as a permissive, indifferent expectation that the child gets on with things themselves without ‘bothering’ the parent. The picture may have been clearer had the study used a more well-known and validated measure of parenting practice. An additional explanation for the finding is that the narcissist may be more likely to seek independence and monetary rewards and therefore incite such behaviours in the parent. Or both factors may work in conjunction. Thus, this study adds little to the understanding of parenting and narcissism.

Horton, Bleau, & Drwecki (2006), investigated the relationship between narcissism (NPI) and the parenting dimensions of ‘monitoring’, ‘psychological control’ and ‘warmth.’

‘Monitoring’ essentially refers to a parent’s attempts to establish and enforce rules and to know the whereabouts of the child. ‘Psychological control’ includes manipulation of a child via guilt induction or withdrawal of love and expressing shame or disappointment with the child. ‘Parental warmth’ refers to the extent to which parents ‘provide emotional and material resources’ for their child. These were investigated across two studies with separate samples. One sample was of high school students (n= 212) with parenting rated concurrently, the other was of undergraduates (n= 222) with parenting rated retrospectively. Aside from this difference, the method and measures remained the same. No subscales were analysed as only one internally consistent factor was found. A distinction was made between ‘healthy’ and ‘unhealthy’ narcissism with the latter determined through self-esteem scores being partialled out from the total NPI score. Narcissism is otherwise assumed to be ‘relatively healthy’ and the term is used interchangeably with ‘healthy’ narcissism. The two types were analysed separately. As the authors concentrated on the high school study due to its superior concurrent method, and the results are very similar, the results presented shall be from this study unless otherwise stated.

Overall, ‘healthy’ narcissism was predicted by less parental monitoring and more parental warmth. The authors suggest that: *‘Indulgent, permissive parenting is linked to ‘healthy’ narcissism, consistent with both Millon and Kohut... parents who lavish affection upon their children without setting boundaries for them may enable a narcissistic self to develop.’* Although not clearly expressed in the paper, the authors seem to be equating ‘warmth’ with ‘indulgence’ and a lack of monitoring as ‘permissiveness’. If this is accepted then this does indeed support the theories of Millon, Kohut and Imbesi. ‘Warmth’ items were rated as to ‘how true’ each statement was on a four-point scale. Items included: ‘..spending time talking with me,’ and, ‘..doing fun things’. The extreme end of the scale, when such things occur ‘Always’ or ‘Almost every day,’ may have some face validity in approximating such excessive ‘warmth’ with overindulgence (used interchangeably with ‘indulgence’), particularly the Too much and Over-nurture subscales. However, the cut-offs and breakdown of scoring on the warmth scale are not presented so it is not possible to tell what levels of warmth they seem to be equating with overindulgence.

The effect size for the overall regression model predicting narcissism from parenting components is small (9%). Warmth was positively and significantly associated with narcissism scores at  $\beta = .25$ , monitoring scores were negatively related to narcissism at  $\beta = -.29$ . Control was non-significant. For ‘unhealthy’ narcissism, the regression analysis showed the three parenting dimensions to predict a significant, though small, 15% of variance, and

gender differences were found. For men, the only significant relationship was for less monitoring predicting more 'unhealthy' narcissism. No other interactions approached significance. For women, the interactions of all variables with each other upon 'unhealthy' narcissism were significant. Of particular note was that psychological control was positively associated with 'unhealthy' narcissism under both high and low warmth conditions (i.e. at 1 SD above and below the warmth mean,  $\beta = .22$  and  $\beta = .44$  respectively). This again raises the question of whether high warmth is equivalent to overindulgence. Unfortunately, this is not explicitly discussed by the authors but it does seem that this could be considered so. Overindulgence would therefore be associated with both 'healthy' (or undifferentiated) narcissism and 'unhealthy' narcissism. The converse relation of low warmth associating with 'unhealthy' narcissism reflects the theory of insufficient gratification by Kernberg. Again, the mixed picture of narcissistic development is supported to some extent. However, support for both of these theories was found only in relation to females.

Trumpeter, Watson, O'Leary, & Weathington (2008) also used Emmon's four factor structure of the NPI as they explored its relationship with perceived parental empathy and love inconsistency in a sample of 232 undergraduates. Depression and self-esteem were also measured. Parental love inconsistency items include: 'I couldn't tell from day to day how my mother would respond to certain things,' and, 'The things that didn't seem to bother my mother one day would make her angry the next'. 'Empathy items include: 'Sometimes my mother didn't feel very sorry for me when I was having problems;' and 'Before criticizing me my mother would try to imagine how she would feel if in my place'. Too much inconsistent love and a lack of empathy would, in theory, provide excessive frustration and a lack of gratification of needs in line with Kohut's theory. Trumpeter and colleagues found that higher scores on the narcissistic subscale of entitlement/exploitativeness significantly correlated with perceptions of their parents showing more inconsistency, less empathic concern, and less perspective taking, but all correlations were weak (.18 to .28). More love inconsistency also correlated significantly with higher levels of depression and lower self-esteem, adding weight to the unhealthy aspects of these constructs. Of the 'healthy' subscales, higher leadership/authority scores correlated with more perceived mothers' perspective taking (.20) and less fathers' love inconsistency (-.16) and superiority/arrogance also positively correlated with more mother's perspective taking (.20). The authors suggest that their findings support Kohut's theory of the importance of parental empathy in the development of narcissism but they do not comment on the rather weak correlations. The parenting constructs measured in

this study are not directly comparable with overindulgence. However, the importance of inconsistency certainly seems to relate to the paradoxical care that has been suggested in other studies in this review, i.e. combinations of coldness and overvaluation or permissive and authoritarian styles.

## Discussion

### *Summary of findings*

Overall, the findings for the impact of parenting consistently show weak to moderate effects upon narcissism. It may be that the small effects are due to limitations in study design and measurement or it may actually reflect the reality of parenting being a relatively minor contributor to narcissism as measured in adolescent or in adult years. If the weak effects are down to limitations in design, it will be important to consider why this is so. One explanation may be that it is a unique combination of parenting factors, which have not been studied together yet, that are involved in the development of narcissism. Furthermore, unique combinations may be involved respectively with each type of narcissism. Based on both the strength and quality of findings thus far, the best evidence is for a relationship between ‘healthy’ narcissism and:

- Low levels of parental monitoring (Horton et al., 2006), i.e. the parent not setting many rules about curfew times and checking where the child is going. Monitoring is more clearly elucidated and has stronger evidence than does the closely related concept of permissiveness (Barry et al., 2007; Cramer, 2011; Ramsey et al., 1996).
- Higher levels of parenting warmth (Horton et al., 2006), i.e. behaviours indicative of love and attention, or empathy (Trumpeter et al., 2008) or nurturance (Watson et al., 1995). More consistent parenting also fits this picture (Trumpeter et al., 2008).
- Parental overvaluation or over praising (Otway and Vignoles, 2006).

‘Unhealthy’ narcissism shares the low levels of monitoring and overvaluation. Additional relationships are important with:

- Parental coldness, i.e. indifference and lack of interest (Otway and Vignoles, 2006), and largely encompassing ‘less empathic concern’ (Horton et al., 2006), with the addition of corporal punishment (Barry et al., 2007).
- Parental inconsistency (Barry et al., 2007; Horton et al., 2006).
- For women alone, psychological control (i.e. emotional manipulation of the child), in combination with either low levels of warmth or high levels of warmth, has been found to be related to ‘unhealthy’ narcissism (Horton et al., 2006).

The findings tend to suggest that the difference between ‘healthy’ and ‘unhealthy’ narcissism is centred around parental coldness, or further, harsh treatment and less empathy. What they

have in common is low levels of monitoring and more overvaluation. Perceptions of inconsistency may well be reflections of the combination of overvaluation and coldness. The authoritarian parenting style also broadly fits with the unhealthy picture but the effects are weaker (Ramsey et al., 1996), or only found in combination with a proclivity to narcissism (Cramer, 2011) and it is also less specific. The low levels of monitoring and overvaluation do not fit with the authoritarian style so is not included above for these reasons. Similarly, the authoritative parenting style, whilst associated with 'healthy' narcissism (Cramer, 2011, Ramsey et al., 1996), is contradicted by low levels of monitoring and is not included above as it complicates the picture. Overindulgence, as studied by Capron (2006), seems to fit with the unhealthy picture but is not included above due to the weaknesses of the study.

The above two pictures broadly suggest support for the two competing theories of parenting in the development of narcissism respectively. 'Healthy' narcissism is associated with higher levels of gratification of needs and more parental permissiveness in the form of lower levels of monitoring, supporting the theories of Millon (1996) and Imbesi (1999). 'Unhealthy' narcissism is associated with a combination of harsh parenting alongside excessive praise and messages of 'specialness' as per the theory of Kernberg (1975). But low levels of monitoring and inconsistency also are involved. No study has yet examined these factors together. The role of overindulgence, particularly in relation to the provision of too much time and material things and over-nurture remain to be rigorously examined also. Therefore, it appears that the full picture of the effects of parenting behaviours upon the development of narcissism has yet to be discovered due the weaknesses of the studies. Whilst other factors will undoubtedly be important, the full importance of parenting has yet to be established.

There are of course a number of other possible influences upon the development of narcissism aside from parenting. Other societal factors and media may also influence feelings of entitlement or materialism, particularly in more capitalist, individualist societies (James, 2007; Twenge & Campbell, 2003). Distinct personal attributes such as being attractive or having a talent may influence others and peer relations into complimentary feedback. In a family with little warmth or harsh treatment, such feedback may be exaggerated by the recipient in order to make up for what they do not have at home. Of course, genetics may also play a part. Two studies have found NPD to be heritable by 45-80% (Jang, Livesley, Vernon & Jackson, 1996; Torgersen, Kringlen & Cramer, 2001). Some evidence has been found for the genetic heritability of narcissistic traits such as low frustration tolerance, emotional dysregulation (i.e., poor management of anxiety and anger), hypersensitivity (i.e., strong

reactions to criticism) and a strong aggressive drive (Schorer, 1994). It may be that it is such traits that are inherited rather than ‘narcissism’ per se, and certain environments then inculcate narcissism in those most susceptible to it, i.e. a stress-diathesis model. Also as found in the Cramer (2011) study, the presence of narcissistic traits at the age of 3 also suggests a genetic or perhaps in-vitro contributory factor. However, further consideration of such influences is beyond the scope of this review.

### *Clinical implications*

For interventions to be most effective, a thorough, empirical-based understanding of the aetiology and development of narcissism is required in order to address the factors critical to its causation and maintenance. Coldness or harsh treatment and a lack of monitoring are perhaps fairly obvious parenting behaviours requiring intervention, the extreme end of course being neglect and physical abuse. Overvaluation and overindulgence on the other hand may be difficult to spot or even recognised as potentially detrimental to the child. Some parents may actually want to parent in ways that encourage children to develop narcissistic self-concepts. If parents are narcissistic themselves, and indeed share genetic traits, they may well be more likely to engender narcissism in their children. After all, a lack of empathy is characteristic of narcissists and is also found to play a role, if minor, in the parental inculcation of narcissism (Trumpeter, 2008). Such parents may well be difficult to engage with. However, for interested professionals and parents, it will be important to note that indiscriminate praise has consequences that can lead to unrealistic perceptions of the self. Giving too much time, attention and material things may well have similar results. It will be worth exploring parent’s experiences of being overindulged themselves or conversely, their needs not being met enough.

As it is suggested that overindulgence occurs more through the needs of parents than the child, motivations resulting from their own parenting, may be useful avenues of enquiry and intervention. Health professionals should further consider the nature of overindulgence in order to be able to evaluate the need to intervene in this regard. Interventions might include highlighting the potential consequences of overindulgence and helping parents to identify the need for children to learn limits to their wants, being able to handle frustration. The more parents pay attention to the needs of the child as opposed to their wants, the less likely it seems that they are likely to overindulge them. However, support may be required in order to deal with potential anxieties or guilt over saying no or doubts about whether they are doing or giving enough.

### *Overindulgence*

It is not usual to measure ‘too much’ of something which is otherwise assumed to be good. Studies have looked at ‘warmth’ and ‘nurturance’, ostensibly very positive things associated with favourable outcomes. They have not sought to measure the excessive ends of the spectra of parenting behaviour in such constructs. However, it seems that Horton et al. (2006) found a related phenomenon by chance with psychological control in combination with high levels of warmth associating with ‘unhealthy’ narcissism, but this was only in women. Otway and Vignoles’ study demonstrated that too much of a ‘good thing’, i.e. praise can actually work in the opposite way. This was of course more powerful in combination with coldness. To this end, it appears that overindulgence in this sense has not really been measured in relation to narcissism. It is therefore difficult to accept claims that overindulgence has been shown to play a role in the development of narcissism. The relationship of overindulgence with narcissism has only been examined in the study by Capron and in a limited sense. One of the problems may be that it is difficult to conceive of what overindulgent behaviour actually looks like, particularly in terms of its difference with indulgence or warmth.

It seems that *indulgence* is about providing more than adequate amounts of love, time and gifts to children, for example, buying a better pair of trainers than is required for sports, cuddling a child for longer than they need in order to feel loved or bringing the child breakfast in bed for no particular reason (i.e. not their birthday). In contrast, *overindulgence* is far exceeding this, such as buying the most expensive pair of trainers available or cuddling the child several times per day or bringing the child breakfast in bed on a daily basis. Of course, such behaviours also depend on the child’s age. Cuddling a baby several times per day would not be overindulgent, but cuddling a teenager in the same way may be considered overindulgent. Importantly, overindulgence is not an empathic behaviour as it is more about the needs of parents than the child’s.

### *Research implications*

It can appear that the sheer number of constructs involved in the studies seems to combine into building a picture of increasing complexity rather than bringing about clarity. The number and quality of factors that constitute narcissism remain contentious and add to this ambiguity. It would therefore be more helpful for future studies to use the measures and constructs used by previous research where possible and to elucidate what is being measured clearly. Additional variables could then be added to an established picture in order to build a model for understanding the development of narcissism. The Otway and Vignoles’ study

appears to be the strongest foundation for building upon. Inclusion of the overindulgence scale (Bredehoft et al., 2004) or the measures of warmth and monitoring Lamborn (1991) would be useful additions to this and, given sufficient sample size, regression analyses could yield clues as to important combinations of factors involved in the development of narcissism. The overindulgence scale may also need refining though, particularly with regard to the low alpha for the over-nurturance scale. The warmth scale may need modification in order to capture ‘overindulgence’ as clearly as possible.

Ideally, a longitudinal design would be used to further explore issues of causality, which Cramer (2011) began to address. It would be helpful to examine whether parenting changes as a function of narcissism and if is this more of a dynamic than straightforward relationship of causality. Such longitudinal studies are of course difficult to conduct. A compromise in this regard is the concurrent method as utilised by Barry et al., along with the combined parent-child reporting. A variation in ages of children sampled could then be examined for differences by age. If differences were found this might have implications for when children may be most vulnerable to developing narcissistic characteristics and whether this is related to parenting or not. From the Horton et al. study, monitoring and psychological control tactics also appear to warrant further investigation although they are very similar to soft structure and parental coldness respectively.

It is also important to continue to examine gender differences in terms of both the influence of mothers and fathers respectively and in the presentation of narcissistic traits in men and women. The nuances of the personal experiences of ‘narcissists’ do not seem to have been explored. Perhaps a qualitative study looking at the recollections of those scoring high on the NPI of their parenting experiences may yield further clues as to those factors that may be common to all or how they may vary. Overall, further research is required to create a clearer picture of the combination of factors, parenting and otherwise, which contribute to narcissism.

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Empirical Paper

**Parental illness representations of ADHD:  
Relationships with coping, wellbeing and stress**

**Department of Clinical Psychology  
School of Psychology  
The University of Birmingham  
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## Abstract

This study used a cross-sectional design to explore the applicability of Leventhal's Self-Regulation Model to ADHD. Relationships between parental illness perceptions of children's ADHD, coping strategies, stress and wellbeing were examined. Forty parents of children with ADHD were recruited from ADHD support groups, websites, and NHS Child and Adolescent Mental Health Clinics in the United Kingdom.

Bivariate correlations and bootstrapped mediation analyses showed that higher parental stress levels and reduced wellbeing were associated with greater perceived consequences for parent and child, higher emotional perceptions for parent and children, a chronic expectation for ADHD and greater identity. Coping was an important mediator between several of the illness perception domains and outcome, with problem-focused coping having a positive relationship and dysfunctional coping having a negative relationship.

The results suggest potential utility of illness perceptions in aiding clinicians to be aware of how such perceptions might guide parental behaviour. Additionally, the IPQ may be a useful tool in helping clinicians and parents of children with ADHD to coming to a shared understanding of the child's condition together. Limitations of the study are discussed.

*Keywords: illness perceptions, ADHD, Attention – Deficit Hyperactivity Disorder, coping, wellbeing, stress.*

## Introduction

### *Background*

When people are diagnosed with an illness they usually try to make sense of it through developing an organised pattern of implicit common sense beliefs about their illness. The Self-Regulation Model of illness perceptions (SRM; Leventhal, Nerenz, & Steele, 1984) attempts to explain differing individual responses to the same illness and predict how people perceive, behave and adjust to health-related stressors. The model states that the 'common sense beliefs' that a person holds about their illness will guide the creation of illness action plans/coping procedures in line with those beliefs and subsequently influence a range of medical, psychological, and behavioural outcome variables (Hagger & Orbell, 2003; Scharloo Kaptein, & Weinman, 1999).

Illness perceptions are reinforced or modified in a dynamic, ongoing (self-regulatory) process in response to the efficacy of coping strategies and the course of the illness. Such beliefs have been found to influence various outcomes such as: emotional response to illness, treatment choices, return to work, adherence to treatment, healthcare use and self-care/self-management behaviours (e.g. Petrie, Jago, & Devcich, 2007; Frostholm, Fink, & Christensen, 2005). Moreover, illness perceptions have been found to relate to outcomes both indirectly (mediated through coping) and directly (Leventhal et al, 1984; Nouwen, Law, Hussain, McGovern, & Napier, 2009). Overall, it is recognised that the illness perceptions people hold are not necessarily bio-medically valid (Nerenz & Leventhal, 1983), but they are important as it is understood that a greater awareness of patients' beliefs can improve illness outcomes.

Many studies have demonstrated an association between negative illness perceptions (e.g., a large number of symptoms associated with the condition, more severe consequences, longer timeline beliefs) and slower recovery and future disability, which is independent of the severity of the illness (Botha-Scheepers, Riyazi & Kroon, 2006; Petrie and Weinman, 2006). An experimental study has also shown the effectiveness of altering illness perceptions on improving health and vocational outcomes (Petrie, Cameron, Ellis, Buick, & Weinman, 2002). More recently, research has begun to move beyond an exploration of the individual's illness to instead using the SRM to explore more systemic factors, such as parental and spousal illness perceptions and relating these to a range of outcomes (e.g. Olsen, Berg, & Wiebe, 2007; Sterba & DeVellis, 2009).

### *The Self-Regulation Model*

The Self-Regulation Model (SRM) provides an explanatory framework for understanding responses to health-related stressors and illness. It proposes a hierarchically organised model featuring the main constructs of (i) the perception of the illness experience that guide the development of (ii) action planning or ‘coping’ responses and performance of these, followed by (iii) the effects on wellbeing and (iv) the ‘appraisal,’ or monitoring of the success or failure of coping efforts. Emotional perceptions (e.g., anxiety, anger and being upset) as well as cognitive ones are also being actively generated and processed, in parallel, within the model, which may be particularly important for understanding responses to and managing mental health difficulties.

Evidence from multiple research sources (e.g. Botha-Scheepers, Riyazi & Kroon, 2006; Frostholm, Fink, & Christensen, 2005; Petrie, Jago, & Devcich, 2007), involving different methodologies, suggests that cognitive illness perceptions tend to comprise five broad dimensions:

1. ‘Identity’: refers to the disease/illness label, diagnosis, and associated symptoms that individuals believe are part of their condition.
2. ‘Timeline’: refers to the perceived duration of an illness.
3. ‘Consequences’: refers to the perceived effect of the illness on an individual’s physical, psychosocial, economic and emotional functioning.
4. ‘Causal beliefs’: personal beliefs individuals hold about the cause of their condition.
5. ‘Cure-control’: refers to individuals’ beliefs about perceived cure(s) or personal control over illness and symptoms.

To date, the majority of research that has explored the utility of the SRM to understand responses to health-related stressors has taken place within the field of physical health (e.g., for a review, see Hagger & Orbell, 2003). However, more recently, researchers have begun to examine the applicability of the SRM model to understand responses and adjustment to mental health difficulties. Petrie, Broadbent and Kydd (2008) note the different areas to which illness perceptions have been found to be implicated in the variance of outcomes, such as: schizophrenia (Lobban, Barrowclough, & Jones, 2004), non-affective psychotic disorder (Watson, Garety, Weinman, Dunn, Bebbington, & Fowler, 2006), bipolar disorder (Pollack & Aponte, 2001), anorexia nervosa (Holliday, Wall, Treasure, & Weinman, 2005), psychotic or personality disorders (Broadbent, Kydd, Sanders, & Vanderpyl, 2008), depression (Fortune,

Barrowclough, & Lobban, 2004; Bhui, Rudell & Priebe, 2006), and anxiety (Bhui et al., 2006). In addition, the following findings can be related to particular domains of illness perceptions in mental health, linking them to coping and outcomes as in the SRM:

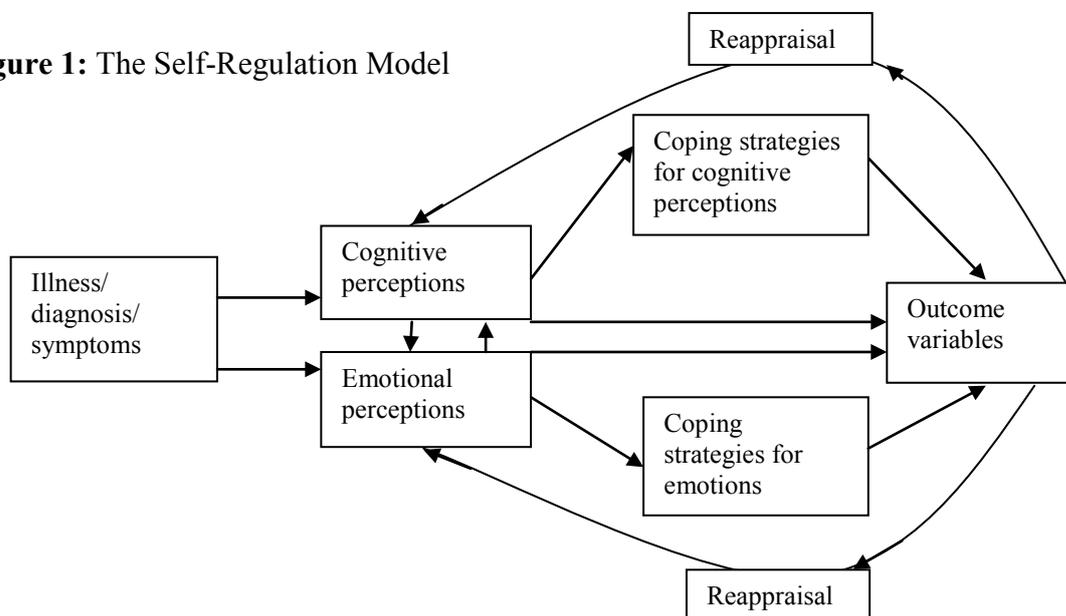
- ‘Cause’: psychosocial factors (e.g., unemployment) are often identified by the public as the likely cause of depression, whereas schizophrenia is thought of as being caused by organic disorders such as a genetic problem or a brain disorder (Jorm, Korten, Jacomb, Christensen, Rodgers, & Pollitt, 1997a; Schomerus, Matchinger, & Angermeyer, 2006). Such differing causal attributions have been found to be predictive of treatment choices (Jorm, Korten, Jacomb, Christensen, Rodgers, & Pollitt, 1997b; Lauber, Nordt, & Rossler, 2005).
- ‘Identity’: knowledge about symptoms of mental ill health is known to be low in the general public, thus it might be predicted that misattributions of symptoms for such difficulties would be greater and influence coping strategies and outcomes (Lauber, Nordt, Falcató, & Rossler, 2003).
- ‘Consequences’: a higher number of perceived consequences were found to be the strongest predictor of more anxiety and depression in patients with schizophrenia (Lobban et al., 2004). The perceived stigma associated with diagnoses of mental health problems may also add to perceived consequences (Rose, Thornicroft, Pinfold, & Kassam, 2007).
- ‘Timeline’: an acute or cyclical view of mental health difficulties is more common than a chronic or life long view. Longer-term consistent medication adherence may well be adversely affected in line with such perceptions (Clatworthy, Bowskill, Rank, Parham, & Horne, 2007; Clifford, 1998).
- ‘Cure/Control’: In relation to ‘personal control,’ a study by Morrison, Wells, and Nothard (2000) found that hallucinations become distressing only when appraised as uncontrollable and dangerous. Hoffman, Kupper, and Kunz (2000) found that less perceived personal control of schizophrenic symptoms was related to depressive-resigned coping strategies such as self-pity, resignation and brooding.

Attributions of causality for symptoms have also been shown to be associated with levels of relatives’ distress (Barrowclough, Tarrier, & Johnston, 1996; Heinrichsen & Lieberman, 1999) and emotional response to the patient (Barrowclough et al., 1994, 1996). Chesla (1989) and Rose (1983) demonstrated an association between attributions of cause of mental illness and the type of coping strategies used by relatives. Relatives who saw mental illness as being

caused by a chemical imbalance strongly reinforced the use of medication, whereas those who saw irrational thoughts as the cause tried to reason with the patient to think differently and avoided reinforcing any delusional ideas.

Given the above findings of relationships between different aspects of illness perceptions with coping and a range of outcomes in physical health difficulties, and newer research exploring illness perceptions in mental health conditions, it seems important to consider how patients' views of their mental health problems relate to coping and to a range of psychological and treatment outcomes. The SRM can be considered a 'common sense' way of understanding these relationships and is presented in Figure 1 below.

**Figure 1:** The Self-Regulation Model



In their review of the application of the SRM to mental health, Petrie, Broadbent and Kydd (2008) note some further areas where the SRM would seem applicable but has yet to be demonstrated, one of which is Attention-Deficit Hyperactivity Disorder (ADHD).

### *Applying the Model to ADHD*

Occurring in up to 5% of UK school children (NICE, 2006), ADHD refers to a range of problem behaviours associated with a short attention span such as inattentiveness, impulsiveness, restlessness and hyperactivity. These difficulties often prevent children from learning and socialising well. According to the DSM-IV (APA, 2000) there are three types of ADHD: the combined type with high levels of both inattention and hyperactivity-impulsivity;

the predominantly inattentive type exhibits atypical levels of inattention only; and the predominantly hyperactive-impulsive type exhibits high levels of hyperactivity-impulsivity only. ADHD will be used to encompass all three types henceforth. ADHD may affect all aspects of a child's life. Indeed, it impacts not only on the child, but also on parents and siblings, causing disturbances to family and marital functioning (Harpin, 2005). The adverse effects of ADHD upon children and their families changes from the preschool years to primary school and adolescence, with varying aspects of the disorder being more prominent at different stages. ADHD has been associated with increased healthcare costs for patients and their family members (Harpin, 2005).

Stimulant medication is recommended as the first line treatment by The National Institute of Health and Clinical Excellence for ADHD (NICE, 2006). Psychological treatments (such as CBT) and behaviour management strategies are also recommended to be used where indicated, ideally in conjunction with medication. There is no substantive evidence for other treatments such as dietary restrictions or fish oil supplements, but they are discussed in the NICE guidelines. This may be related to the wide range of beliefs about the causes of ADHD, which vary from the evidence-based ideas around genetic vulnerability and parenting, to the more pop-culture ideas around pollution and diet deficiencies (NICE, 2006). The wide range and apparent importance of such beliefs suggests that there may be an accordingly diverse range of outcomes for children with ADHD.

What ADHD actually is has been open to a wide range of views such as it being something akin to a 'genetic disease,' (e.g. Swanson, Sergeant, Taylor, Sonuga-Barke, Jensen, & Cantwell, 1998) or a rather opposing view as a variation of normal behaviour which has been 'medicalised' (e.g. Block, 1977; Schrag & Divoky, 1975). Whilst the validity of these perceptions is open to debate, the implications of these are undoubtedly important. For example, it has been thought of as beneficial to externalise problems to beyond the child's control, thereby absolving the child from any blame for misbehaviours. The result has been found to be more sympathetic parenting, being more likely to be 'frustrated' than 'angry' with the child (Saltmarsh, McDougall & Downey, 2005). This could relate to the importance of both 'cause' and 'control' domains of the SRM. However, complicating this issue is the perceived chronicity of ADHD (which can be related to the 'timeline' domain of the SRM). Differences in attributions of how long ADHD was foreseen to last were found to account for variance in punitive and responsive discipline in parents whom otherwise shared views on how much the child could control their misbehaviour (Ruskin, 2006). The parents who

believed the ADHD to be longer-term were more likely to use more punitive parenting strategies.

Johnston, Mah & Regambal (2010) examined mothers' parenting efficacy and attributions for child ADHD behaviours as predictors of their preferences and experiences of behavioural treatment. They found that mothers who saw behaviour therapy as most acceptable were those who made attributions for child ADHD behaviours as being enduring and caused from within children. Thus, there is a demonstrated link between causal beliefs and treatment choice, further strengthening the rationale for exploring parental beliefs and examining their relationship to coping styles and aspects of parental wellbeing. According to the literature, one significant factor relating to parental wellbeing and ADHD is parental stress.

### *Parental Stress*

Studies indicate that having a child with ADHD is associated with a range of negative parenting and wellbeing factors: decreased parenting esteem and satisfaction; heightened parental distress and discord; reduced parental sense of competence; and increased levels of parenting stress and psychopathology, particularly when ADHD is co-morbid with conduct problems (e.g. Johnston & Mash, 2001; Maniadaki, Sonuga-Barke, Kakouros, 2005; Podolski & Nigg, 2001; Sobol, Ashbourne, Earn, & Cunningham, 1989). Parental stress and wellbeing is therefore important to consider in relation to ADHD, perceptions of behaviour and parenting practices. In general, the broader parenting literature shows that high levels of stress are associated with more inconsistent parenting (Morgan, Robinson, & Aldridge, 2002) and stress decreases parents' ability to use positive parenting practices with their children (McLaughlin and Harrison 2006). Several studies have demonstrated that parents of children with ADHD report higher levels of stress than parents of children without ADHD (e.g., Baker and Kevin 1995; Gupta 2007). More recently, Pimentel, Vieira-Santos, Santos & Vale (2011) found that mothers of children with ADHD experience significantly higher levels of parenting stress and report more behavioural problems in their children than parents of non-ADHD children in the general population.

A further study, and relevant to the potential applicability of the SRM to this population, demonstrated that parental stress was significantly predicted by low knowledge of ADHD, causal and controllability attributions internal to the child, and lower perceived parental control (Harrison & Sofronoff, 2002). Unfortunately, this study lacked an explicit

theoretical framework to guide data analysis and interpretations (i.e. it is unclear how attributions are linked to stress, whether there is direct relationship or whether other factors such as coping mediate such relationships). Importantly, stress has been shown to be influenced by perceptions of situations. A person's stress level or perceived vulnerability is interpreted in terms of the disparity between the demands of the actual situation and the available coping resources and social support (Pretzer, & Beck, 2007). Thus it is important to consider how perceptions of ADHD may relate to coping strategies and parental stress.

### *Coping*

An effective method for individuals coping with stress in general is utilising social support through talking things through with friends and seeking advice from others in similar situations (Williams & Galliher, 2006). This has also been found to apply specifically for parents of children with ADHD (Bussing et al., 2003). ADHD support groups may be a particular help for parents in accessing help and empathy from those with similar experiences. In a study on parents of children with ADHD, more use of positive reframing strategies (e.g. thinking about problems as challenges that might be overcome) was associated with higher role satisfaction for both mothers and fathers (Podolski & Nigg, 2001). This study also found that parents of children with ADHD expressed more role dissatisfaction than parents of non-ADHD children. Additionally, greater parental wellbeing has been associated with the use of more positive coping strategies (i.e. problem-focused coping and seeking social support) and less negative coping strategies (i.e. wishful thinking, self-blame and avoidance) in relation to stress of taking care of a child with special needs (Hastings and Johnson, 2001; Saloviita, Itälinna, & Leinonen, 2003).

Parents of children with developmental disabilities (e.g., learning disabilities) have been found to use avoidant coping strategies more often than parents in the general population (Margalit, Raviv, & Ankonina, 1992). In studies on parents of children with autism, use of problem-solving strategies to cope have predicted less psychological distress, while emotion-focused coping (e.g. seeking comfort from others) predicted more psychological distress (Abbeduto et al., 2004; Dunn, Burbine, Bowers, & Tantleff-Dunn, 2001; Smith, Seltzer, Tager-Flusberg, Greenberg, & Carter, 2008). Distancing (e.g., going on as if nothing has happened, trying to forget the situation, making light of the situation) also corresponded to increased depression (Dunn et al., 2001). However, distraction and emotional regulation coping (i.e., expressing emotions in an accepting and open way) have

also been associated with reduced depressive and anxiety symptomatology, whereas higher levels of depressive and anxiety affect were predicted by blaming, worrying, and withdrawal coping (Pottie and Ingram, 2008). Additionally, more problem-focused coping and less emotion-focused coping have been found to buffer the impact of high levels of stress on maternal well-being for parents of children with general learning disabilities (Essex, Seltzer, & Krauss, 1999; Seltzer et al., 1995). These results, taken together with the importance of coping found in the SRM research above, highlight a clear need for exploring the role of coping in relation to parental illness perceptions of ADHD and parental wellbeing, which no study has yet done. Therefore, this study aims to explore the relationship between parental perceptions of childrens' ADHD, parental coping, and levels of parental stress and wellbeing.

### *Research Aims*

To explore the applicability of the Self-Regulation Model of illness perceptions to parents of children with ADHD. Relationships between parental illness perceptions, parental coping, and parental stress and wellbeing are examined.

### *Hypotheses*

There will be relationships between parental illness perceptions of ADHD and:

1. parental wellbeing
2. parental stress
3. parental coping

There will be relationships between parental coping styles and:

4. parental wellbeing
5. parental stress

According to the SRM, parental coping will:

6. mediate the relationship between parental illness perceptions and wellbeing
7. mediate the relationship between parental illness perceptions and stress

## **Methodology**

### *Design*

A cross-sectional, questionnaire-based survey design was used. The study was designed to explore how parental illness perceptions of their child's ADHD are associated with the coping strategies used to manage ADHD, and the wellbeing of parents. For the main analysis, the independent variables were illness perceptions. Dependent variables were measures of coping, wellbeing and stress.

### *Procedure*

109 UK ADHD support groups were identified on the Internet and contact was attempted with all of these via email or telephone. From the 23 support groups who responded to this initial contact, 14 agreed to participate in the research and to distribute packs to their members. Advertisements and study information were also placed on ADHD websites (i.e., [www.adders.net](http://www.adders.net)), the University of Birmingham website, and on an ADHD Facebook group blog. Information sheets were also circulated through e-mailing lists at the Universities of Birmingham and Coventry and Warwick. Following the return of a low number of completed questionnaires from members of the ADHD support groups (N=17; estimated response rate = 15%), the researcher decided to apply for NHS research ethics committee approval in order to recruit further potential participants from local Child and Adolescent Mental Health Services. Following NHS ethical approval (see Appendix 4), and associated R&D permissions (see Appendix 5), four CAMH services in the West Midlands were approached to participate and agreed to do so. A prize draw for retail vouchers was offered as an incentive to potential participants to take part. Having read the information sheet, potential participants were given a questionnaire pack including the information sheet (Appendix 6) and consent form (Appendix 7), which they were able to take home to complete and return in a pre-paid envelope.

### *Inclusion / exclusion criteria*

The research was open to parents of children (<18 years) diagnosed with ADHD. Those who were not proficient in English could not complete the questionnaires and were therefore not invited to participate. Children with conditions comorbid with ADHD were not excluded

from the study, as research indicates that comorbidity is frequently found in this population.

### *Participants*

40 parents participated; 35 mothers and 5 fathers. 17 parents were recruited through ADHD support groups directly, 5 were recruited through friends/relatives and emails, 5 through websites and Facebook, and 13 were recruited through Child and Adolescent Mental Health Clinics. The overall response rate from those questionnaires given out was approximately 20%. All children were listed as having the same ethnicity as their parent: 1 pair was 'Irish'; 1 pair was 'Mixed White and Black Caribbean'; the remainder, 33, were 'White British', and 5 did not answer. Only 3 children were from single-parent families. Ages of children ranged from 6.98 to 18.04 years (mean = 11.95; SD = 3.22). There were 32 boys and eight girls. Time since diagnosis ranged from 0.17 to 9.06 years (mean = 4.16; SD = 2.68). Respective t-tests revealed no significant differences between those diagnosed for less than a year (n=4) and those over, and those diagnosed for less than two years (n=9) and those over in their illness perceptions, stress or wellbeing.

### *Measures and Materials*

Parents completed questionnaire packs, which included the following measures:

General details and demographic information.

- Information sheet (Appendix 8); name, relationship to child, child's name and DOB, gender of child, child's diagnoses, time since diagnosis.

ADHD checklist for severity

- The Conners 3 Parent Rating Scale (Conners, 2008) is a 43-item questionnaire used to assess the 12 criteria that are listed in the *Diagnostic and Statistical Manual of Mental Disorders* (4<sup>th</sup> ed., text revision [*DSM-IV-TR*]; American Psychiatric Association, 2000) for ADHD. A parent is asked to rate the extent of problem behaviours for his or her child during the last month using a 4-point scale ranging from 0 (*not true at all*) to 3 (*very much true*). Age range: 3 to 18 years old. Published Cronbach's alphas for parent scale are > .91 (Gallant, 2008).

Parental Illness perceptions of ADHD.

- The Illness Perception Questionnaire - Revised (Moss-Morris et al., 2002) (*parent proxy version*) is a widely used quantitative measure of the five cognitive components of illness perceptions in Leventhal's self-regulation model. Analysis has

provided good evidence for both the internal reliability of the subscales and good retest reliability. The IPQ-R also demonstrated sound discriminant, known-group and predictive validity (Moss-Morris et al., 2002). For this study, and as is allowed by the authors of the IPQ and IPQ-R, the wording of items was altered to fit ‘ADHD’ rather than the generic ‘illness’ labels that are used in the published versions. As this is a proxy version, further items were added to some sections in order to capture, for example, the perceived impact of ADHD on the child as well as the parent, e.g., ‘My child’s ADHD has major consequences on my life’, became, ‘My child’s ADHD has major consequences on his/her life’(see Appendix 9). All scales, unless stated below, use a five point scale where the parent indicates the extent to which they agree with the statements. Higher scores indicate greater endorsement. In all, nine domains of parental perceptions (with the domains discussed above further sub-divided) and four domains of the parent’s perceptions of the child’s perceptions are assessed. The table below presents these scales:

**Table 1:** Illness perception scales.

|   |
|---|
| 1. Timeline duration - i.e. Acute/Chronic beliefs about how long ADHD will last   |
| 2. Timeline cyclical - beliefs about the predictability or cyclical nature of ADHD  |
| 3. Parent Control - the extent to which the parent believes they have control over ADHD   |
| 4. Child control – the extent to which the parent believes the child has control over ADHD  |
| 5. Treatment Control - beliefs about treatment effectiveness. This section is further subdivided in order to assess perceptions of different types of treatment, e.g. medication or behavioural strategies  |
| 6. Parental Consequences - the perceived or expected consequences of ADHD on the parent’s life  |
| 7. Child Consequences - the perceived or expected consequences of ADHD on the child’s life  |
| 8. Emotions of parent – parental emotional reactions to ADHD  |
| 9. Emotions of child - the emotional reactions of the child to ADHD   |
| 10. Identity: this scale requires the parent to indicate by circling either yes or no to whether the child has <i>experienced</i> a particular symptom (e.g. headaches) and then to state whether they believe this is <i>related</i> to ADHD or not. Twelve items were added to the identity scale to cover items relating to ADHD symptoms and possible associated emotions and behaviours, e.g. being hyperactive, worrying, swearing. The ‘related’ items are totalled to give a score indicating how wide a range of symptoms ADHD is perceived to have. |
| 11. Causes: the perceived causes of ADHD scale includes forced choice and open response items [note: this scale was not included in subsequent analyses]  |
| 12. Parent Coherence: the extent to which ADHD is understandable to the parent  |
| 13. Child Coherence: the extent to which ADHD is understandable to the child  |

### Parental Coping.

- The Brief Cope Questionnaire (see Appendix 10) is a 28-item validated self report measure of coping strategies (Carver, 1997). Each item is scored on a four-point scale with higher scores indicating more use of that particular strategy/behaviour from 1- “I haven’t been doing this at all” to 4- “I’ve been doing this a lot”. Carver (1997) reports Cronbach’s alpha values ranging from 0.50 to 0.90 across the 14 derived domains. More recently, Cooper, Katona and Livingston (2008) demonstrated a three factor structure comprising emotion-focused, problem-focused and dysfunctional coping, which was reliable (alphas from 0.72 to 0.84) and showed both convergent and concurrent validity. Higher scores on each of the three factors are indicative of greater use of that coping strategy.

### Parental Wellbeing/quality of life.

- The General Wellbeing Index (GWBI; see Appendix 11) is a 22-item standardised self-report quality of life measure validated in non-clinical populations (Gaston & Vogl, 2005). Published Cronbach's alpha for the total scale is 0.94. The GWBI has three subscales: 'general mood/affect', 'life satisfaction/vitality', and 'poor physical health/somatic complaints'. It uses a 5-point Likert scale with higher scores indicating lower wellbeing.
- The Parental Stress Scale (Berry and Jones, 1995; see Appendix 12) is an 18-item measure appropriate for parents of children with and without clinical problems and all ages. The Parental Stress Scale correlated with the Parenting Stress Index (PSI) (Abidin, 1986) total ( $r = .75, p < .01$ ) Higher scores indicate greater levels of parenting stress.

### Parental Perception of Child’s psychosocial functioning.

- The Strengths and Difficulties Questionnaire (SDQ; see Appendix 13) proxy version for parents is a widely used, brief, 25-item, behavioural screening questionnaire for parents of 3-17 year olds. The five-factor structure (emotional difficulties, conduct problems, hyperactivity-inattention, peer problems, pro-social behaviour) has been validated by Goodman (2001) who reports satisfactory internal reliability (mean of subscales Cronbach’s  $\alpha$  0.73) and has been used in a wide range of studies. Higher scores indicate more problems.

## Data analysis

All scales and subscales were analysed for their internal reliability and normality of distribution. Where variables were normally distributed parametric statistical tests were used; non-parametric equivalent tests were otherwise used where appropriate. According to the quality ratings of George & Mallery (2002), most scales showed acceptable to excellent reliability (.7 to .9 respectively). The treatment control scale on the IPQ-R showed low internal reliability (.64) and was thus removed from further statistical analysis. This perhaps reflects the high number of treatments employed for children in this sample and, therefore, the answers to this scale did not represent a unitary construct (see results below). The hyperactivity subscales on both the Conners' and SDQ scales showed relatively poor reliability (.69 and .56, respectively), with the Conner's scale performing slightly better and falling just below the 'acceptable' threshold. Perhaps predictably for an ADHD population, they did not show normality of distribution, being skewed towards the higher end of the scoring, indicating difficulties with hyperactivity and inattention. The remaining scales were all normally distributed.

### *Analysis Strategy for testing hypotheses*

As is often the case with data derived from clinical samples, it is not possible to assume a normal distribution of scores in the reference population. Deviations from normality will often not reflect idiosyncratic aspects of sampling but rather reflect the non-normal distribution of scores in the reference population. Accordingly, correcting sample distributions for normality is an inappropriate correction to these data. Traditionally, use of nonparametric statistical procedures has been recommended for such data. Unfortunately, the use of nonparametric procedures is also associated with a loss of statistical power for inferential tests (Howell, 2002). In small sample situations, this loss of statistical power may substantially increase the risk of type II errors. Accordingly, in situations where variables showed deviation from normality, traditional asymptotic probability estimates will be supplemented by bootstrap parameter estimates and 95% confidence intervals. The parametric bootstrap procedure has the twin advantages of being independent of sample and population distribution and providing robust confidence intervals in small sample situations (Hardle, 1991; Moore & McCabe, 2005).

## Results

### *ADHD and comorbidity*

All children were recorded as being diagnosed with ‘Attention-Deficit Hyperactivity Disorder’ (as opposed to mainly hyperactive or mainly inattentive types). According to the Conners’ rating scale, 39 of 40 children had T-Scores for Inattention  $>70$  (one child had a T-score 68). For hyperactivity, 38 of 40 had T-scores  $>70$  (one child scored 69, the other child scored in the average range). These findings support the parent-reported diagnoses. Twenty-four children had a comorbid diagnosis. Of these, six had two other conditions and two had four other conditions. Four children had Oppositional-Defiant Disorder (ODD); eight children had anxiety, six children had ASD, three children had OCD, one child had each of: Tourette’s syndrome, Conduct Disorder and Depression respectively. Thirteen children were listed as having an ‘Other’ condition, these included: Dyslexia, Dyspraxia and unspecified ‘learning problems/difficulties’. A t-test was performed to explore for differences on the IPQ scales, parental stress and wellbeing between the two groups (i.e., those with comorbidities and those without). No statistically significant differences were found.

### *Children’s difficulties*

On the SDQ, according to parental ratings, 36 children scored in the ‘Abnormal’ range for ‘Total Difficulties’ according to parental ratings, two scored in the ‘Normal’ range and two scored in the ‘Borderline’ range. The mean total difficulties score was 23.7 (SD = 6.8; possible maximum of 40 on this scale with scores  $>17$  falling in the ‘abnormal’ range according to the criteria of the SDQ). Also in the ‘abnormal’ range for the subscales were the following numbers of children: 27 for conduct problems, 24 for emotional problems, 25 for peer problems, 38 for hyperactivity, and 20 for prosocial behaviour. Together, these scores indicate that the majority of children had significant difficulties.

### *Support group attendance.*

19 parents reported that they attend support groups. Of these, 14 attended at least monthly, one attended every two months and four attended less frequently. A t-test was performed to check for differences between those parents attending a support and group and those not on variables of illness perceptions, stress and wellbeing. No significant differences were found. Similarly, no significant differences were found, on the same variables, between those parents recruited through a support groups and those via the NHS.

### *Illness Perceptions*

Table 2 shows the adjusted means and standard deviations for parental illness perceptions on the IPQ-R subscales. Remaining subscales shall be looked at separately.

**Table 2:** IPQ-R subscales

| <b>IPQ-R subscale</b>   | <b>N</b> | <b>Mean<sup>1</sup></b> | <b>Std. Deviation</b> |
|-------------------------|----------|-------------------------|-----------------------|
| Timeline – Duration     | 40       | 4.00                    | 0.70                  |
| Parent Consequences     | 40       | 3.66                    | 0.80                  |
| Parent control          | 40       | 3.29                    | 0.77                  |
| Treatment control       | 40       | 3.26                    | 0.64                  |
| Parent coherence        | 40       | 3.74                    | 0.88                  |
| Timeline Cyclical       | 40       | 3.05                    | 0.84                  |
| Parent emotions         | 40       | 3.01                    | 0.96                  |
| Child control           | 40       | 3.13                    | 0.78                  |
| Child consequences      | 40       | 3.93                    | 0.87                  |
| Child Illness coherence | 40       | 3.00                    | 0.97                  |
| Child emotions          | 40       | 3.13                    | 0.78                  |

<sup>1</sup> Adjusted mean score (sum of scale items divided by number of items); all scores range from 1-5 with higher scores indicating greater endorsement of subscale construct and 3 being suggestive of ‘moderate’ endorsement.

Overall, the results show that parents believed ADHD to be a chronic condition, with a mean of 4, but also moderately cyclical in presentation (i.e. mean scores around 3). They perceived there to be moderate to high consequences for both themselves and their child. Levels of coherence for the parent suggests that they tend to think that they have a moderately clear understanding of the condition, but perceive their children to be somewhat less clear. In terms of managing ADHD, parents attributed a moderate degree of control to themselves, their children and also to the treatment. The emotional impact of ADHD is perceived as being moderate for both parents and children.

## Treatment

75% of parents reported two or more treatments that they or their child were receiving and 50% reported three or more. The most frequently reported treatment was medication, with 30 parents reporting this. This was followed by: behavioural treatments (22); diet restrictions (16); therapy for the child (16); therapy for the parent (10); diet supplements (5); and ‘other’ (3). The 22 receiving behavioural treatments is rather low considering that it is recommended as a main treatment in combination with medication in most cases as per NICE guidelines (NICE, 2006). Of those receiving medication, 27 (of 30) disagreed that medication would cure the ADHD, but 19 agreed it could prevent negative effects, and 19 agreed it could control the ADHD. For behavioural treatment, 13 (of 22) disagreed that it could cure ADHD, 12 agreed that it could prevent negative effects, and 10 agreed it can control the ADHD.

## Identity

The mean number of symptoms attributed to ADHD was 11.9 (SD: 4.3) out of a maximum of 26. The frequencies of the most endorsed items are in the table below.

**Table 3:** Symptoms parents attribute to ADHD

| <b>Symptom / behaviour</b>          | <b>Frequency (%) of parents endorsing</b> |
|-------------------------------------|---|
| Doing things without thinking       | 100                                       |
| Not concentrating                   | 100                                       |
| Being ‘on the go’ a lot of the time | 95  |
| Misbehaving                         | 85  |
| More energy                         | 80.5                                      |
| Irritable                           | 80  |
| Arguing                             | 72.5                                      |
| Sleep difficulties                  | 65  |
| Worrying                            | 60  |
| Feeling down                        | 50  |
| Tiredness                           | 47.5                                      |
| Swearing                            | 45  |
| Making jokes                        | 40  |
| Headaches                           | 40  |
| Weight loss                         | 27.5                                      |
| Sick feeling                        | 25  |

Table 3 shows the wide range of symptoms frequently attributed by parents to their child’s ADHD. The top three of these are the most clearly related to ADHD in the areas of

hyperactivity, inattention and impulsivity. However, many of those which occurred frequently (e.g., Worrying, Headaches) are not usually considered part of the clinical presentation of ADHD according to most sources (e.g. DSM IV; NICE guidance).

#### Perceived Causes

Parents could list up to three top causes. 24 parents listed ‘genetics’ (or equivalent such as ‘runs in the family’) as a ‘top cause’ of their child’s ADHD. Other perceived causes were: birth trauma / poor antenatal care (8); child’s personality (5); parent personality (5); brain / body development ( 5); parent illness during pregnancy (4); diet (3); bad luck (3); and don’t know (4). Given the small sample size, there were not enough data to look at clustering the causal factors, therefore this scale was excluded from further analysis.

The illness perception scales were correlated with each other in order to explore their inter-relationships. These data are shown in Table 4.

**Table 4:** IPQ-R inter-correlations

| IPQ-R                         | 1.            | 2.           | 3.           | 4.           | 5.   | 6.   | 7.           | 8.   | 9.           | 10.  |
|-------------------------------|---------------|--------------|--------------|--------------|------|------|--------------|------|--------------|------|
| <b>1.Identity</b>             | 1             |              |              |              |      |      |              |      |              |      |
| <b>2.Timeline – Duration</b>  | .10           | 1            |              |              |      |      |              |      |              |      |
| <b>3.Parent Con-sequences</b> | <b>.44**</b>  | .37          | 1            |              |      |      |              |      |              |      |
| <b>4.Parent control</b>       | -.21          | -.24         | -.10         | 1            |      |      |              |      |              |      |
| <b>5.Parent coherence</b>     | -.27          | .16          | -.17         | .08          | 1    |      |              |      |              |      |
| <b>6.Timeline Cyclical</b>    | .40           | -.06         | .22          | -.03         | -.33 | 1    |              |      |              |      |
| <b>7.Parent Emotions</b>      | <b>.55**</b>  | .20          | <b>.71**</b> | -.30         | -.18 | .17  | 1            |      |              |      |
| <b>8.Child control</b>        | -.04          | -.29         | <b>-.32</b>  | <b>.51**</b> | -.19 | -.08 | -.25         | 1    |              |      |
| <b>9.Child con-sequences</b>  | .38           | <b>.46**</b> | <b>.77**</b> | -.09         | -.10 | .23  | <b>.50**</b> | -.34 | 1            |      |
| <b>10.Child coherence</b>     | <b>-.42**</b> | -.18         | -.23         | .14          | .30  | -.03 | <b>-.39</b>  | .05  | -.27         | 1    |
| <b>11. Child emotions</b>     | <b>.55**</b>  | .30          | <b>.48**</b> | -.32         | .00  | .30  | .36          | -.17 | <b>.42**</b> | -.26 |

\*\*Correlation significant 0.01 (2-tailed).

As can be seen in Table 4 there are a number of significant correlations between the subscales of the IPQ-R. The strongest is between the perceived consequences on the parent’s life and the consequences on the child’s life ( $r = .77$ ), indicating that as parents perceive greater consequences on themselves as a result of their child’s ADHD, they perceive greater

consequences for the child. A moderate positive strength correlation was found between parents' perceptions of their degree of control of ADHD and the control they perceive their children to have ( $r = .51$ ). Similarly, as the number of symptoms attributed to ADHD increases, the higher the emotional impact for parents ( $r=.55$ ) and that perceived for children ( $r=.55$ ). A higher number of symptoms also correlated negatively with perceived child coherence ( $r= -.42$ ), indicating that the more symptoms that are attributed to ADHD, the less children are perceived to understand about their ADHD. More perceived consequences for the parent also is associated with parents attributing more symptoms to ADHD ( $r= .44$ ) and perceiving more emotional consequences for the child ( $r= .48$ ).

Conversely, more perceived consequences for children were associated with more emotional consequences for parents ( $r= .50$ ). A strong positive correlation was found between parents' emotions and perceived consequences ( $r=.71$ ), indicating that as the perceived consequences for parents increases, then the emotional impact of their children's ADHD increases also. More perceived consequences of ADHD for the child were associated with expecting a longer duration of ADHD ( $r= .46$ ). More perceived emotional consequences for the child were also associated with more perceived consequences for the child ( $r= .42$ ). Importantly, given the cross-sectional nature of this research, directions of cause-effect cannot be determined.

### *Parental coping*

Normative data are not available for the three coping subscales devised by Cooper, Katona and Livingston (2008), but the means and standard deviations of their endorsement are presented in Table 5.

**Table 5:** Parental coping styles

| <b>Coping style</b>    | <b>N</b> | <b>Mean item score</b> | <b>Standard deviation</b> |
|------------------------|----------|------------------------|---------------------------|
| Problem-focused coping | 40       | 2.8                    | 0.71                      |
| Emotion-focused coping | 40       | 2.24                   | 0.54                      |
| Dysfunctional coping   | 40       | 1.84                   | 0.56                      |

Note: Scales are scored from 1 (I haven't been doing this at all) to 4 (I have been doing this a lot).

Table 5 shows the use of relative parenting styles for this sample. Problem-focused coping

strategies are adopted to a moderate degree, which is more frequently than emotion-focused coping, which in turn, is adopted more than dysfunctional coping. These differences were all statistically significant according to paired samples t-tests ( $p \leq .004$ ).

### *Wellbeing and Stress*

The means, ranges and standard deviations of wellbeing and stress for the parents are shown below.

**Table 6:** Descriptive statistics of outcome measures

|                   | <b>N</b> | <b>Range</b> | <b>Minimum</b> | <b>Maximum</b> | <b>Mean</b> | <b>Std. Deviation</b> |
|-------------------|----------|--------------|----------------|----------------|-------------|-----------------------|
| <b>GWBI total</b> | 40       | 69.00        | 29.00          | 98.00          | 64.05       | 17.08                 |
| <b>PSS total</b>  | 40       | 42.00        | 30.00          | 72.00          | 50.95       | 11.37                 |

The above table shows that the mean for the GWBI is substantially above that found by Gaston & Vogl (2005) of 49.82 (SD:13.92) in a generic non-clinical sample. The PSS total mean of 50.95 (SD: 11.37) is almost one standard deviation higher than the mean of 43.2 (SD: 9.1) found by Berry and Jones (1995) in parents of children with behavioural problems. Their non-clinical sample mean was 37.1 (SD: 8.1). Overall then, both sets of results for the general wellbeing index and parental stress scale suggest that the current sample of parents are reporting higher levels of stress and lower wellbeing than comparative samples of parents in non-clinical samples.

In order to understand how the different measures of parental wellbeing (including subscales of the parental stress scale) were related to each other and to the SDQ scores for the children, interrelationships were explored (see Table 7).

**Table 7:** Intercorrelations between parental wellbeing measures and children’s difficulties

| Wellbeing/<br>stress | 1.<br>GWBI<br>total | 2.SDQ<br>Total<br>problems | 3.PSS<br>Total | 4.PSS<br>Rewards | 5.PSS Lack<br>of Control | 6.PSS<br>Stressors | 7.PSS<br>Satisfaction |
|----------------------|---------------------|----------------------------|----------------|------------------|--------------------------|--------------------|-----------------------|
| 1.                   | 1                   | .394                       | <b>.694**</b>  | <b>.580**</b>    | <b>.674**</b>            | <b>.512**</b>      | <b>.599**</b>         |
| 2.                   |                     | 1                          | <b>.424**</b>  | .284             | <b>.431**</b>            | .297               | <b>.436**</b>         |
| 3.                   |                     |                            | 1              | <b>.759**</b>    | <b>.902**</b>            | <b>.842**</b>      | <b>.857**</b>         |
| 4.                   |                     |                            |                | 1                | <b>.741**</b>            | .367               | <b>.780**</b>         |
| 5.                   |                     |                            |                |                  | 1                        | <b>.662**</b>      | <b>.822**</b>         |
| 6.                   |                     |                            |                |                  |                          | 1                  | <b>.660**</b>         |
| 7.                   |                     |                            |                |                  |                          |                    | 1                     |

\*\*Correlation significant at 0.01 (2-tailed).

Table 7 shows how the wellbeing and stress measures of the parent (including the subscales of the PSS) are related to the perceived difficulties of their children with ADHD. Parents’ higher stress (PSS Total) significantly correlates with a greater level of their child’s difficulties to a moderate degree ( $r=.42$ ). The parental wellbeing measures are also correlated with each other. The PSS Total correlates with GWBI total at .69, indicating that higher levels of stress are associated with reduced wellbeing. The strongest PSS subscale associated with the PSS total is ‘Lack of control’ at  $r=.90$ . The greater the level of the children’s difficulties (as indicated by the SDQ), the lower the parental wellbeing, but this does not reach significance at  $p<0.01$ . Child’s age and duration of diagnosis were tested against parental wellbeing and stress for correlations using Pearson’s  $r$  and no significant effects were found.

**Hypotheses 1 and 2: There will be a relationship between domains of parental illness perceptions of ADHD and parental self-reported wellbeing and stress**

Parental illness perceptions of ADHD were correlated with parental wellbeing (as measured by the General Wellbeing Index) and stress (as measured by the Parental Stress Scale) measures using a series of bootstrapped Pearson’s  $r$  correlation coefficients. The bootstrap sample comprised 20,000 re-samples with replacement and non-parametric 95% confidence intervals were calculated for parameter estimates. The relationship between parental illness perceptions of ADHD and parental wellbeing and stress is shown in Table 8.

**Table 8:** Bootstrapped Pearson’s r correlation coefficients between parental illness perceptions of ADHD, parental wellbeing and stress

| IPQ-R               | <b>GWBI<br/>Total<br/>(confidence interval)</b> | <b>PSS<br/>Total<br/>(confidence interval)</b> |
|---------------------|---|--|
| Timeline Duration   | <b>r = 0.36<br/>( 0.04 : 0.62)</b>              | <b>r = 0.35<br/>( 0.07 : 0.59)</b>             |
| Parent Consequences | <b>r = 0.54<br/>( 0.32 : 0.71)</b>              | <b>r = 0.69<br/>( 0.49 : 0.82)</b>             |
| Parent Control      | r = -0.27<br>( -0.56 : 0.05)                    | r = -0.19<br>( -0.51 : 0.16)                   |
| Parent Coherence    | r = -0.20<br>( -0.47 : 0.08)                    | <b>r = -0.34<br/>( -0.57 : -0.09)</b>          |
| Timeline Cyclical   | r = 0.10<br>( -0.27 : 0.46)                     | r = 0.22<br>( -0.15 : 0.56)                    |
| Parent emotions     | <b>r = 0.619<br/>( 0.38 : 0.80)</b>             | <b>r = 0.618<br/>( 0.38 : 0.80)</b>            |
| Identity            | <b>r = 0.36<br/>( 0.05 : 0.59)</b>              | <b>r = 0.40<br/>( 0.11 : 0.61)</b>             |
| Child control       | r = -0.08<br>( -0.39 : 0.25)                    | r = -0.03<br>( -0.33 : 0.31)                   |
| Child consequences  | <b>r = 0.35<br/>( 0.035 : 0.60)</b>             | <b>r = 0.41<br/>( 0.09 : 0.65)</b>             |
| Child coherence     | <b>r = -0.46<br/>( -0.69 : -0.17)</b>           | r = -0.32<br>( -0.60 : 0.01)                   |
| Child emotions      | <b>r = 0.49<br/>( 0.23 : 0.70)</b>              | <b>r = 0.35<br/>( 0.09 : 0.59)</b>             |

Table 8 shows that there are significant correlations between several of the IPQ-R scales with both GWBI and PSS total scores. Six IPQ-R scales significantly and consistently positively correlate with both the PSS Total and GWBI Total scores; only the two illness coherence scales show different results, such that greater levels of parental coherence (i.e. ADHD makes more sense to parents) are associated with reduced stress, although not with general wellbeing. In terms of the degree to which parents believe their children understand ADHD (i.e., child’s coherence), higher levels of understanding are associated with greater parental wellbeing, although not with parental stress.

For the six consistent associations between IPQ-R scales and wellbeing and stress, the above data show that parental wellbeing is reduced when parents report: higher levels of negative emotional consequences for themselves; greater numbers of consequences resulting from ADHD; more symptoms associated with ADHD; more perceived consequences for the child; ADHD making less sense to the child; more emotional consequences for the child; and a longer expected duration.

For the Parental Stress Scale, the findings show that higher levels of stress are associated with parent reports of: more negative emotional consequences resulting from

ADHD; a greater number of consequences; more perceived symptoms; more consequences for the child; the less ADHD makes sense to the parent; the more negative emotional consequences for the child; and the longer the duration expected.

Rather surprisingly, perceptions of parent control and child control did not show any significant correlations with either measure of parental wellbeing. However, these are close to significance. Timeline-cyclical was not related to wellbeing or stress.

Overall, both hypotheses are supported with several significant moderate strength correlations. How parents perceive ADHD is significantly associated with how they perceived their wellbeing and stress.

**Hypothesis 3: There will be a relationship between parental illness perceptions of ADHD and coping strategies employed by parents to deal with their children's ADHD**

Parental illness perceptions of ADHD were correlated with parental coping strategies to deal with their child's ADHD using a series of bootstrapped Pearson's  $r$  correlation coefficients. Once again, bootstrap samples comprised 20,000 re-samples with replacement and non-parametric 95% confidence intervals calculated for parameter estimates. The 14 domains of coping strategies were collapsed together into the three factors identified by Cooper, Katona and Livingston (2008). The relationships between parental illness perceptions of ADHD and parental coping strategies are shown in Table 9.

**Table 9:** Bootstrapped Pearson's r correlation coefficients between parental illness perceptions of ADHD and parental coping strategies

| IPQ-R                      | Emotion-focused<br>(confidence interval) | Problem-focused<br>(confidence interval) | Dysfunctional coping<br>(confidence interval) |
|----------------------------|--|--|---|
| <b>Timeline - Duration</b> | r = -0.06<br>(-0.47 : 0.34)              | r = -0.11<br>(-0.43 : 0.23)              | r = 0.20<br>(-0.06 : 0.43)                    |
| <b>Parent Consequences</b> | r = 0.000<br>(-0.28 : 0.30)              | r = 0.07<br>(-0.32 : 0.43)               | <b>r = 0.46</b><br><b>(0.22 : 0.66)</b>       |
| <b>Parent Control</b>      | <b>r = 0.31</b><br><b>(0.03 : 0.55)</b>  | <b>r = 0.40</b><br><b>(0.10 : 0.66)</b>  | r = -0.18<br>(-0.55 : 0.22)                   |
| <b>Parent Coherence</b>    | <b>r = 0.35</b><br><b>(0.08 : 0.58)</b>  | <b>r = 0.36</b><br><b>(0.12 : 0.58)</b>  | <b>r = -0.47</b><br><b>(-0.72 : -0.18)</b>    |
| <b>Cyclical</b>            | r = -0.01<br>(-0.30 : 0.32)              | r = -0.00<br>(-0.32 : 0.33)              | r = 0.32<br>(-0.053 : 0.70)                   |
| <b>Parent Emotions</b>     | r = -0.13<br>(-0.43 : 0.20)              | r = -0.14<br>(-0.46 : 0.20)              | <b>r = 0.54</b><br><b>(0.34 : 0.71)</b>       |
| <b>Identity</b>            | r = -0.12<br>(-0.43 : 0.25)              | r = -0.04<br>(-0.38 : 0.32)              | <b>r = 0.34</b><br><b>(0.02 : 0.61)</b>       |
| <b>Child control</b>       | r = -0.13<br>(-0.47 : 0.20)              | r = 0.05<br>(-0.25 : 0.33)               | r = -0.02<br>(-0.33 : 0.32)                   |
| <b>Child consequences</b>  | r = -0.05<br>(-0.41 : 0.34)              | r = 0.02<br>(-0.37 : 0.43)               | r = 0.22<br>(-0.07 : 0.49)                    |
| <b>Child coherence</b>     | r = 0.21<br>(-0.08 : 0.48)               | r = 0.07<br>(-0.23 : 0.38)               | r = -0.30<br>(-0.61 : 0.07)                   |
| <b>Child emotions</b>      | r = -0.18<br>(-0.46 : 0.13)              | r = 0.09<br>(-0.26 : 0.42)               | r = 0.28<br>(-0.02 : 0.58)                    |

Table 9 shows that parental coherence correlates significantly with all three coping styles, suggesting that the more ADHD makes sense to parents the more likely they are to use emotion-focused and problem-focused coping and the less likely they are to use dysfunctional coping to deal with their child's ADHD.

For perceptions of parental control, the more parents believe they can control ADHD, the more likely they are to adopt both emotion-focused and problem-focused coping strategies. Dysfunctional coping was more likely to be adopted when there were more perceived consequences, negative emotions and symptoms related to ADHD.

Overall, hypothesis three is supported by eight significant interactions across the three coping styles and five domains of illness perceptions, suggesting an important link between these elements of the SRM.

**Hypotheses 4 and 5: There will be relationships between parental coping styles and parental self-reported wellbeing and stress**

The relationships between parental wellbeing and stress, the child’s level of difficulty (SDQ: Total) and parental coping strategies are shown in Table 9. The SDQ is included in order to test for any possibly confounding relationship with coping styles.

**Table 10:** Bootstrapped Pearson’s r correlation coefficients between parental coping strategies, parental wellbeing and stress, and children’s level of difficulty

|                   | <b>Emotion-focused</b><br>(confidence interval) | <b>Problem-focused</b><br>(confidence interval) | <b>Dysfunctional coping</b><br>(confidence interval) |
|-------------------|---|---|--|
| <b>PSS Total</b>  | r = -0.26<br>(-0.53 : 0.06)                     | r = -0.23<br>(-0.52 : 0.07)                     | <b>r = 0.68</b><br><b>( 0.48 : 0.83)</b>             |
| <b>GWBI Total</b> | r = -0.18<br>(-0.50 : 0.16)                     | r = -0.18<br>(-0.51 : 0.16)                     | <b>r = 0.61</b><br><b>( 0.41 : 0.78)</b>             |
| <b>SDQ total</b>  | r = 0.02<br>(-0.33 : 0.31)                      | r = 0.24<br>(-0.14 : 0.57)                      | r = 0.25<br>(-0.08 : 0.54)                           |

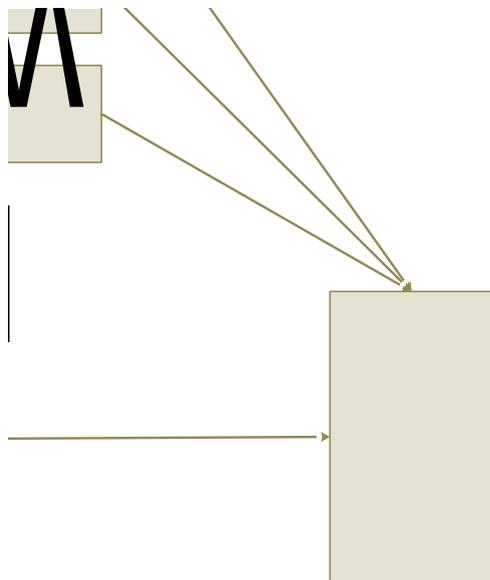
As can be seen from Table 10 there were significant positive correlations between dysfunctional coping and parental wellbeing and stress. These are strong correlations and suggest that the more that parents use dysfunctional coping strategies, the more likely they are to report higher levels of stress and reduced wellbeing or vice versa. No significant relationships were found between children’s overall level of difficulty and any of the three coping styles. Problem-focused and emotion-focused coping were close to significance, but effect sizes were weak. Overall, dysfunctional coping appears to be an important variable in trying to understand parental wellbeing.

**Hypothesis 6: Coping will mediate the relationship between parental illness perceptions and parental wellbeing**

The role of coping style as a mediator in the relationship between illness perceptions and wellbeing was examined using the asymptotic and bootstrap strategies for assessing and comparing indirect effects. In multiple mediator models that are described by Preacher and Hayes (Preacher & Hayes, 2004, 2008) this method is a generalisation of the SOBEL method described by Baron and Kenny (1986), and allows for multiple mediators and bootstrap

estimates of the direct and indirect (i.e., mediated) effects of illness perception on general wellbeing. As this analysis uses bootstrap estimates of parameters and confidence intervals of sample and population distributions, robust confidence intervals may be obtained in relatively small sample sizes (Preacher & Hayes, 2008).

Only those illness perceptions that evidenced significant correlations with coping style (see Table 9) were selected for further analysis. Accordingly, parent consequences, personal control, parent coherence, parent emotions and identity were selected as independent variables in the model depicted in Figure 2. In all analyses, the children's level of difficulty (SDQ: Total) was used a covariate to control for impact of difficulties upon parental wellbeing. Results are shown in Table 11.



**Figure 2:** Hypothesised direct and indirect relationship between illness perception and general wellbeing.

**Table 11:** Direct and indirect relationship between illness perceptions and wellbeing

|   | Asymptotic Path Estimate | Bootstrap Path Estimate | Bias    | Standard Error                  | Lower 95% Bootstrap Confidence Interval | Upper 95% Bootstrap Confidence Interval |
|---|--------------------------|-------------------------|---------|---------------------------------|---|---|
| <b>Illness Perceptions: Parent Consequences (R<sup>2</sup>=0.36; p&lt;0.01)</b> |                          |                         |         |                                 |   |   |
| Direct Effect   | 5.041                    |                         |         | 3.83 (t = 1.31; p = 0.20)       |   |   |
| Emotion Focused   | .0195                    | -.0402                  | -.0597  | .6594                           | -1.3889                                 | 1.6239                                  |
| Problem Focused   | .7011                    | .8106                   | .1095   | 1.5289                          | -.9825                                  | 5.9220                                  |
| Dysfunctional   | 4.9660                   | <b>5.1183</b>           | .1523   | 2.0246                          | 1.6696                                  | 9.4224                                  |
| Total of Indirect Effects   | 5.6865                   | <b>5.8887</b>           | .2021   | 2.2662                          | 1.9110                                  | 10.8084                                 |
| <b>Illness Perceptions: Parent Control (R<sup>2</sup>=0.21; p=0.07)</b>         |                          |                         |         |                                 |   |   |
| Direct effect   | -.3001                   |                         |         | 3.2103 (t = -0.09; p = 0.93)    |   |   |
| Emotion Focused   | .4606                    | .2336                   | -0.2271 | 1.2023                          | -1.4596                                 | 4.7108                                  |
| Problem Focused   | -2.7165                  | -2.3254                 | .3911   | 2.2343                          | -14.1637                                | .3806                                   |
| Dysfunctional   | -1.6331                  | -1.5441                 | .0889   | 2.6520                          | -6.6478                                 | 4.4336                                  |
| Total of Indirect Effects   | -3.889                   | -3.636                  | .2530   | 3.4120                          | -10.6245                                | 3.4748                                  |
| <b>Illness Perceptions: Parent Coherence (R<sup>2</sup>=0.37; p&lt;0.01)</b>    |                          |                         |         |                                 |   |   |
| Direct Effect   | 2.9650                   |                         |         | 2.9475 (t = 1.0059; p = 0.3216) |   |   |
| Emotion Focused   | .5191                    | .4198                   | -.0993  | .7579                           | -.4861                                  | 2.7772                                  |
| Problem Focused   | -1.7478                  | <b>-1.6348</b>          | .1130   | 1.0029                          | -4.4130                                 | -1.724                                  |
| Dysfunctional   | -3.6115                  | <b>-3.8974</b>          | -.2859  | 1.7998                          | -8.1329                                 | -1.1075                                 |
| Total of Indirect Effects   | -4.8402                  | <b>-5.1125</b>          | -.2723  | 2.1020                          | -9.4834                                 | -1.1502                                 |
| <b>Illness Perceptions: Parent Emotions (R<sup>2</sup>=0.49; p&lt;0.01)</b>     |                          |                         |         |                                 |   |   |
| Direct effect   | 5.2364                   |                         |         | 2.8662 (t = 1.8269; p = .0765)  |   |   |
| Emotion Focused   | -.0872                   | -.0950                  | -.0079  | .7494                           | -3.3170                                 | .8349                                   |
| Problem Focused   | 1.0361                   | .7060                   | -.3300  | 1.6151                          | -1.1910                                 | 6.0121                                  |
| Dysfunctional   | 3.7574                   | <b>3.7064</b>           | -.0510  | 1.5905                          | 1.3434                                  | 7.6887                                  |
| Total of Indirect Effects   | 4.7063                   | <b>4.3174</b>           | -.3890  | 2.0621                          | 1.3985                                  | 10.0134                                 |
| <b>Illness Perceptions: Identity (R<sup>2</sup>=0.41; p&lt;0.01)</b>            |                          |                         |         |                                 |   |   |
| Direct effect   | .1940                    |                         |         | .5791 (t = .3349; p = .7397)    |   |   |
| Emotion Focused   | -.0428                   | -.0451                  | -.0023  | .1640                           | -.6888                                  | .1256                                   |
| Problem Focused   | .1968                    | .1691                   | -.0277  | .2670                           | -.1123                                  | 1.0873                                  |
| Dysfunctional   | .5982                    | .5877                   | -.0105  | .3705                           | -.0281                                  | 1.4819                                  |
| Total of Indirect Effects   | .7522                    | <b>.7117</b>            | -.0405  | .4512                           | .0365                                   | 1.8312                                  |

Significant (p<.01) values in bold.

As can be seen from Table 11, R-squared values show significant effects for all illness perception domains on the variance of wellbeing across the five proposed models. Between 20-49% of the variance in parental wellbeing can be accounted for by illness perceptions, coping styles and their interaction. This is over and above any effects predicted by the difficulties of the children (SDQ), which have been controlled for in the analyses. However, each of the models varies in regard to which particular aspects are significant in predicting parental wellbeing.

For parent consequences, dysfunctional coping is a significant mediator between parent perceived consequences of ADHD and parental wellbeing. This shows that the more parents perceive consequences of their child's ADHD and the more dysfunctional coping

adopted, the lower parental wellbeing is likely to be. Additionally, the total of indirect effects also shows significance meaning that the combination of all three coping strategies upon wellbeing is also significant. However, the direct effect of perceived consequences upon wellbeing (without coping) was not significant by itself. Perceived consequences only significantly influence wellbeing through the effects of coping, particularly through the use of dysfunctional coping.

Dysfunctional coping also significantly mediates the relationship between parents' emotions related to children's ADHD and wellbeing. The more perceived negative emotional consequences of ADHD for parents, the more likely they are to use dysfunctional coping strategies and to have reduced wellbeing. Again, the total of indirect effects is also significant but the direct effect of illness perception onto wellbeing is not.

The effect of parent coherence on wellbeing is mediated significantly by both dysfunctional and, to a lesser extent, problem-focused coping strategies. The more that ADHD makes sense to parents the less likely they are to engage in problem-focused and dysfunctional coping strategies and the better their wellbeing is likely to be.

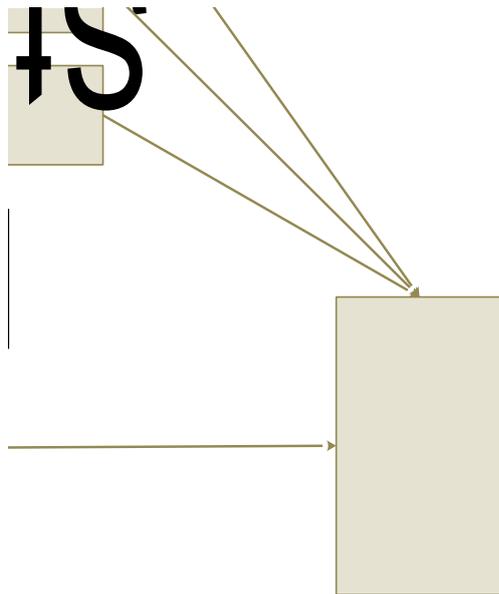
Identity only predicts wellbeing through the combined effects of the three coping styles, with none of them achieving significance alone. A higher perceived number of symptoms related to ADHD are indicative of reduced wellbeing through a combined method of coping.

For parental control, there are no statistically significant interactions between individual elements of the model onto wellbeing. The R-squared value is relatively small ( $R^2=0.21$ ), and the significance level is only 0.07 so the possibility of a type 1 error cannot be ruled out to a sufficient degree of certainty.

Overall, and in support of the links proposed by Leventhal's self-regulation model, none of the potential direct effects of illness perceptions to wellbeing are significant; instead, the effects of illness perceptions onto general wellbeing are mediated via coping.

**Hypothesis 7: Coping will mediate the relationship between parental illness perceptions and stress**

In addition, the role of coping style as a mediator in the relationship between illness perceptions and parental stress was examined (see Figure 3). Once again, only those illness perceptions that evidenced significant correlation with the three coping styles were selected for further analysis and the SDQ was included as a covariate. Results are shown in Table 12 .



**Figure 3:** Hypothesised direct and indirect relationship between illness perceptions and parental stress.

**Table 12:** Direct and indirect relationship between illness perceptions and parental stress.

|  | Asymptotic Path Estimate | Bootstrap Path Estimate | Bias   | Standard Error | Lower 95% Bootstrap Confidence Interval | Upper 95% Bootstrap Confidence Interval |
|--|--------------------------|-------------------------|--------|----------------|---|---|
| <b>Illness Perceptions: Parent Consequences (R<sup>2</sup>=0.70; p&lt;001)</b> |                          |                         |        |                |   |   |
| Direct effect  | <b>6.7987</b>            |                         |        | 1.9591         | <b>(t = 3.4704; p = .0014)</b>          |   |
| Emotion Focused  | -.0347                   | -.0604                  | -.0257 | .4093          | -1.0874                                 | .8200                                   |
| Problem Focused  | .3864                    | .2749                   | -.1116 | .6282          | -.4528                                  | 2.3642                                  |
| Dysfunctional  | 3.2149                   | <b>3.2503</b>           | .0354  | 1.1913         | 1.2630                                  | 6.0146                                  |
| Total of Indirect Effects  | 3.5666                   | <b>3.4648</b>           | -.1019 | 1.3313         | 1.2647                                  | 6.4808                                  |
| <b>Illness Perceptions: Parent Control (R<sup>2</sup>=0.51; p&lt;001)</b>      |                          |                         |        |                |   |   |
|  | 1.9469                   |                         |        | 1.8326         | <b>(t = 1.0624; p = .2955)</b>          |   |
| Emotion Focused  | -.0815                   | -.1149                  | -.0334 | .7324          | -1.6320                                 | 1.3344                                  |
| Problem Focused  | -2.2653                  | <b>-2.2746</b>          | -.0093 | 1.2052         | -5.5068                                 | -.4784                                  |
| Dysfunctional  | -1.2483                  | -1.4247                 | -.1764 | 1.8974         | -5.2772                                 | 2.1749                                  |
| Total of Indirect Effects  | -3.5951                  | -3.8142                 | -.2191 | 2.3240         | -8.5295                                 | .7576                                   |
| <b>Illness Perceptions: Parent Coherence (R<sup>2</sup>=0.51; p&lt;001)</b>    |                          |                         |        |                |   |   |
|  | .3916                    |                         |        | 1.7341         | <b>(t = .2258; p = .8227)</b>           |   |
| Emotion Focused  | -.1152                   | -.1888                  | -.0736 | .6694          | -1.8107                                 | 1.0072                                  |
| Problem Focused  | -1.2224                  | <b>-1.1143</b>          | .1081  | .7146          | -2.9817                                 | -.0405                                  |
| Dysfunctional  | -3.6184                  | <b>-3.7881</b>          | -.1697 | 1.5478         | -7.1046                                 | -1.1000                                 |
| Total of Indirect Effects  | -4.9561                  | <b>-5.0912</b>          | -.1352 | 1.6200         | -8.6230                                 | -2.0415                                 |
| <b>Illness Perceptions: Parent emotions (R<sup>2</sup>=0.58; p&lt;001)</b>     |                          |                         |        |                |   |   |
|  | 2.4412                   |                         |        | 1.6916         | <b>(t = 1.4431; p = .1581)</b>          |   |
| Emotion Focused  | .0789                    | .0591                   | -.0198 | .4018          | -.3417                                  | 1.6947                                  |
| Problem Focused  | .7586                    | .6466                   | -.1120 | .6788          | -.0179                                  | 4.2572                                  |
| Dysfunctional  | 3.1661                   | <b>3.1246</b>           | -.0414 | 1.1761         | 1.1630                                  | 5.9001                                  |
| Total of Indirect Effects  | 4.0036                   | <b>3.8303</b>           | -.1733 | 1.3482         | 1.9229                                  | 7.6187                                  |
| <b>Illness Perceptions: Identity (R<sup>2</sup>=0.53; p&lt;001)</b>            |                          |                         |        |                |   |   |
| Direct effect  | .1344                    |                         |        | .3358          | <b>(t = .4002; p = .6915)</b>           |   |
| Emotion Focused  | .0075                    | .0117                   | .0042  | .0977          | -.1559                                  | .2779                                   |
| Problem Focused  | .1270                    | .1068                   | -.0202 | .1352          | -.0352                                  | .5855                                   |
| Dysfunctional  | .4493                    | .4367                   | -.0126 | .2607          | -.0190                                  | 1.1128                                  |
| Total of Indirect Effects  | .5838                    | <b>.5552</b>            | -.0287 | .3120          | .0290                                   | 1.3345                                  |

Significant (p<.01) values in bold.

As can be seen from Table 12, the five mediation models of parental stress show a very similar, yet stronger, pattern of interactions and R-squared values than the preceding wellbeing models.

Parental consequences significantly predict stress both directly and through the partial mediator of dysfunctional coping. More perceived negative consequences of ADHD predict more dysfunctional coping, which predicts higher levels of parental stress. The total effect of perceived consequences in combination with the three types of coping is also significant. The overall effect size of 70% is large.

Lower levels of parental stress are predicted by the combination of more perceived parental control and more problem-focused coping, such that the more parents feel that they

can influence ADHD the more they try to cope by solving problems themselves and think of solutions. This is associated with less stress.

Very similarly to the model on wellbeing, parent coherence significantly predicts parental stress through both dysfunctional coping and problem-focused coping. The more that ADHD makes sense to parents the less likely they are to engage in trying to cope with it and the lower the levels of stress they are likely to report.

More perceived negative emotions reported by parents predict more dysfunctional coping strategies and higher levels of stress.

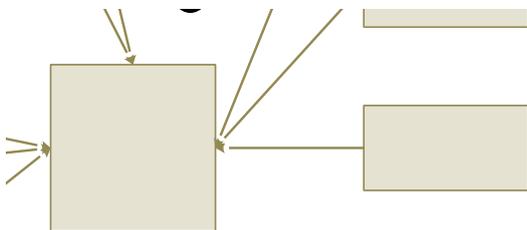
As with the models predicting wellbeing, identity only predicts stress through the combined effects of the three coping styles, with none of them achieving significance alone. A higher perceived number of symptoms related to ADHD are indicative of higher levels of stress through an unspecified method of coping.

Overall, the effect sizes are larger than those found for wellbeing. Similarly to wellbeing, many of the effects of illness perceptions onto parental stress are mediated via coping and this supports the links proposed by Leventhal's self-regulation model. Unlike with wellbeing, one of the direct effects is also significant.

## Discussion

The aims of this study were to evaluate the applicability of the Self-Regulation Model of illness perceptions to parents of children with ADHD, exploring the relationships between parental illness perceptions, parental coping, and parental wellbeing. Significant effects were found in both simple correlations between perceptions, coping and wellbeing and also in mediation analyses implicating coping styles as important in this role.

Specifically, parents' perceptions of higher stress levels and reduced wellbeing are associated with their perceptions of more consequences of ADHD on their lives and their children's lives, more emotional consequences for themselves and for their children, a longer expected duration of ADHD, and more symptoms related to ADHD. Higher stress alone is associated with parental perceptions of having less control over ADHD, and a less clear understanding of ADHD. Reduced wellbeing alone is associated with parents perceiving that their child has an unclear understanding of ADHD. Three of the illness perception domains' effects are only significant through being mediated by coping. Figure 4 below depicts the entirety of significant ( $p < .01$ ) relationships between illness perceptions and parental stress and wellbeing, including those mediated by coping.



\*Parent consequences: not a significant *direct* effect to wellbeing

\*\*Parent control: not a significant *indirect* effect to wellbeing

\*\*\* Child coherence: not significantly related to stress

**Figure 4:** significant relationships between illness perceptions and parental outcomes.

Figure 4 illustrates the wide range of relationships that exist between illness perceptions and parental outcomes. As the schematic shows, the effect of perceived parental control upon stress is mediated by problem-focused coping. It appears that more perceived control leads to more problem-focused coping, which in turn leads to lower stress levels. Obviously, such a relationship could be self-reinforcing with 'successful' coping leading to more sense of control, as would benefit the self-regulatory function of the SRM.

Parents' sense of coherence regarding ADHD was also mediated by problem-focused coping. As people already believed they understood ADHD, there would be no need to try to 'come up with a strategy about what to do'. As problem-focused coping in this study encompassed a range of behaviours, these findings are in line with previous work suggesting beneficial effects of these methods of coping (Hastings and Johnson, 2001; Podolski & Nigg, 2001; Saloviita et al., 2003). In this study the problem-focused coping strategies were: Active coping (concentrating my efforts on doing something about the situation I'm in), Planning (trying to come up with a strategy about what to do) and Instrumental support (getting help and advice from other people). However, attendance at ADHD support groups did not make any difference to wellbeing according to analyses. It may be that people attend such groups for several reasons. On a related note, instrumental support is differentiated from 'seeking comfort or emotional support from others', which is designated as 'emotion-focused coping'.

As is evident from Figure 4, emotion-focused coping is absent. One obvious difference to the other two coping styles was a lower alpha value (.71 compared with >.82). It may also have less face validity than the other two styles with a slightly more diverse range of styles, e.g. Humour compared with Religion. It is also a more reactive style, rather than proactively setting out to do things differently before problems arise. The direction of correlations between emotion-focused coping and wellbeing suggest that it is a somewhat beneficial method of coping but this was too ambiguous to be a significant relationship. Across other studies, equivocal effects have been found as to the effects of emotion-focused coping with benefits found in some (e.g. Pottie and Ingram, 2008) and negative associations in others (e.g. Abbeduto et al., 2004; Dunn et al., 2001). It appears that further research is required in order to clarify the effects of types of emotion-focused coping in this population.

Dysfunctional coping was found to mediate the effects of perceptions of parental coherence, parents' emotions and parents' perceived consequences upon stress and wellbeing. In this study, dysfunctional coping included: Behavioural disengagement (e.g. giving up trying to deal with it), Denial, Self-distraction, Self-blame, Substance use, and Venting (e.g.

saying things to let my unpleasant feelings escape). As other research suggests, less stress and greater parental wellbeing has been associated with the use of fewer of these negative coping strategies (Hastings and Johnson, 2001; Pottie and Ingram, 2008; Saloviita et al., 2003). The relationship between stress and dysfunctional coping strategies may also be self-reinforcing with unhelpful coping strategies making parenting more stressful, and stressed parents finding it more difficult to face the problems associated with parenting directly and so using more avoidant, dysfunctional strategies. Such dysfunctional coping strategies as, going on as if nothing has happened, or trying to forget the situation, have also been found to correspond with increased depression (Dunn et al., 2001).

Parents' perceptions of their children's perceptions and consequences, though significantly related to parental wellbeing, had no significant bearing on coping strategies. However, dysfunctional coping was close to significance with three of the four domains. It may be that these perceptions are just far enough removed from parents' sense of control to not become significant in this small sample.

On the whole, the relationship between perceptions of ADHD and stress was found to be stronger than that between perceptions of ADHD and general wellbeing. Indeed, the effect size of parental consequences upon stress is almost twice that upon wellbeing. The General Wellbeing Index is a quality of life measure and includes items relating to physical health and activities as well as mood. It therefore comprises a broader range of 'outcomes' compared with the more specific Parental Stress Scale, as the respective names imply. Stress levels can be considered an aspect of general wellbeing. The use of these two outcome measures works to show that perceptions of ADHD and coping strategies are specifically related to stress levels but that they also have a wider relationship with overall wellbeing.

The variance of parental stress predicted by perceived consequences of ADHD, both directly and through the mediator of dysfunctional coping, is very large at 70%. Some of this may be explained by a generally negative thinking style which influences perceptions of stress as well as ADHD. It also seems likely that there is some conceptual overlap between the PSS and parent consequences subscale as both measure problems with finances and contain items about the impact of the child on their life. However, it is important to note that the items of the IPQ specifically ask about the impact of ADHD on the parents' life so the perceptions of ADHD itself do seem to be important. Another possibility is that ADHD is used as an explanation for wider-ranging problems. It may then of course mask other difficulties and perhaps prevent interventions being focused where they need to be. Further speculation upon this is probably not warranted but the strength of this domain in influencing

stress nonetheless suggests that it is an important consideration when working with families. The parental consequences scale pertains to the overall impact of ADHD on the parent's life but also specifically to how others see the parent in relation to them being a parent of a child with ADHD. A qualitative study of parents of children with ADHD found that they felt blamed for their sons' difficulties, battled with professionals to gain recognition of their perspectives and experienced emotional distress as a result of these problems. The authors suggest that there is a need for clinicians to be particularly sensitive when diagnosing children with ADHD and working with their families (Harborne, Wolpert, & Clare, 2004). This study perhaps sheds some light on how perceived consequences and emotional responses to ADHD may be affecting parents and contribute to such large effect sizes.

### *Clinical implications*

Parental coping strategies are implicated in this study as having clinically significant associations with wellbeing and stress. In turn, coping strategies appear to be influenced by particular illness perceptions. The highly stressed presentation of the parents in this study reflect the high levels of stress of parents with ADHD reported in the literature (e.g., Baker and Kevin 1995; Gupta 2007) and suggests that this is an 'at-risk' group. There is a clear need for interventions that can help with these problems both for the parents themselves and for the children. Identifying such perceptions in parents may guide clinicians into providing assistance and advice in adopting more helpful coping strategies. Subscales of the IPQ-R may be used for such a purpose routinely when children are diagnosed with ADHD. All subscales are short and would be quick and easy to administer at an appointment. Given the findings of Harborne et al. (2004), alongside the evidence from this study, using the IPQ to assess and discuss personal beliefs about ADHD may be a way to facilitate open conversations. Indeed, Pollack & Aponte (2001) report that in the conduct of their study, some researchers found that interviews assessing illness perceptions were deemed to be therapeutic through allowing patients to tell their story, consider new issues and clarify aspects of their illness.

The R-squared significance of the identity scale in relation to stress and wellbeing ( $R^2=.53$  and  $R^2=.41$  respectively), suggests that a higher number of perceived symptoms of ADHD predicts reduced wellbeing and more stress both directly and through a combination of coping strategies, no one strategy that is more important or more significant than the others. Alongside the high number of non-ADHD symptoms ascribed by parents, increasing

clarity of education as to the nature of ADHD may be a useful way to help parents come to a more 'biomedically valid' perspective, thereby reducing perceived symptoms and distress. However, an alternative explanation may be that higher numbers of symptoms are indicative of more problems on the whole, in which case, further investigations may need to be made in order to provide appropriate help. The scale itself may be a useful checklist for this purpose.

In a similar way to that of the identity scale, the significance of the parent coherence scale implies that the less that ADHD makes sense to parents, the more likely they are to use dysfunctional coping strategies and to have reduced wellbeing and higher stress. Helping parents to come to a clearer understanding of the nature of their child's ADHD may work to help them use more problem-focused strategies and hopefully reduce stress levels leading to parenting their children in a more consistent way in light of their understanding. What also seems to be important in relation to coping strategies is identifying the beliefs that reinforce their adoption. It may not simply be a case of suggesting coping strategies to a parent if they do not fit with their beliefs. If a parent believes they have little control over ADHD they may be more reluctant to consider what they might do in order to make change. Smaller goals in order to start growing a sense of control may be required.

### *Limitations & Future Research*

Some obvious limitations of this study relate to the small sample size and low response rate. Despite multiple recruitment methods and sites the sample size was smaller than anticipated, and thus statistical power is less than that required from the a priori power calculation. The initial design involved children as well as adults and the use of asymptotic statistical procedures examining discrepancies in illness perceptions. This would have required 150 parent-child dyads, which of course did not prove possible. The low response rate may be in part due to the length of the questionnaires in relation to a potentially highly stressed population, as suggested by our data. Indeed, those who did not return questionnaires may be more or less stressed, but we do not have access to the data required to substantiate this. A larger sample size may yield further significant relationships and allow for more generalisable conclusions.

Parents with higher stress and lower wellbeing may think about life generally more negatively and hence, ADHD more negatively, thereby influencing illness perceptions. Dysfunctional coping strategies, such as alcohol use, may also influence wellbeing and illness

perceptions. The cross-sectional design of this study means that the direction of causality of these relationships cannot be confirmed. Additionally, the nature of the self-regulation model is such that appraisals of outcome feed back into perceptions of conditions. In order to overcome this, longitudinal studies would need to be utilised to elucidate the sequential arrangement of such relationships and how they develop over time.

This design also relies on parental perceptions of their child's condition. Researchers have found differences between adolescents' and their parent's illness perceptions in physical health problems (e.g. Olsen, Berg, & Wiebe, 2008). The addition of data from children with ADHD themselves is likely to add valuable insight into their perspectives and whether their views are similar to parental perceptions, and whether similarity/dissimilarity is important to coping and wellbeing.

Sample biases also exist because participants needed to be English literate to complete questionnaires and almost all of the sample classed themselves and their children as 'White British', despite research sites being located in ethnically diverse areas. Generalisation to other languages or ethnic groups in the UK may be limited. Future studies would need to address such issues and consideration may have to be made of why those from other ethnic groups either were not approached by clinicians or were reluctant to take part. These limitations combine to caution against the generalisability of the findings. A much larger sample size would also allow for the examination of the impact of different causal beliefs, different treatment types, and comorbidities.

Ultimately, the most important research would focus on measuring the outcomes of interventions addressing the illness perceptions and/or coping strategies of parents and children with ADHD. To date, only one study has aimed their intervention specifically towards modifying illness perceptions (Petrie et al., 2002). It showed that using a cognitive – behavioural intervention to modify perceptions in patients following a heart attack reduced negative perceptions and they returned to work sooner compared with standard care patients. This is of course a very different circumstance to those in our current sample. However, this shows that such beliefs can be modified and to good effect. The relations of parenting practices with illness perceptions and coping are important considerations for future research.

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Executive Summary

**The role of parenting in the development of narcissism  
&  
Parental perceptions of ADHD**

**Department of Clinical Psychology  
School of Psychology  
The University of Birmingham  
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## Executive Summary

Volume 1 details research completed, as part of a Doctorate in Clinical Psychology (ClinPsyD) at the University of Birmingham. This is presented in two parts: 1) a review of existing literature explores the role of parenting and overindulgence in the development of narcissism. 2) an empirical study investigates relationships between parental illness perceptions of children's ADHD, coping strategies, stress and wellbeing. Details of each paper are provided below:

### **1) The role of parenting and overindulgence in the development of narcissism: A review of the literature**

**Introduction:** Prominent theories on the role of parenting in the development of narcissism suggest a significant role for the overindulgence of children (e.g. Imbesi, 1999; Millon, 1996). Reviews on narcissism also tend to suggest empirical evidence for overindulgence amongst other factors (Ronningstam, 2010; Thomaes et al., 2009), yet no systematic reviews of the literature exist on parenting generally, or overindulgence specifically. This review therefore explores the relationship between parenting and the development of narcissism with a specific focus on the role of overindulgence.

**Method:** 13 empirical studies were identified for the review, 2 of which were unpublished. A quality assessment was completed for each study. The papers are examined for the strength of their findings and the constructs they purport to measure are considered in relation to each other and overindulgence. A distinction was drawn between 'healthy' and 'unhealthy' narcissism and studies were examined for findings related to these constructs.

**Findings:** Overall, both types of narcissism were found to be associated with low levels of parental monitoring and higher levels of overvaluation. 'healthy' narcissism was also associated with higher levels of warmth and empathy whereas 'unhealthy' narcissism was associated with parental coldness, less empathy and harsher treatment.

**Discussion:** All relationships between parenting factors and narcissism were weak to moderate. Overindulgence, in the sense of giving 'too much' time, attention and material

things (Bredehoft & Ralston, 2008) remains rather unexamined in a reliable way in relation to narcissism. This should be addressed. Future research should also build upon the findings of previous research combining factors found to be important, as studies thus far have focused on a limited range of factors. Clinically, overindulgence and overvaluation are important parenting behaviours to recognise as potentially detrimental to child development, alongside the lack of monitoring and empathy, which are perhaps better established as areas for concern.

## **2) Parental illness perceptions of ADHD: Relationships to coping, wellbeing and stress**

**Introduction:** The Self-Regulation Model of illness perceptions (SRM; Leventhal, Nerenz, & Steele, 1984) attempts to explain differing individual responses to the same condition and predict how people perceive, behave and adjust to physical and mental health problems (Petrie, Broadbent, & Kydd, 2008). Parental illness perceptions have also been found to be importantly related to a range of outcomes (e.g. Olsen, Berg, & Wiebe, 2007). In relation to ADHD, studies have demonstrated that higher levels of stress in parents of children with ADHD are associated with factors such as low knowledge of ADHD and lower perceived parental control (e.g. Harrison & Sofronoff, 2002) suggesting that the SRM may be usefully applied to ADHD. This study therefore explores the applicability of the SRM to ADHD in order to explain relations between parental perceptions of ADHD, coping, stress and general wellbeing.

**Method:** Forty parents of children with ADHD were recruited through ADHD support groups, websites and Child and Adolescent Mental Health Clinics. Each parent completed questionnaires exploring their beliefs about ADHD, their coping strategies, wellbeing, stress and the nature of their child's difficulties.

**Results:** Statistical analysis showed that higher parental stress levels and reduced wellbeing were associated with greater perceived consequences for parent and child, higher emotional responses for parent and child, a longer expected duration for ADHD and more perceived symptoms of ADHD. Coping was also related to several illness perception domains and levels of general wellbeing and stress. Problem-focused coping was associated with positive

effects and dysfunctional coping was associated with negative effects upon wellbeing and stress. The combination of several domains of perceptions with coping strategies explained moderate to large amounts of variance in stress and wellbeing.

**Limitations and Recommendations:** The results suggest potential utility of illness perceptions in aiding clinicians to be aware of how such perceptions might guide parental coping and management of ADHD related behaviours. Additionally, the IPQ may be a useful tool in helping clinicians and parents of children with ADHD to coming to a shared understanding of the child's condition and highlight potential vulnerability to increased stress levels. The study had a small sample size and data was only taken at one time point. It is not possible to ascertain the direction of causality between illness perceptions and outcomes. It is recommended that research completed in the future should gather children's perceptions in order to examine the effect of potential differences between parent and child perceptions. Ideally, longitudinal studies would explore the dynamic relationship between perceptions, coping and wellbeing over time.

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