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Final thesis

Master's thesis

Utrecht University

Master's programme in Clinical Child, Family and Education Studies

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Date: 21-05-2018

Words: 4500

Does Parental Overprotection Moderate the Relationship between Child Behavioral Inhibition
and Child Anxiety Symptoms?

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Clinical Child, Family and Education Studies: Thesis (201600201)

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Abstract

Behavioral inhibition in young children is a well-known and established scientific construct.

Its relation to the development of anxiety disorders has been studied frequently. Less researched are specific environmental factors possibly influencing this relationship. One of these factors is parental overprotection, which is associated with child anxiety psychopathology. Because aiding parents in improving their childrearing-practices is accessible, the possible moderating influence of parental overprotection on this relationship was researched. In addition, the relationship between child behavioral inhibition and child anxiety symptoms was researched to bolster the robustness of this association. Data originated from a longitudinal study on child behavioral inhibition. Questionnaires assessing child behavioral inhibition, child anxiety symptoms and parental overprotection were administered when children were respectively 3, 4 and 5 years of age on average. A multiple hierarchical regression analysis showed that child behavioral inhibition predicted child anxiety symptoms. Parental overprotection did not moderate this relationship. Concluding, this study indicates that parental overprotection exerts no significant influence on the development of anxiety symptoms in behaviorally inhibited children, while providing further support for the relationship between child behavioral inhibition and anxiety symptoms. The outcomes are regarded in light of this study's characteristics and the context of other studies regarding the relationship between child behavioral inhibition, parental overprotection and child anxiety symptoms. The theoretical and clinical implications of the results are evaluated, while other possible influences on this relationship are reviewed and recommendations for future research are given.

Key words: *behavioral inhibition, anxiety, parental overprotection, social learning theory, diathesis-stress model*

At a very young age it is seen that children respond very differently to unfamiliarity (Kagan, 1997). Some children are prone to explore and to acquaint themselves with novelty. Others display fearful and hesitant behaviors to novel objects, individuals and environments (Hirshfield-Becker, Micco, Wang, & Henin, 2014), and these behavioral patterns are observed at an early age (Turner, Beidel, & Wolff, 1996). This is called behavioral inhibition. It is moderately stable over time and independent of intelligence as well as social class, and it is observed in about 10 to 15 % of healthy 2 and 3-year old children (Kagan, Reznick, & Snidman, 1988). There is also evidence that behavioral inhibition in children has genetic

components (DiLalla, Kagan, & Reznick, 1994; Robinson, Kagan, Reznick, & Corley, 1992). Behavioral inhibition seems a clearly defined construct, but how is the development of children exhibiting this disposition affected?

Emotional and social development could be influenced by behavioral inhibition (Chen et al, 1998). Various studies have connected behavioral inhibition to anxiety. For example, Shamir-Essakow, Ungerer, and Rapee (2005) concluded that behavioral inhibition offered a contribution to anxiety in preschool children independent of maternal anxiety and insecure attachment. A study by Muris, van Brakel, Arntz, and Schouten (2011) displayed that high levels of behavioral inhibition were connected with an increase of social anxiety symptoms over time, while the authors also emphasize the status of behavioral inhibition as a serious risk factor for pathological anxiety development in youth. Accordingly, studies have linked behavioral inhibition specifically to anxiety disorders, in addition to anxiety symptoms. For example, Hirshfield et al. (1992) found that relative to those who did not, children who exhibited behavioral inhibition stably throughout childhood had an increased risk for anxiety disorders. There exist multiple studies that have convincingly linked behavioral inhibition to risk for anxiety disorders, and social anxiety disorders in particular (Hirshfield-Becker et al., 2008).

In short, behavioral inhibition in childhood appears to be clearly associated with multiple facets of anxiety later in life. However, not all behaviorally inhibited children go on to develop anxiety problems, be it significant symptoms or disorders. Behavioral inhibition occurs far more frequently than anxiety disorders do (Biederman et al., 1993). According to the diathesis-stress model (Goforth, Pham, & Carlson, 2011) genetic factors interacting with environmental stress affect mental health. Thus, the question at hand is what other element occurring in children's environment could be relating behavioral inhibition to anxiety, and thereby putting them at risk for pathological development.

Such an element could be parental rearing style. The ways in which parents raise their children have been linked to childhood anxiety problems (Brown & Whiteside, 2008). Some parents can be overprotective of their children. This behavior is associated with parents' own anxiety, and the link between parental overprotectiveness and child anxiety could be behavioral as well as genetic (Turgeon, O'Connor, Marchand, & Freeston, 2002). This corresponds with the fact that behavioral inhibition contains genetic components. An example

of the connection between parental overprotection and childhood anxiety is the relation between higher levels of parental overprotection, as well as rejection, and the amount of social phobia in their offspring (Lieb et al., 2000). Another example is the finding that the behavior of mothers of anxious children as opposed to non-clinical children was observed as more involved, interfering and negative (Hudson & Rapee, 2001). It seems that besides possible genetic transmission of some form of anxiety, the presence of parental overprotection could also be an environmental factor influencing child anxiety. As mentioned before, behaviorally inhibited children are already at risk for developing anxiety, thus being exposed to parental overprotection could put them even further at risk.

In line with the diathesis-stress model (Goforth, Pham, & Carlson, 2011), behaviorally inhibited children who are already showing a habit to behave more fearfully are more likely to be affected by stressful parenting in the form of overprotection and to adopt this tendency than non-inhibited children. This possibly diminishes the ways in which they know how to interact with novelty. Overprotective parenting could convey the message that the world is a perilous environment and make children less able to have learning experiences with unfamiliar stimuli or situations that could disconfirm their fears (Hudson & Rapee, 2001; Rapee, 1997). Therefore, they are probably less likely to develop and display appropriate and rational behavior in front of unknown people, objects and situations that could be potentially fear-inducing, creating a fear-reinforcing cycle. In this way, avoiding the fearful stimuli becomes rewarding through negative information (Nebel-Schwalm & Davis, 2013). By these processes, behaviorally inhibited children exposed to parental overprotectiveness could be more at risk of developing anxiety problems than behaviorally inhibited children who are not. According to social learning theory (Bandura, Blanchard, & Ritter, 1969) the learning of behavior is influenced by modeling. Likewise, the pathway of the vicarious acquisition of fear (Rachman, 1977) describes that fears can be acquired through indirect learning experiences. Corresponding with these principles, children exposed to overprotective parenting could come to emulate their parents' overprotective behavior by the processes described above.

Researching the abovementioned effects of parental rearing style on behavioral inhibition and anxiety in children might be beneficial. It could contribute to the theoretical knowledge used for developing interventions to help parents improve their rearing style. Specifically, training parents in changing their overprotectiveness could possibly abate the

development of anxiety problems in behavioral inhibited children. Behavioral inhibition is present in a distinct part of children, and the risk of these children developing anxiety issues is apparent. Furthermore, anxiety disorders are known to be the most prevalent disorders in children and adolescents, and to seriously impact development (Rapee, Schniering, & Hudson, 2009), demonstrating the need for research. There is evidence that behaviorally based parenting programmes can improve both child outcomes and parenting quality (Scott, 1998). Illustrative of this finding, Ungar (2009) presents a case study in which a three-step clinical intervention is exemplified to help families look critically at their patterns of overprotection, also mentioning that interventions addressing overprotectiveness have not been empirically studied. It seems that more knowledge on this topic is needed, in order to create incentives for the further development of such interventions. In addition to aiding individuals with anxiety problems, early discovery of anxiety disorders and the possibility of better interventions may help in unburdening society too. Anxiety disorders are related to extensive costs that are both direct, such as treatment costs, and indirect, such as diminished or lost productivity (DuPont et al., 1996), and constitute individual as well as social strain (Lépine, 2002).

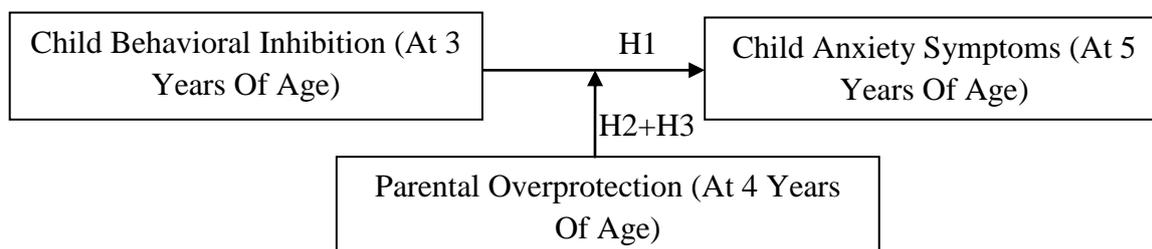
However, exact findings on the influence of overprotective parenting on child behavioral inhibition and child anxiety symptoms do not seem numerous. Related research did either not look at these three specific constructs all at once or at their specific interaction. For example, Bögels and van Melick (2004) found a relationship between parental overprotection and children's anxiety, but these children were not behaviorally inhibited, while Williams et al. (2009) found effects of different parenting styles on the relationship between child behavioral inhibition and child internal- and external behavior problems, but specifically examined neither parental overprotection nor child anxiety symptoms. In addition, van Brakel, Muris, Bögels, and Thomassen (2006) showed an interaction effect of behavioral inhibition and parental control on anxiety symptoms. Parental control is however a different construct than parental overprotection, and the interaction also contained the factor insecure attachment. Yet, studies examining the abovementioned relation are not wholly absent, for example, the study by Vreeke, Muris, Mayer, Huijding, and Rapee (2013). They found an indication of links between parental overprotection and anxiety symptoms but no strong confirmation regarding a moderating role of parental overprotection, contrary to expectation.

Therefore, this study intends to contribute to the research in this field by focussing exclusively on the aforementioned relationship, as behavioral inhibition and overprotective parenting consistently emerge as variables affecting child anxiety. The potential moderating role of parental overprotection on the relationship between child behavior inhibition and child anxiety in particular will be studied. Accordingly, this study aims to answer the following question: does parental overprotection moderate the relationship between child behavior inhibition and child anxiety symptoms?

In summary, this study aims to explore the relationship between child behavioral inhibition, child anxiety symptoms and parental overprotection (Figure 1.). Based on the examined literature, social learning theory (Bandura et al., 1969) and in particular the theory of vicarious fear acquisition or modeling (Rachman, 1977; see for examples Muris, Steerneman, Merckelbach, & Meesters, 1996; Ollendick & King, 1991; Menzies & Clarke, 1993 and Milgrom, Mancl, King, & Weinstein, 1995), as well as the diathesis-stress model (Goforth et al., 2011), it is hypothesized (H1) that higher levels of behavioral inhibition early in the child's life will be associated with a higher chance of exhibiting anxiety symptoms after two years; additionally, it is predicted (H2) that parental overprotectiveness will act as a moderator in this relationship, in the sense that a higher level of parental overprotectiveness will exacerbate the effects of child behavioral inhibition on the later development of anxiety symptoms. Conversely, it is therefore also expected (H3) that lower levels of parental overprotectiveness will allay these effects.

Figure 1.

Research Model



Methods

Design. A prospective longitudinal study was performed, with child behavioral inhibition at 3 years of age as predictor variable, parental overprotection at 4 years of age as moderator variable, and child anxiety symptoms at 5 years of age as outcome measure.

Participants. For a detailed description of this study's participants and the data-gathering procedures, see the study by Vreeke et al. (2012), from which this research uses its participant data. At the start of the study, Dutch parents (in most cases the mothers) of 2,343 non-clinical children aged 2.5 to 6 year old ($M = 3.59$, $SD = 0.77$; 1,189 boys and 1,147 girls) were recruited. A year later, 1,636 parents were contacted for the second research wave, of which in total 732 remained: 70 moved away or could not be contacted again, 94 responded stating explicitly that they did not want to participate any longer, and 740 parents did not respond to the mailing at all, leaving 732 parents to participate. Another year later, parents were asked a third time to participate, and for reasons unknown in total only 280 parents (and their children) remained providing data for this research by filling out questionnaires at the three moments in time. The data used consisted of all participants of which the parents completed the BIQ-SF, PAS-R, and POM (not described in Vreeke et al., 2012) questionnaires. The total sample of subjects with valid data for this study consisted of $N = 146$, and the number of excluded cases consisted of $N = 2901$ (the used dataset also contained other data inutile for the current study). The country of origin of the children was almost exclusively The Netherlands (99.3%) with one child born in Spain and one in Panama. In the majority of cases fathers (82.4%) and mothers (82.8%) were also born in The Netherlands. In total, parents originated from over 25 different countries, with Surinam (4.6% of fathers and 3.9% of mothers) and Morocco (2.5% of fathers and 1.8% of mothers) comprising the largest part of that share besides the Netherlands. Child gender was about evenly distributed (53.9% male, 46.1% female), and the average age of the children at the first time of measurement was 3 years of age (96.4%; $M = 2.96$, $SD = 0.367$). Although no exact information on the socio-economic status of the participants was available, a non-Dutch ethnicity generally indicated a lower SES. A possible explanation could be the subordinate position in which residents with a non-Dutch ethnicity of highly-populated urban regions in the Netherlands like the Rotterdam area, more than on average, find themselves in.

Procedure. The largest part of the original group of parents of the participating children ($N = 1,636$, more than two-third) were visiting the infant welfare centre in Rotterdam, the Netherlands, and participated in a longitudinal study on the relation between behavioral inhibition and anxiety in young children. Other parents were recruited via playgroups and mailings of the local council in two neighbouring cities, Gouda and Woerden. All parents had to sign an informed consent. The ethical committee of psychology of the Erasmus University provided official approval for the observation procedures also used in the study by Vreeke et al. (2012).

Materials.

Parental Overprotection. The 19-item Parental Overprotection Measure (POM; Edwards, 2007; Edwards, Rapee, & Kennedy, 2010) was used to assess parental overprotection. It is an instrument based on existing measures of parental rearing behavior and devised specifically to measure overprotective parenting not confounded by other, related constructs. Items adhere to three criteria, namely describing parental behavior in specific situations, referring to situations possibly perceived as psychologically or physically threatening, and being relevant to parents of preschool-aged children. Example items are "I protect my child against criticism" and "I try to protect my child from making mistakes" which had to be answered on a 5-point Likert scale ranging from 0 (*not at all*) to 4 (*very often*). The total score is obtained by adding up all item-scores (range 0-76). A higher score indicates a higher level of parental overprotection, no cut-off points were used (high internal consistency, good construct- and predictive validity and strong 12-month test-retest reliability; Edwards, Rapee, & Kennedy, 2008; Edwards et al., 2010; Clarke, Cooper, & Creswell, 2013 and Vreeke et al., 2013; also see Vreeke et al., 2013 for psychometric properties of the POM in a Dutch population sample). The reliability of the POM in this study's sample was good (Cronbach's $\alpha = 0.89$, $N = 146$).

Child Behavioral Inhibition. The 14-item Behavioral Inhibition Questionnaire-Short Form (BIQ-SF; Edwards, 2007), a scale to assess behavioral inhibition in preschool children, was used to assess child behavioral inhibition. It is a shortened version of the 30-item Behavioral Inhibition Questionnaire (BIQ; Bishop, Spence, & McDonald, 2003) and groups items across six contexts and three domains: social novelty (unfamiliar adults, peers, and performing in front of others), situational novelty (unfamiliar situations, preschool/separation) and novel

physical activities with possible risk of injury. Example items are "My child is shy when first meeting new children" and "My child approaches new situations or activities very hesitantly" which had to be answered on a 6-point Likert scale ranging from 1 (*hardly ever*) to 6 (*almost always*). The total score is obtained by adding up all item-scores (range 14-84). A higher score indicates a higher level of child behavioral inhibition, no cut-off points were used (internal consistencies for all scales $\alpha > 0.70$, satisfactory parent test-retest reliabilities ($r_s = 0.55-0.78$), and strong paternal/maternal agreement ($r = .69$) of the BIQ; adequate internal consistency and moderate 12-month test-retest reliability of the BIQ-SF; Bishop et al., 2003; Edwards, 2007; Kim et al., 2011; Vreeke et al., 2012; see also Muris, Meesters, Bouwman, & Notermans, 2015; see Vreeke et al., 2012, 2013 for psychometric properties of the BIQ-SF in Dutch population samples). The reliability of the BIQ-SF in this study's sample was good (Cronbach's $\alpha = 0.87$, $N = 146$).

Child Anxiety Symptoms. The 30-item Preschool Anxiety Questionnaire-Revised (PAS-R; Edwards, Rapee, Kennedy, & Spence, 2010) a revised version of the 28-item Preschool Anxiety Questionnaire (PAS; Spence, Rapee, McDonald, & Ingram, 2001) was used to assess child anxiety symptoms. It measures symptoms of five DSM-IV-based anxiety disorders, with example items being "Is afraid of meeting or talking to unfamiliar people" and "Becomes distressed if separated from parents", which had to be answered on a 5-point Likert scale ranging from 0 (*not at all true*) to 4 (*very often true*). The total score is obtained by adding up all item-scores (range 0-120). A higher score indicates a higher level of child anxiety symptoms, no cut-off points were used (adequate reliability and validity for the PAS; Cronbach's $\alpha > 0.70$, strong 12-month test-retest reliability ($r_s = .60-.75$), and strong maternal/paternal agreement ($r_s = .60-.75$) of the total scale and 4 subscales for the PAS-R; Spence et al., 2001; Edwards et al., 2010; Vreeke et al., 2013; see also Broeren, Muris, & Diamantopolou, 2013; for psychometric properties of a translated Dutch version of the PAS see Broeren & Muris, 2008). The reliability of the PAS-R in this study's sample was excellent (Cronbach's $\alpha = 0.90$, $N = 146$).

Data-analysis

Missing values. In the analysis subjects were excluded listwise, thus subjects were only contained in the analysis if they had valid data on all variables included in the analysis.

Statistical Analyses. None of the variables had skewed data, no transformations were applied. Outliers were to be replaced by the highest or lowest score that was within range of normal values and erroneous data were to be marked as missing data, but neither were detected. The assumptions of normality of the residuals as well as independence of the residuals and predicted values (homoscedasticity) were met. The outcome, predictor- and moderator variables had linear relationships. Finally, the assumption of the absence of multicollinearity was also met.

A hierarchical multiple regression analysis was performed in SPSS with child behavioral inhibition at 3 years of age (child behavioral inhibition) and parental overprotection at 4 years of age (parental overprotection) as predictors, and child anxiety symptoms at 5 years of age (child anxiety symptoms) as outcome measure. The interaction between child behavioral inhibition and parental overprotection was included in the analysis to assess potential moderating effects of parental overprotection. The variables were mean centered prior to computing the interaction term in order to avoid potential multicollinearity as much as possible. Additionally, variables were included as probable confounders, being the demographic variable gender of the child, and paternal- and maternal education level.

Results

Table 1 shows the descriptive statistics of all studied variables. Pearson correlations of the predictors and outcome variable showed that child behavioral inhibition was moderately positively correlated with child anxiety symptoms (Pearson's $r = 0.518$, $p < 0.001$) and very weakly negatively correlated with parental overprotection (Pearson's $r = -0.089$, $p > 0.10$), while parental overprotection was very weakly positively correlated with child anxiety symptoms (Pearson's $r = 0.053$, $p > 0.10$).

Table 1.

Descriptive Characteristics of the Studied Variables (Uncentered Data).

	Mean (SD)	Range
<i>Demographic characteristics</i>		
Child gender (%)		
Boy	53.4	
<i>Confounders</i>		
Maternal education level (%)		
Primary education	2.1	

Secondary education	28.8	
University or college (higher secondary education) schooled	67.8	
Different (no education or not applicable)	1.4	
Paternal education level (%)		
Primary education	-	
Secondary education	34.2	
University or college (higher secondary education) schooled	64.4	
Different (no education or not applicable)	1.4	
<i>Predictors</i>		
Child behavioral inhibition at 3 years of age*	33.18 (9.55)	16-63
Parental overprotection at 4 years of age*	28.48 (11.39)	7-63
<i>Outcome measure</i>		
Child anxiety symptoms at 5 years of age*	24.92 (13.91)	0-71

Note: *Centered variable in analysis.

Main analysis. The regression models for child anxiety symptoms are summarized in Table 2.

Table 2.

Hierarchical Regression Models for the Prediction of Child Anxiety Symptoms from Child Behavioral Inhibition and Parental Overprotection.

	<i>B</i>	<i>b</i>	<i>R</i> ² <i>model</i>	<i>F</i> <i>change</i>	<i>R</i> ² <i>change</i>
Child anxiety symptoms at 5 years of age					
Step 1			0.010	0.489	0.010
Child gender	2.348	0.085			
Maternal education level	0.557	0.068			
Paternal education level	-0.530	-0.061			
Step 2			0.287	18.017	0.277
Child behavioral inhibition at 3 years of age	0.767	0.526*			
Parental overprotection at 4 years of age	0.116	0.095			
Child behavioral inhibition*Parental overprotection	0.003	0.025			

Note. *B*: regression coefficient, *b*: standardized regression coefficient, *R*² *model*: total explained variance by the model, *F* *change*: F statistic corresponding *R*² *change*; *R*² *change*: partial explained variance by added predictors and interaction variables (step 2). * $p < 0.01$.

The central question of this study was whether child behavioral inhibition predicted child anxiety symptoms, and if this relationship was moderated by parental overprotection. The regression models showed that child behavioral inhibition predicted child anxiety symptoms: higher child behavioral inhibition significantly predicted higher child anxiety symptoms ($b = 0.526$, $p < 0.01$).

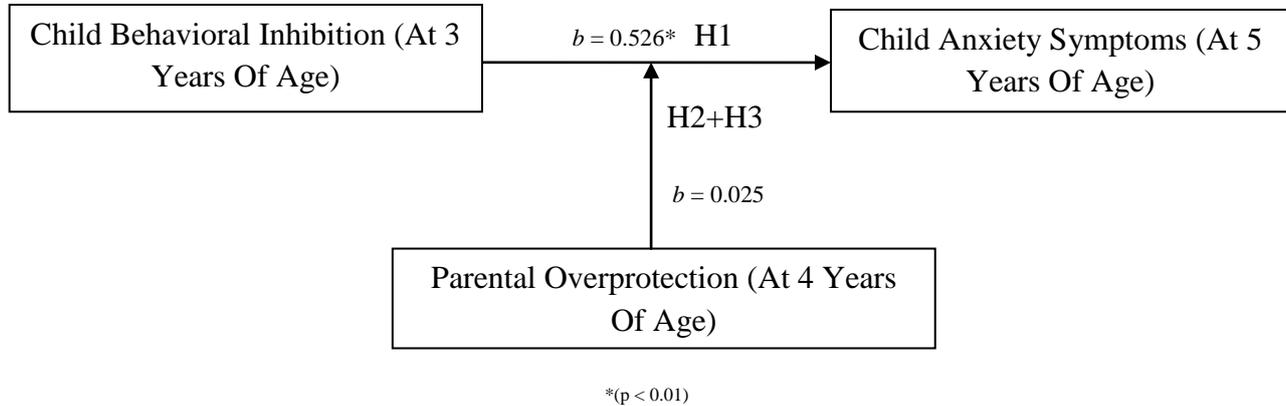
The regression models further showed that parental overprotection did not moderate the relationship between child behavioral inhibition and child anxiety symptoms ($b = 0.025$, $p > 0.10$). An effect of parental overprotection on child anxiety symptoms was not found either ($b = 0.095$, $p > 0.10$).

The *R*² *change* between the first and second regression models showed that the second model provided a better fit to the data than the first model, meaning that the predictor

variables explained more variance of the outcome measure than the additional variables. The found associations are summarized in Figure 2.

Figure 2.

Research Model with Significance Results.



Discussion

This research investigated if at a young age child behavioral inhibition predicted child anxiety symptoms, in order to corroborate the known link between child behavioral inhibition and child anxiety. It also examined whether this relationship was moderated by parental overprotection, to identify parental overprotection as a factor influencing this relationship in order to establish a theoretical underpinning on which to constitute possible parental interventions. It was hypothesized that child behavioral inhibition predicted child anxiety symptoms. Also, it was hypothesized that higher parental overprotection predicted higher child anxiety symptoms, whereas lower parental overprotection predicted lower child anxiety symptoms. The results demonstrated that child behavioral inhibition at 3 years predicted child anxiety symptoms at 5 years. Parental overprotection at 4 years neither predicted child anxiety symptoms nor moderated the relationship exhibited by child behavioral inhibition and child anxiety symptoms. These results were found after controlling for child gender and maternal- and paternal education level.

The finding that child behavioral inhibition predicts child anxiety symptoms confirms expectations, and is in accordance with multiple studies. Shamir-Essakow et al. (2005) found that behavioral inhibition predicted anxiety in preschool children, while Muris et al. (2011) found that high levels of behavioral inhibition were associated with a gradual increase of

social anxiety symptoms. Furthermore, van Brakel et al. (2006), Vreeke et al. (2012, 2013) and Williams et al. (2009) all found confirmatory connections between child behavioral inhibition and child anxiety. Additionally, Hirshfield et al. (1992) and Hirshfield-Becker et al. (2008) demonstrated the association between child behavioral inhibition and later risk for the development of anxiety disorders. This study's assessment of specific anxiety disorder-symptoms complements the abovementioned findings. These studies namely report associations between child behavioral inhibition and child anxiety, with the outcome measured in multiple forms: as specific anxiety disorder-symptoms, as results of structured interviews and questionnaires, and as links with the development and presence of anxiety disorders. The outcome of the present study thus supports the literature in the notion that predisposing risks play an important role in the unfolding of anxiety disorders in children (Muris et al., 2011) and that behavioral inhibition can be regarded as a distinct factor in that regard.

The outcome that parental overprotection does not moderate the relationship between child behavioral inhibition and child anxiety symptoms disconfirms the assumption that parental overprotection influences the relationship between child behavioral inhibition and child anxiety symptoms. This is incongruent with the literature, as connections have been found between child anxiety disorders and parental overprotection specifically (Hudson & Rapee, 2001; Lieb et al., 2000) as well as between child anxiety disorders and parental rearing style in general (Brown & Whiteside, 2008). Research investigating this exact association in behaviorally inhibited children was found to be sparse. However, research incorporating study designs comparable to the current research indicated effects of different forms of parental rearing style on behaviorally inhibited children, such as a negative influence of permissive parenting styles on internalizing problems (Williams et al., 2009) and exacerbating effects of parental control on child anxiety symptoms (van Brakel et al., 2006). Furthermore, the research by Vreeke et al. (2013), which was essential for the expectations of this study, found links between parental overprotection and anxiety symptoms in behaviorally inhibited children and also expected a moderating role of parental overprotection, but found none. In that regard, the present study concurs with the research done by Vreeke et al. (2013), for in both studies the moderating role of parental overprotection was expected but not found. Additionally, although this study found no significant link between parental overprotection

and child anxiety symptoms, the occurring relationship was positive.

Several alternative explanations could be addressed to interpret the abovementioned outcome. Firstly, this study's small research sample could have attributed to the lack of a significant effect of parental overprotection. If data was excluded pairwise, the studied population would have been larger, however, the data would also have been less reliable. Secondly, the population of the present study differs from the populations of the other reviewed studies researching parental rearing style, as half of these concerned (partly) clinical populations. Thirdly, the designs in these studies diverge from the current study, with half of the studies incorporating cross-sectional or observational designs. Lastly, all but one of these studies researched adolescents instead of children as in the present study, with the majority of the longitudinal studies looking at adolescents.

This study has various strengths. First of all, the psychometric qualities of the English questionnaires used have also been demonstrated in Dutch population samples, making them more valid. Also, child gender was about evenly distributed in the population sample, making for a more representative population sample. Lastly, this study displayed the link between child behavioral inhibition and child anxiety symptoms in a prospective longitudinal study, producing results that are more reliable than non-longitudinal studies.

This study is not without limitations. Firstly, the exclusive use of complete data resulting in a relatively small population sample is also a drawback because it makes the sample less representative, and possibly reduced the chance of finding other significant results. Secondly, this study's population primarily consisted of children with a Dutch ethnicity, making it difficult to generalise the findings to different populations. Finally, all measurements were based solely on self-report, and observational measures could have complemented the data, increasing their convergent construct validity.

To conclude, this study shows that child behavior inhibition at 3 years of age is predictive of child anxiety symptoms at 5 years of age in a comparatively small population sample, thereby further substantiating this relationship. Although no moderating role of parental overprotection on this relationship was found, the literature seems to show that this is nevertheless considered a fruitful direction for future research, as is the role of parental

rearing style in general. This study confirms the strength of the relationship between child behavior inhibition and later child anxiety outcomes, which consistently emerges from the literature, and thereby the status of behavioral inhibition as a distinctive risk factor for child anxiety development. The consistency of this relationship indicates the importance of further research on factors influencing this relationship, in an effort to comprehend better the trajectories of the development of anxiety disorders in behaviorally inhibited children, as well as the role of their parents in these processes, and importantly, to discover ways of altering those progressions.

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