Parental Influences and Child Internalizing Outcomes across Multiple Generations

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Abstract

Our objective was to test ways parental caring and over-controlling rearing approaches predict internalizing problems across multiple generations of offspring: from grandparents to parents and from parents to children. We examined whether retrospective perceptions of grandparents' caring and over-controlling behaviors predicted parents' current anxiety problems and rearing behaviors toward their own children in a sample that participated in a clinical trial for youth with a specific phobia (SP). We further tested whether parental anxiety and rearing approaches (as perceived by parents and children) predicted children's longitudinal outcomes of internalizing problems and severity of the SP over time, above and beyond the effects of Cognitive Behavior Therapy (CBT) for the treatment of the SP. We were ultimately interested in testing indirect, intergenerational processes from grandparents to children to identify buffers or risks of anxiety via patterns of care and control from parents. Data were drawn from 113 treatment-seeking children with SPs and their parents (52.2% female, ages 6-15, *M* age = 8.77, SD = 1.75) from pre-treatment to three-year follow-up. Hierarchical linear models tested the effects of earlier grandparent rearing behaviors on parent and child outcomes and the effects of parent anxiety and rearing behaviors on child outcomes. Models supported indirect effects of grandparent rearing behaviors onto child outcomes via ongoing parent anxiety problems and select rearing behaviors, suggesting these intergenerational processes could potentially maintain anxiety (i.e., use of over-controlling behaviors) or buffer offspring from anxiety risks (i.e., use of care behaviors).

Keywords

Phobia; Anxiety; Parental Rearing; Intergenerational Processes; Hierarchical Linear Modeling

Extant research has suggested that poor or inadequate parenting behaviors are a risk factor for the development of phobic and anxiety disorders in children (Bögels & Brechman-Touissaint, 2006; Chambers, Power, & Durham, 2004; Chorpita, Brown, & Barlow, 1998;

Ollendick & Horsch, 2007; Turgeon, O'Connor, Marchand, & Freeston, 2002). Further, parental behaviors might limit the benefits of treatment for these anxiety disorders (Chambers et al., 2004). Mothers of anxious children have been shown to be less caring and responsive, grant less autonomy, and be more intrusive, negative and overly-controlling. Further, mothers of anxious youth tend to be more overprotective when their children are in anxiety-producing situations and more stressed compared to mothers of non-anxious children. One of the reasons parents may use behaviors and responses toward children's anxiety that undermine coping with distress is that they themselves are more likely to currently experience anxiety or have previously experienced anxiety problems (Cooper, Fearn, Willetts, Seabrook, & Parkinson, 2006). Specifically, parents may have a history of being overwhelmed by fearful situations themselves, and the ways their own parents modeled resolving situations including more over-control and/or less care. That is, anxiety tends to be transmitted and to be sustained across generations (e.g., Cooper et al., 2006; Fisak & Grills-Taquechel, 2007; Turner, Beidel, & Costello, 1987). For example, parents of children with anxiety problems tend to report ambiguous situations as more threatening (e.g., marked by maladaptive processing, increase in perceived lack of control, and lack of coping ability). As such, parents of children with anxiety problems often endorse more avoidant behavioral responses than parents of children without anxiety disorders (Shortt et al., 2001). Moreover, youth with anxiety disorders perceive their parents as less accepting (Siqueland, Kendall, & Steinberg, 1996). Also, youth with anxiety disorders interpret ambiguous situations involving their parents as more threatening than do children without anxiety disorders (Shortt et al., 2001). Finally, within a non-clinical sample of youth, perceived parental rearing behaviors as reported by the youth, have been shown to be related to parental control and increased self-reported symptoms of generalized anxiety disorder, separation anxiety disorder and environmental-situational phobias in children (Muris & Merckelbach, 1998).

Although there remains relatively little consideration of fathers in anxiety studies, fathers' anxiety problems and displays of over-controlling and hypervigilant behaviors toward children likely contribute to similar risks for ongoing anxiety problems (see Bögels & Phares, 2008). Although associations between anxiety in mothers and anxiety in children are reasonably well established, less is known about the role of fathers. In addition, questions remain regarding the psychological mechanisms by which this cross-generational transmission of anxiety might occur. As noted, parenting behaviors (e.g., control and a lack of care) and the ways children perceive these patterns as responsive or over-controlling have been associated with parental anxiety (particularly in mothers) and implicated in the development and maintenance of child anxiety (Rapee, 1997; Wood, McLeod, Sigman, Hwang, & Chu, 2003). Researchers have begun to explore the cross-generational transmission process to examine the causal mechanisms by which parenting behaviors lead to the development and maintenance of anxiety in children. Overprotective parenting, attempts to limit autonomy, negativity, lack of care, over-controlling behaviors, and promotion of avoidance are among the proposed mechanisms by which anxious cognitions and behaviors can be transmitted from parents to children (Fisak & Grills-Taquechel, 2007).

Parents tend to incorporate rearing styles that involve differing levels of responsive care and overprotective parenting, according to the rearing approaches they experienced from their

own parents (i.e., the children's grandparents). Tanaka and colleagues (2009) found that fathers and mothers who reported their parents as having used more care and more overprotection during their upbringing, also reported using more of these strategies toward their children. These findings suggest a cross-generational transmission of rearing strategies. Moreover, the use of grandparent controlling/overprotection behaviors was negatively associated with parents' ongoing use of responsive care toward their children. Overall, these trends suggest there may be an important intergenerational process by which children are exposed to or buffered from parent traits and behaviors that can complicate their experiences with distress and anxiety. In short, parental over-controlling behaviors might model and communicate the presence of threat, resulting in increased vigilance and fear (Fisak & Grills-Taquechel, 2007). At the same time, these behaviors constrain children's opportunities for approaching situations on their own, resulting in concomitant avoidance and a lack of experiences to appropriately develop skills relevant to the domains of personal competency, mastery and control (Chorpita et al., 1998; Ollendick & Grills, 2016; Rapee, 1997). These parenting practices and the ways they are perceived by children could be impactful for children with a specific phobia (SP). Children with SPs are frequently overwhelmed with particular stimuli and are at risk for comorbidity with more general anxieties (e.g., Verduin & Kendall, 2003; Ollendick & Muris, 2015). Parents' hypervigilance or coldness during children's distress in fearful situations could, in turn, impact the broader strategies children apply across other situations.

Although there have been advancements in understanding some of the aspects of parental rearing (i.e., controlling behaviors) and parents' individual differences (i.e., anxiety problems) that predict trends in children's anxiety symptoms, many of these efforts remain independent from one another and a coherent picture is lacking. There is evidence that offspring of anxious parents are more likely to be anxious (see Bögels & Phares, 2008), that parents' controlling behaviors may exacerbate children's anxiety problems (e.g., Hudson & Rapee, 2001), and that offspring of anxious parents may report greater anxiety problems (see Rapee, 1997). Further, parents are likely to use over-controlling behaviors if they experienced such behaviors during upbringing (Tanaka et al., 2009). The current study considered each of these effects to determine whether perceptions of grandparents' (Generation 1) previous rearing behaviors predicted mothers' and fathers' (Generation 2) anxiety problems and rearing behaviors toward children (Generation 3), and whether parent behaviors predicted longitudinal anxiety and internalizing problems for children referred for children with a SP (see Figure 1). Our study has three major research questions: a) do perceptions of previous grandparent rearing behaviors help explain current parent anxiety and rearing behaviors; b) do grandparent and parent effects explain child clinical outcomes; and c) do parental factors mediate the ties between grandparent rearing and child outcomes?

Method

Procedure

Participants were recruited through flyers in the community (e.g., churches, schools, restaurants), existing research registry databases, university-affiliated clinics, and school and mental health services. Individuals interested in participating in the study were directed to

contact the study investigators through phone or email. Before scheduling the participant, the study coordinator conducted a brief screener in order to determine study eligibility. Every participant subsequently completed two pre-treatment assessment sessions. During the pre-assessment, parents and children completed a clinical intake which consisted of a semi-structured diagnostic interview (see below). Parents and children also completed questionnaires and a behavioral avoidance task. Eligibility criteria were as follows: Participants had to be between 6-15 years of age; meet DSM-IV criteria for a specific phobia (SP; APA, 1994); and to discontinue other forms of treatment and to be stable on medications for the duration of the treatment. After the assessment, eligibility and diagnoses were determined during a consensus meeting with the parent and child clinicians as well as the project's doctoral-level clinical supervisor. Subsequent assessment sessions were conducted at one week, one month, six months, one year, and three years following treatment. For all of the followup assessment sessions, the diagnostic modules endorsed at pre-treatment as well as a battery of questionnaires were administered (see Ollendick et al., 2015, for further details).

Participants

One hundred thirteen families seeking treatment were recruited into a randomized clinical control trial (RCT), which examined the effectiveness of the standard child-focused one session treatment (OST) and an augmented one-session exposure treatment (A-OST; Ollendick et al., 2015) for children and adolescents with SPs. Participants included children and adolescents aged 6 to 15 years (M age = 8.77 years, SD = 1.75). All participants met DSM-IV criteria for a SP (APA, 1994), as established by a semi-structured diagnostic interview (discussed below). In order to participate in the study, the duration of the child's phobia needed to be at least 6 months and result in significant clinical interference and distress. Children and adolescents were screened for accompanying psychopathology and current medication by parent report. A majority (54.9%) of children had comorbid anxiety diagnoses of Generalized Anxiety Disorder, Social Phobia, and/or Separation Anxiety Disorder. All participants were required to discontinue other forms of treatment and be stable on medications for the duration of the RCT. Any participant with a diagnosis of autism spectrum disorder, schizophrenia, or demonstrated parent-reported homicidal or suicidal behavior was excluded. All youth provided informed written assent and their parent/caregiver provided an informed written consent for their child's participation.

Treatments

All participants were randomized to either A-OST or standard OST. The standard OST, or child focused OST treatment condition, was based on the guiding principles established by Öst (1989, 1997) for adults with adaptations made for the treatment of SP in youth (Ollendick et al., 2009). Standard OST consisted of a three-hour treatment session with the child alone and with limited parent involvement. Within the three-hour session, the therapist engaged the child in gradual in-vivo exposure while challenging and correcting the child's distorted beliefs associated with the phobic object or situation. In contrast, the A-OST condition included the parent(s) throughout treatment. The parent observed the treatment session with a second clinician while the clinician coached the parent on how to conduct exposures, how to reinforce approach behaviors, and how to reduce reinforcement of

avoidance behaviors. Both treatments were equally effective and differences between the child focused OST and the augmented OST were not found (see Ollendick et al., 2015, for details). As such, data were combined across the two treatment conditions for this study.

Measures

Brief Symptom Inventory (BSI; Derogatis, 1975)—The BSI is a 53-item measure of parent-reported psychological symptoms. Each item of the BSI is rated on a 5-point scale of distress (1 – 5), ranging from "not-at-all" to "extremely." The BSI was obtained at pre-treatment and each follow-up period from both mothers and fathers. Parental anxiety was assessed using the anxiety subscale of the BSI. BSI scores were converted to *T*-scores. For a majority of time points, internal consistencies were acceptable for both maternal (αs = .70 – .86) and paternal anxiety (αs = .70 – .81) subscales. At the three-year follow-up, internal consistencies for mothers and fathers were surprisingly lower (αs < .60). These reports were retained however for a complete representation of parents' anxiety problems across all time points.

Parental Bonding Instrument (PBI; Parker, Tupling, & Brown, 1979)—The PBI is a 25-item measure which assesses perceptions of both maternal and paternal parenting. This scale was originally designed to measure retrospective reports of perceptions of exposure to rearing approaches up to the age of 16. More recently, researchers have used this scale to measure current perceptions of rearing behaviors as reported by parents (e.g., Tanaka et al., 2009) and children (e.g., Greco & Morris, 2002). The PBI consists of two subscales: care behaviors (12 items)— where high values reflect warmth, empathy, and affection in parenting, rather than coldness or neglect; and overprotection/over-controlling (13 items)— where higher values reflect excessive control and intrusiveness from parents, limiting child autonomy and independence. Parents reported *retrospectively* on views of their parents (Generation 1) as having displayed patterns of care and overprotection during their upbringing. Retrospective reports, though limited, have been shown to be valuable sources of information with considerable agreement between multiple reporters from shared environments (e.g., Amodeo & Griffin, 2009) and within individuals reporting on similar retrospective items over multiple time points (e.g., Pinto, Correia, & Maia, 2014). Parents also reported on their (Generation 2) *current* perceptions of care and overprotection toward their children. In turn, youth reported on perceptions of their parents' *current* rearing approaches to them in the home. Items had four response options, rated on a one to four Likert scale, ranging from "a lot like" (3) to "not at all like" (0). Data from the PBI were obtained at all time-points. Internal consistencies were acceptable for all parent reports across time points for the care (αs = .79 – .95) and overprotection (αs = .74 – .88) subscales. Internal consistencies were acceptable for all child reports of mothers' (αs = .72 – .84) and fathers' care (αs = .78 – .91). For some child reports of mothers' (αs = .56 – .80) and fathers' (αs = .68 – .78) overprotection, internal consistencies were lower than expected. However, all reports were once again retained and used for analyses in the current study.

Child Behavior Checklist (CBCL; Achenbach, 1991; Achenbach, Dumenci, & Rescorla, 2003)—The CBCL is a 113-item, parent-report measure which assesses children's behavioral and emotional functioning. Using a 3-point scale, parents rated

agreement concerning their child's behavior (ranging from 0 = *not true* to 2 = *very true or often true*). The CBCL is normed for children ages 6-to-18 years of age. The present study focuses on the Internalizing Problems subscale. Internalizing Problems included Withdrawn, Anxious/Depressed, and Somatic Complaints subscales. Higher *T*-scores indicate greater impairment. The CBCL was obtained at most follow-ups, but was not measured at one-week or one-month follow-up. Internal consistencies were acceptable across time points and reporters for the internalizing (αs = .82 – .83) symptom reports.

The Anxiety Disorders Interview Schedule for DSM-IV-Child and Parent Versions (ADIS-IV-C/P; Silverman & Albano, 1996)—The ADIS-IV-C/P is a semi-structured interview that assesses the major DSM-IV disorders of childhood, including anxiety, mood, and externalizing disorders. Clinicians assign a severity rating (CSR) on a 9-point scale (0-8, with any rating   4 being indicative of probable diagnosis and a clinical level of interference). For the present study, separate clinicians administered the ADIS-C and ADIS-P to the child and parent, respectively, with all clinicians trained to diagnostic criterion. During both the ADIS-IV-P and ADIS-IV-C interviews, clinicians assessed the severity of the child's SP and other potential psychological problems. The assigned parent and child clinicians independently assigned their CSRs and were blind to the randomized treatment conditions, both prior to and following treatment. ADIS-IV interviews were administered at pre-treatment as well as at all subsequent assessments following treatment. Consensus meetings were held following all assessment sessions in order to determine consensus CSRs between the parent and child clinicians independently rated severity ratings. The project director, a licensed clinical psychologist, and the parent and child assigned clinicians discussed the outcomes of both interviews and assigned consensus diagnoses and CSRs. The primary dependent measure of treatment outcome was the consensus CSR for the child's SP.

Analytical Plan

Descriptive analyses included paired *t*-tests for reports of mother and father effects for Generation 1 (grandparents) and Generation 2 (parents). Bivariate correlations for pre-treatment measures were conducted, determining associations between reports of Generation 1 effects, Generation 2 outcomes, and Generation 3 outcomes.

For hypothesis tests, multilevel models were used because repeated measures of parent and child variables were nested within each family; hence, models allowed consideration of effects within and between families. Growth models, using hierarchical linear modeling, addressed three research questions. First, would perceptions of earlier Generation 1 (grandparent) rearing predict current Generation 2 (parent) anxiety and rearing? We expected grandparent effects to influence mean differences between families in current parent anxiety and rearing; however, models tested for possible trends of change over time. Second, Generation 1 and Generation 2 effects predict Generation 3 (child) clinical outcomes. We expected initial grandparent effects (time-invariant) and repeated measures of parent effect (time-varying) to predict different patterns for change for children across time. Lastly, would indirect effects be supported between Generation 1 and Generation 3 via

Generation 2 effects? We expected effects of earlier grandparent effects on child outcomes to be explained by parent effects.

Preliminary models tested mean-level patterns of change and then effects of demographic covariates (i.e., child age, gender, anxiety disorder [AD comorbidity], treatment group). Time was measured *in months since the delivery of the phobia intervention* (ranging from −.25 for the pre-treatment assessment to 36 for the three-year follow-up). Models then tested Generation 1 effects (retrospective perceptions of grandparent rearing) on Generation 2 (mother and father anxiety and perceived rearing behaviors) and Generation 3 (child SP severity and internalizing problems) outcomes. Generation 2 effects were then considered as unique influences on Generation 3 outcomes. Baseline reports of grandparent rearing were used for all models and treated as constant within families. From these models, ninety-five percent confidence intervals, using 20,000 parametric bootstrapped repetitions, were then formed based on a Monte Carlo-based mediation test from Selig and Preacher (2008). For each model, marginal (fixed effects only) and conditional (fixed and random effects) pseudo-R^2 values were conducted, based on approaches by Nakagawa and Schielzeth (2012). Effect sizes were calculated by dividing each unstandardized effect by the respective model's level-1 intercept variance.

Results

Preliminary Analyses

Table 1 presents variable descriptives. Paired samples *t*-tests determined whether mothers and fathers reported differing perceptions of pre-treatment parenting behaviors toward their children, retrospective perceptions of parenting received from grandparents, and personal anxiety problems. Further, *t*-tests determined whether children reported differing perceptions of mothers' and fathers' rearing behaviors. Relative to perceived grandparent behaviors, most parent reports of own care and overprotection were higher (ps < .001). There was one exception of father's care not being significantly different than perceptions of care from paternal grandmothers ($t(82) = -.57$, $p = .570$). Mothers reported utilizing more care ($t(91) = 4.56$, $p < .001$) and overprotection ($t(91) = 2.21$, $p = .030$) than fathers. Similarly, children reported that mothers were higher in uses of care ($t(105) = 4.80$, $p < .001$) and overprotection ($t(104) = 2.29$, $p = .024$). Within families, children's perceptions of parent care and overprotection were not significantly different from parent self-reports (ps > .217). Mothers and fathers did not report significantly different levels of anxiety problems at pre-treatment baseline ($t(89) = .30$, $p = .976$).

Table 2 presents the bivariate correlations between study variables at pre-treatment. As expected, perceptions of care and overprotection from Generation 1 toward Generation 2 were broadly linked with perceptions of these approaches from Generation 2 toward Generation 3. Further, there was moderate agreement between children's and parents' perceptions of Generation 2 rearing behaviors in the home. Children's reports of mothers' care, mothers' overprotection, and fathers' care were significantly and positively correlated with parents' respective self-reports.

In line with expectations, maternal grandmother care was negatively linked with mother anxiety, whereas paternal grandmother and grandfather overprotection were positively linked with father anxiety. Maternal grandmother and grandfather care were also negatively linked with children's internalizing problems as reported by mothers, whereas paternal grandfather overprotection was positively linked with internalizing problems as reported by fathers.

As expected, multiple Generation 2 outcomes showed ties with Generation 3 outcomes. Mother anxiety was linked with more child internalizing problems (mother- and father-report), whereas mother care was linked with fewer internalizing problems (mother-report). Children's reports of mothers' overprotection were also positively correlated with fathers' reports of children's internalizing problems. Father anxiety was linked with more child internalizing problems (father-report), whereas father care was linked with fewer internalizing problems (mother- and father-report).

Hypothesis Tests

Hierarchical linear models addressed our 3 study questions: a) do retrospective reports of Generation 1 rearing behaviors predict current trends in Generation 2 rearing behaviors (as reported by parents and children) and Generation 2 anxiety; b) do Generation 1 (rearing approaches) and Generation 2 (anxiety and rearing approaches) effects uniquely predict trends in Generation 3 internalizing problems and SP severity after children complete interventions for specific phobias; c) and is there support for mediation between Generation 1 behaviors and Generation 3 outcomes via Generation 2 anxiety and behaviors? Hierarchical linear modeling, accounting for differences within and between families over time, provided opportunities to address each of these questions. Table 3 depicts fixed effect for mother outcomes of anxiety and rearing behaviors. Table 4 depicts fixed effects for father outcomes of anxiety and rearing behaviors. Table 5 depicts fixed effects for child outcomes.

Initial models of change and covariate effects—For Generation 2 (parent) and 3 (child) outcomes, initial models tested whether each repeated measure of interest (rearing behaviors, parent anxiety, child internalizing problems, children's phobia severity) significantly improved over time. Mothers' overprotection (self-reports and child-reports), fathers' overprotection (self-reports and child-reports), children's internalizing problems (mother-reports and father-reports), and child SP severity (clinician-reports) significantly decreased and improved over time.

Covariate tests included average differences given child age, child gender, child anxiety disorder (AD; diagnosis of social anxiety, separation anxiety, and/or generalized anxiety disorder) comorbidity, and family treatment condition. An additional covariate of treatment differences over time was also included. Covariate tests found significant effects for multiple outcomes. Child age was associated with differences in Generation 2 rearing. Care (mother- and father-reports) was perceived to be lower and father overprotection (self- and child-report) was perceived to be lower for older children. Child age was also associated with lower average severity in Generation 3 SPs. Children's comorbidity with additional anxiety diagnoses predicted greater perceptions of father overprotection (child-report) and more severe reports of internalizing problems (mother- and father-report). Child gender was

associated with Generation 2 rearing (child reports). Girls perceived less overprotection from mothers and more care from fathers. There was no mean-level difference in outcomes given treatment condition; however, children in the augmented treatment condition perceived declines in fathers' care over time.

Generation 1 effects on Generation 2 outcomes—Perceived maternal grandmother and grandfather effects were added for self-reports and child-reports of mothers' outcomes (anxiety and rearing behaviors). Maternal grandmother care buffered mothers' self-reports of anxiety problems. Grandmother care predicted self-reports of care behaviors, and grandmother overprotection predicted self-reports of overprotective behaviors. Grandfather care predicted child reports of mothers' care behaviors.

Similarly, perceived paternal grandmother and grandfather effects were added for self-reports and child-reports of fathers' outcomes. Paternal grandmother care predicted higher father care (self-report and child-report). Grandfather care surprisingly predicted lower child reports of father care. Grandfather overprotection predicted greater anxiety problems and overprotection (self-reports) for fathers.

Generation 2 anxiety on Generation 2 rearing behaviors—Following examination of grandparent effects, parents' reports of anxiety problems were considered on current rearing behaviors. Mother reports of anxiety problems did not uniquely predict care or overprotection (self- and child-reports). Father anxiety did not predict self-reports of overprotection or child reports of rearing, but anxiety did predict lower self-reports of care toward children. Anxiety and rearing behaviors were both collected repeatedly; father anxiety coincided with fewer care behaviors within successive time points.

Generation 1 effects on Generation 3 outcomes—Maternal and paternal grandparent effects were considered on child outcomes of internalizing problems and phobia severity. Maternal grandmother care behaviors buffered mother-reports of children's internalizing symptoms. There were no other direct effects of grandparent behaviors on child outcomes.

Generation 2 effects on Generation 3 outcomes—For child outcomes, parental anxiety and rearing behaviors were considered simultaneously and beyond the influence of demographics and grandparent behaviors. Models initially included all possible predictors (as shown by Table 5). Final models trimmed effects to remove non-significant or non-trending effects ($p > .10$). Results of these trimmed models are discussed below.

For mother reports of children's internalizing problems, mother anxiety (Est. = 2.47, S.E. = .58, d = .50, $p < .001$) and mothers' self-reports of overprotection (Est. = 1.69, S.E. = .67, d = .34, p = .012) coincided with more internalizing problems. Alternatively, mothers' self-reports of care (Est. = −1.24, S.E. = .66, d = −.25, p = .059) showed a near-significant trend coinciding with fewer internalizing problems.

For father reports of children's internalizing problems, fathers' anxiety problems (Est. = 2.34, S.E. = .75, d = .36, p = .002) and self-reports of overprotective behaviors (Est. = 1.66, S.E. = .81, d = .26, p = .041) coincided with more internalizing problems.

For clinician reports of children's phobia severity, fathers' self-reports of overprotective behaviors (Est. = −.48, S.E. = .15, d = −1.02, p = .002) coincided with less severe phobia symptoms, whereas children's reports of mothers' overprotective behaviors (Est. = .49, S.E. = .14, d = .104, p < .001) coincided with more severe phobia symptoms.

Multilevel mediation from Generation 1 to Generation 3, via Generation 2 effects—Using the effects from these earlier multilevel models (first, those testing Generation 1 effects on Generation 2 outcomes; then those testing Generation 2 incremental effects on Generation 3 outcomes), mediation was tested between perceived grandparent care and overprotective behaviors on child outcomes, via parent anxiety and perceptions of care and overprotection. Seven, single mediation models were tested given the findings, using Generation 1 effects as independent variables, Generation 2 effects as mediators, and Generation 3 outcomes as dependent variables. Indirect effects were determined given a) the effect estimate and variance from independent variable to the mediator, and b) the effect estimate and variance from the mediator to the outcome—accounting for covariates. Variance estimates were obtained from the asymptotic covariance matrix. For the mediation test, covariance between effects was assumed to be zero, because 'a path' and 'b path' models were conducted separately.

Maternal grandmother care as independent variable: Maternal grandmother care was considered on child internalizing problems via 1) its negative effect on mother anxiety and 2) its positive effect on mother care (self-report). An indirect effect was supported for mother anxiety (95% CI = −8.911, −.876), but not for mother care (95% CI = −3.467, .032).

Maternal grandmother overprotection as independent variable: Maternal grandmother overprotection was considered on child internalizing problems via its positive effect on mother overprotection (self-report). The indirect effect was supported (95% CI = .216, 5.202).

Maternal grandfather overprotection as an independent variable: Maternal grandfather overprotection was considered on child internalizing problems via its positive effect on mother care (child-report). The indirect effect was not supported (95% CI = −2.722, .101).

Paternal grandfather overprotection as independent variable: Paternal grandfather overprotection was considered on child internalizing problems via 1) its positive effect on father anxiety and 2) its positive effect on father overprotection (self-report). Then, paternal grandfather overprotection was considered on child phobia severity via its positive effect on father overprotection (self-report). For internalizing problems, the indirect effect via father anxiety (95% CI = 4.652, 16.410) was supported, but not the effect via father overprotection (95% CI = −.094, 5.503). For children's phobia severity, the indirect effect via father overprotection was supported (95% CI = − 1.420, −.027).

Discussion

Current findings suggest that perceptions of responsive, caring behaviors from parents were beneficial and had positive implications for offspring across two successive generations. These findings underscore the importance of warm and caring behaviors that are recognized and appreciated by children and serve as protective factors from the development of child anxiety (Hudson & Rapee, 2001; Moore, Whaley, & Sigman, 2004; Ollendick & Grills, 2016). Further, findings suggest that such buffers may continue to be meaningful and have a lasting impact on outcomes in later stages of development. In contrast, perceptions of controlling, overprotective behaviors showed deleterious effects for offspring. Perceptions of grandparent overprotection predicted similar, controlling behaviors toward their children (parents of youth with a SP). While—according to both parents and children—over-controlling behaviors declined following children's phobia treatment, parents who used relatively more over-controlling approaches had children who experienced greater internalizing problems. These findings are broadly in line with previous studies considering parents' over-controlling behaviors or messages limiting child autonomy and reaffirming the importance of both maternal and paternal influences on children's anxiety problems (see Bögels & Phares, 2008). Overall, findings suggest that just as risk factors of anxiety (i.e., over-controlling behaviors) may be transmitted and sustained to the detriment of later generations, so too might protective factors be transmitted to the benefit of later generations.

Our first question addressed possible transmission or maintenance of anxiety and rearing approaches from the grandparents to parents. Our expectations that perceptions of earlier grandparent rearing would continue to predict differences in current parent anxiety and rearing approaches were supported. Grandparents' uses of responsive care and overprotective behaviors predicted parents' respective uses of such rearing approaches— these effects were most robust between parents and the same-sex grandparent. Further, there was reasonable agreement between children's and parents' views of current care and overprotection in the home and in change in these approaches across time points, which suggests that there are similar perceptions of parents' current approaches in these shared environments.

Additionally, many of these reported rearing approaches (from parents and children) showed nuances with children's individual differences. Notably, there were mean differences in reports of care and overprotection given child age. For mothers and fathers, there were instances where displays of care and overprotection were reported to be higher toward younger children, suggesting there may be more overall involvement and attempted guidance toward younger children, rather than pre-adolescents and adolescents. However, as these trends were similar for care and over-protection, age was not informative of whether more constructive or deleterious approaches were likely to be used. Factors such as grandparents' earlier approaches were more indicative of current behavior uses.

Our second question addressed possible direct and unique effects from parents and possibly grandparents onto children's clinical outcomes—considering the ways parental anxiety and perceptions of parents' controlling and responsive approaches may predict poorer outcomes for children's anxiety problems, even as children are undergoing intervention for SPs.

Significant findings were broadly in line with expectations. Parents' anxiety problems were linked with greater reports of children's internalizing problems, and parent uses of overprotective approaches coincided with greater reports of internalizing problems. In a surprising contrast, fathers' overprotective behaviors predicted lower SP severity for children, suggesting there may be a particular benefit to the way fathers' controlling behaviors were applied or at least perceived, in line with previous studies supporting unique benefits of father involvement for children's adjustment (e.g., Amato & Rivera, 1999).

Lastly, we addressed potential intergenerational processes that sustain risks for internalizing problems by considering indirect effects between grandparents' earlier rearing behaviors and grandchildren's internalizing outcomes, via parents' anxiety and rearing outcomes. There was moderate support for expectations of intergenerational processes and ways perceptions of previous Generation 1—grandparent—rearing influenced current anxiety problems and perceptions of rearing approaches for Generation 2—parents—which in turn impacted Generation 3—children—internalizing problems. Overall, the findings suggest that through the examination of both immediate and extended family variables, researchers and clinicians can better understand and begin to anticipate possible challenges and buffers to clinical intervention for both children and their parents who will be involved in the intervention process.

As mentioned above, a surprising contrast emerged with fathers' use of controlling behaviors and children's SP and clinical outcomes. Father uses of overprotection were associated with lower phobia severity ratings across time. This contrasts with past studies, which suggest that fathers' encouragement of child autonomy may buffer their children from anxiety (e.g., Mattanah, 2001), whereas fathers' use of controlling behaviors—when significantly associated with child anxiety—pose a risk factor (e.g., Brakel, van Muris, Bögels, & Thomassen, 2006; Greco & Morris, 2002). However, research concerning fathers' behaviors in phobic contexts remains rare. It is possible that the ways fathers use controlling behaviors may help children manage a limited range of SP situations, though these behaviors may still present risks to broader functioning in managing more general anxieties.

Though not a major focus of the current study, findings indicated an encouraging trend regarding the validity of reported perceptions of parenting approaches. Parent and child reports of current care and overprotection in the home were moderately correlated and both parents and children reported similar declines in perceived use of overprotection or controlling behaviors over time points. Further, these reports had additional ties with child outcomes. However, children's reports of rearing in the home did not show the same associations with retrospective reports of grandparent rearing or parent reports of children's internalizing problems as did their parents' reports. Differences in patterns with retrospective reports may be partly due the fact children did not share an environment with parents during upbringing with their grandparents. Further, discrepancies in trends with parent-reported internalizing problems may be partly due to parent and child factors that shape the extent to which different reporters view behaviors to be normative or problematic, including gender, personality, and each partner's difficulties with internalizing problems and diagnoses (see De Los Reyes & Kazdin, 2005; Youngstrom, Loeber, & Stouthamer-Loeber, 2000).

Limitations and Strengths

The current findings are encouraging yet include limitations of note. This study was limited by the sample diversity in ethnic background and family socioeconomic status. Further, there is a limitation in the collected reports of perceptions of Generation 1 rearing in that retrospective reports were obtained from parents, but not directly from the grandparents themselves. While retrospective reports have been used with the PBI and other measures (Tanaka et al., 2009), and show reasonable agreement between (Amodeo & Griffin, 2009) and within individuals over multiple measures (Pinto, et al., 2014), it is a limited means of data collection. In addition, although child reports of rearing were collected, there was heavy reliance on parents' reports or parent-informed reports. Attrition— particularly among father reports—was a concern; however, analyses used all available data across time points to minimize this limitation. Lastly, some parent reports on the BSI and child reports of parent overprotection on the PBI showed low internal consistency (as noted above). All reports were retained given interest in offspring outcomes of internalizing problems—including those of adult offspring—and offspring perspectives of parental approaches; however, these were concerning limitations. Despite these limitations, this study possessed several noteworthy strengths. The outcomes of interest included reports from parents, children, and clinicians. Further, father reports—a means of insight that remains understudied in clinical and developmental research—were explicitly included here to inform specific influences from each parent.

Conclusions

While multiple family factors have been considered as possible risks and buffers for children's internalizing problems, there remain areas to expand focus in the field and consider additional factors that may contribute to a larger process of transmitted risks for children. The current study addressed one such area of promise by considering the influences of perceived grandparent rearing as influences on potential risk factors involving parents and ultimately on clinical outcomes involving children. Perceptions of how grandparents previously behaved toward parents predicted current perceptions of parents' rearing behaviors and parent reports of ongoing anxiety problems. Parental factors uniquely predicted clinical outcomes for children referred for SP treatment.

In line with previous findings, perceptions of warm, responsive behaviors typically served as buffers from anxiety problems, whereas perceptions of over-controlling and overprotective behaviors typically served as risk factors for anxiety problems. One exception to this trend involved fathers' use of controlling behaviors, which predicted improved outcomes for children's SP symptoms and suggested a possible unique benefit to this pattern of father involvement. Finally, multiple, indirect models were supported, suggesting that there may be intergenerational processes influencing the buffers and risks for transmission of internalizing problems to children—ways that grandparents' earlier behaviors continue to influence the ways parents engage with and respond to their children, particularly in stressful situations, which has implications for children's anxiety problems and their subsequent response to treatment.

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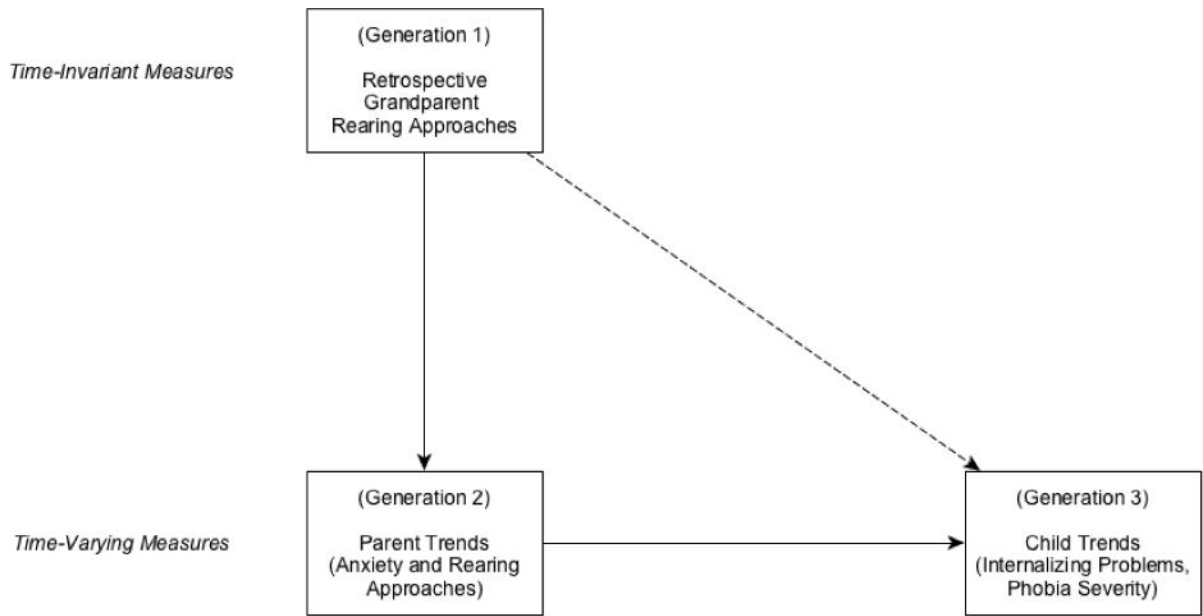
Figure 1.
Conceptual Model of Mediation Effect between Grandparent Rearing Behaviors and Child Outcomes.

Descriptives of Study Variables

Table 1

Variable	Pre-Treatment	One-Week Follow-Up	One-Month Follow-Up	Six-Month Follow-Up	One-Year Follow-Up	Three-Year Follow-Up	Min	Max
Generation 1 Effects								
Maternal Grandmother Care	27.38 (7.16)	–	–	–	–	–	10	36
Maternal Grandmother Overprotection	11.86 (7.26)	–	–	–	–	–	0	37
Maternal Grandfather Care	22.90 (8.84)	–	–	–	–	–	0	36
Maternal Grandfather Overprotection	11.87 (6.96)	–	–	–	–	–	1	37
Paternal Grandmother Care	29.11 (6.92)	–	–	–	–	–	5	36
Paternal Grandmother Overprotection	11.13 (6.41)	–	–	–	–	–	0	25
Paternal Grandfather Care	23.24 (8.52)	–	–	–	–	–	2	36
Paternal Grandfather Overprotection	8.37 (5.14)	–	–	–	–	–	0	21
Generation 2 Effects								
Mother Anxiety	47.97 (8.78)	46.62 (8.38)	44.97 (8.79)	45.67 (7.52)	45.27 (8.38)	47.11 (8.37)	38	71
Mother Care (Self-Report)	31.17 (3.30)	31.18 (3.31)	31.22 (3.52)	31.11 (3.31)	30.84 (3.27)	31.03 (3.52)	18	36
Mother Overprotection (Self-Report)	14.83 (4.51)	14.68 (4.78)	14.78 (5.00)	13.09 (4.29)	12.61 (5.12)	11.09 (4.38)	0	37
Mother Care (Child Report)	31.54 (4.33)	32.36 (4.01)	32.37 (4.05)	32.31 (4.19)	31.98 (5.04)	31.65 (4.39)	15	36
Mother Overprotection (Child-Report)	14.88 (4.92)	13.17 (5.53)	13.76 (6.70)	12.55 (4.86)	10.98 (5.48)	12.02 (5.81)	0	34
Father Anxiety	50.30 (10.15)	48.65 (8.88)	48.15 (9.86)	49.71 (9.36)	44.26 (6.20)	47.58 (6.84)	41	80
Father Care (Self-Report)	28.71 (4.50)	29.35 (3.95)	28.68 (4.40)	29.41 (4.73)	29.52 (3.90)	28.91 (5.23)	16	36
Father Overprotection (Self-Report)	13.95 (4.50)	14.33 (4.87)	15.20 (4.75)	14.21 (4.92)	11.04 (4.81)	12.13 (5.54)	0	27
Father Care (Child-Report)	29.34 (5.23)	31.06 (4.90)	30.22 (5.53)	30.98 (4.40)	29.95 (6.44)	28.96 (6.99)	1	36
Father Overprotection (Child-Report)	13.80 (5.50)	11.88 (5.59)	12.75 (7.05)	11.51 (5.30)	9.49 (5.87)	9.86 (5.35)	0	30
Generation 3 Outcomes								
Child Internalizing Problems (Mother-Report)	58.38 (9.01)	–	–	49.93 (10.02)	50.19 (9.79)	47.79 (10.06)	33	85
Child Internalizing Problems (Father-Report)	56.25 (8.98)	–	–	52.12 (11.30)	49.95 (10.21)	49.26 (9.98)	33	78
Child Specific Phobia Severity (Clinician-Report)	6.60 (.95)	4.83 (3.76)	3.51 (1.89)	2.80 (2.02)	2.81 (2.15)	2.23 (2.17)	0	8

Note. Minimum and maximum values are across all considered time points. CBCL reports of child internalizing problems and BSI reports of parental anxiety are *T*-scaled.

Table 2

Bivariate Correlations among Pre-Treatment Variables

	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
Demographic Covariates																							
1. Child Age	.05	.02	−.08	−.10	.04	−.01	−.01	.07	.01	.01	.15	−.26**	−.15	−.03	.00	.04	−.21	−.29**	−.10	−.20*	.04	.00	−.10
2. Child Gender	–	−.05	.01	−.14	−.03	−.11	−.07	.02	−.08	−.03	.07	−.02	−.22*	.03	−.19*	−.04	.05	−.19	.14	−.06	−.19*	−.04	.10
3. Child AD Comorbidity		–	−.03	.02	−.04	.04	−.06	.14	.12	.19	.18	−.11	.15	.08	.03	−.01	−.20	−.06	.02	.07	.45**	.36**	.13
Generation 1 Effects																							
4. Maternal Grandmother Care			–	−.19*	.49**	−.12	.03	−.05	.12	.02	−.30**	.32**	−.05	−.03	.11	.04	−.01	.10	−.18	.12	−.22*	−.10	.15
5. Maternal Grandmother Overprotection				–	−.11	.61**	.21	−.08	−.14	−.15	.13	−.07	.37**	.10	.01	−.16	.08	−.07	.07	.03	.01	−.06	−.06
6. Maternal Grandfather Care					–	−.20*	.07	−.01	.14	−.07	−.11	.21*	−.06	.10	.16	−.03	.02	.04	.01	.19†	−.23*	−.08	.18
7. Maternal Grandfather Overprotection						–	.05	−.22	−.06	−.08	.17	−.06	.32**	.13	−.03	−.07	.04	−.16	.02	−.02	.16	−.12	−.05
8. Paternal Grandmother Care							–	−.19†	.50**	−.43**	.02	.02	−.12	−.03	−.05	−.19†	.34**	−.21†	.16	.08	−.10	−.08	−.13
9. Paternal Grandmother Overprotection								–	−.41**	.62**	−.02	−.18	.23*	.00	.08	.34**	−.20†	.33**	−.04	−.08	.05	.12	−.06
10. Paternal Grandfather Care									–	−.24*	.08	.17	−.21†	−.10	−.12	−.15	.15	−.20†	−.09	.13	.11	−.07	.21†
11. Paternal Grandfather Overprotection										–	.05	.01	.20†	.03	.07	.48**	−.27*	.45**	.06	−.07	.16	.24*	.06
Generation 2 Effects																							
12. Mother Anxiety											–	.02	.07	.31**	−.12	.15	−.22†	−.18	.18†	−.02	.47**	.29**	.00
13. Mother Care (Self-Report)												–	−.20*	.23*	−.01	.19†	.16	−.10	.04	.08	−.22*	−.10	.18
14. Mother Overprotection (Self-Report)													–	.05	.20*	.00	−.14	.25*	.02	.21*	.18	−.01	−.06
15. Mother Care (Child-Report)														–	−.31**	.14	.10	−.12	.50**	−.26**	.08	.00	.07
16. Mother Overprotection (Child-Report)															–	.03	.03	.18	−.24*	.57**	−.05	.27*	−.07
17. Father Anxiety																–	−.36**	.20†	−.02	.00	.12	.31**	−.01
18. Father Care (Self-Report)																	–	−.09	.33**	.03	−.25*	−.29**	−.09
19. Father Overprotection (Self-Report)																		–	.07	.08	−.05	.16	−.02
20. Father Care (Child-Report)																			–	−.25**	.09	.02	−.10

	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
21. Father Overprotection (Child-Report)																				–	.03	.13	–.02
Generation 3 Outcomes																							
22. Internalizing Problems (Mother-Report)																					–	.48**	.01
23. Internalizing Problems (Father-Report)																						–	–.04
24. Phobia Severity																							–

Note.

† $p < .10,$

* $p < .05,$

** $p < .01$

Table 3

Model Fixed Effects for Mother Outcomes

| | Mother-Reports | | | | | | Child-Reports | | | |
| | Anxiety Problems | | Care | | Overprotection | | Mother Care | | Mother Overprotection | |
	Est. (SE)	d	Est. (SE)	d	Est. (SE)	d	Est. (SE)	d	Est. (SE)	d
Unconditional Growth										
Intercept	44.66 (.73)	–	31.22 (.30)	–	14.66 (.42)	–	31.23 (.30)	–	14.10 (.44)	–
Months since Intervention	−.01 (.03)	.00	−.02 (.01)†	−.01	−.10 (.01)**	−.02	.01 (.04)	.00	−.07 (.02)**	−.02
Marginal R^2 | **Conditional** R^2	.00	**.56**	.01	**.79**	.06	**.81**	.00	**.53**	.02	**.52**
Covariate Effects										
Child Age	.43 (.37)*	.07	−.95 (.28)**	−.34	−.50 (.39)	−.12	−.44 (.32)	−.14	−.01 (.40)	.00
Child Gender	.27 (1.29)	.04	−.01 (.56)	.00	−1.45 (.78)	−.37	.48 (.65)	.16	−1.98 (.82)*	−.53
AD Comorbidity	2.44 (1.29)†	.38	−.74 (.56)	−.27	.99 (.78)	.25	.67 (.65)	.22	.32 (.82)	.09
Treatment Group (Average Differences)	1.49 (1.43)	.26	−.67 (.58)	−.23	−1.21 (.82)	−.31	.19 (.69)	.06	−.65 (.87)	−.17
Treatment Group (Trends over Time)	−.10 (.06)	.00	−.01 (.03)	.00	.05 (.03)†	.01	−.04 (.03)	−.01	−.06 (.04)	−.02
Marginal R^2 | **Conditional** R^2	.04	**.56**	.10	**.77**	.12	**.81**	.02	**.52**	.06	**.52**
Generation 1 Effects										
Maternal Grandmother Care	−1.87 (.74)*	−.30	1.19 (.31)**	.47	−.24 (.43)	−.06	−.66 (.38)†	−.20	.68 (.48)	.18
Maternal Grandmother Overprotection	.49 (.82)	.08	−.26 (.34)	−.11	1.47 (.48)**	.39	−.01 (.42)	−.01	.29 (.53)	.08
Maternal Grandfather Care	.52 (.75)	.09	.16 (.31)	.06	.26 (.44)	.07	.78 (.38)*	.24	.59 (.48)	.16
Maternal Grandfather Overprotection	.13 (.82)	.02	.20 (.34)	.08	.53 (.48)	.14	.64 (.42)	.20	−.15 (.53)	−.04
Marginal R^2 | **Conditional** R^2	.05	**.55**	.22	**.80**	.21	**.81**	.05	**.60**	.09	**.52**
Generation 2 Effect										
Anxiety	–	–	−.23 (.14)†	−.10	.22 (.18)	.06	.31 (.22)	.09	−.27 (.29)	−.07
Marginal R^2 | **Conditional** R^2	–	–	.21	**.79**	.21	**.82**	.01	**.58**	.06	**.51**

Note.

Continuous predictors (i.e., child age, parenting behaviors) are centered and standardized. Previous effects are not shown in successive models to save space. Though not shown, significant covariates were carried forward to ongoing models. For Gender, girls received the higher code. For Treatment Group, the augmented treatment group received the higher code.

† $p < .10$,

* $p < .05$,

** $p < .01$.

Table 4

Model Fixed Effects for Father Outcomes

| | Father-Reports | | | | | | Child-Reports | | | |
| | Anxiety Problems | | Care | | Overprotection | | Father Care | | Father Overprotection | |
	Est. (SE)	d	Est. (SE)	d	Est. (SE)	d	Est. (SE)	d	Est. (SE)	d
Unconditional Growth										
Intercept	49.29 (1.00)	–	28.85 (.44)**	–	14.30 (.45)	–	29.99 (.46)	–	12.97 (.50)	–
Months since Intervention	–.08 (.04)*	–.01	–.01 (.02)	.00	–.09 (.02)**	–.02	–.02 (.03)	.00	–.10 (.02)**	–.02
Marginal R^2 | **Conditional** R^2	.01	**.71**	.00	**.81**	.04	**.78**	.00	**.68**	.04	**.61**
Covariate Effects										
Child Age	.34 (.54)	.04	–.09 (.44)*	–.02	–1.34 (.44)**	–.37	–.64 (.42)	–.16	–1.17 (.46)*	–.27
Child Gender	–.48 (1.80)	–.06	.67 (.84)	.18	–1.28 (.85)	–.35	1.68 (.80)*	.39	–.84 (.88)	–.19
AD Comorbidity	–.50 (1.81)	–.05	–1.19 (.85)	–.32	–.94 (.85)	–.26	–.30 (.80)	–.07	1.84 (.88)*	.42
Treatment Group (Average Differences)	–2.02 (2.01)	–.25	–.13 (.88)	–.03	.29 (.88)	.08	1.38 (.89)	.35	.69 (1.00)	.16
Treatment Group (Trends over Time)	.07 (.08)	.01	.01 (.04)	.00	–.04 (.04)	–.01	–.14 (.07)*	–.04	.02 (.04)	.00
Marginal R^2 | **Conditional** R^2	.02	**.72**	.06	**.81**	.14	**.78**	.06	**.68**	.11	**.61**
Generation 1 Effects										
Paternal Grandmother Care	.78 (.98)	.11	1.56 (.52)**	.46	–.25 (.50)	–.08	1.35 (.60)*	.34	.20 (.66)	.04
Paternal Grandmother Overprotection	–1.07 (1.17)	–.14	–.19 (.61)	–.05	.67 (.59)	.21	–1.10 (.68)	–.27	.93 (.75)	.21
Paternal Grandfather Care	–.34 (.96)	–.04	–.36 (.52)	–.10	.00 (.51)	.00	–1.40 (.59)*	–.35	.37 (.66)	.09
Paternal Grandfather Overprotection	4.12 (1.15)**	.63	–.54 (.59)	–.16	1.21 (.58)*	.38	.91 (.71)	.23	–.67 (.79)	–.14
Marginal R^2 | **Conditional** R^2	.17	**.65**	.19	**.80**	.28	**.78**	.08	**.71**	.12	**.61**
Generation 2 Effect										
Anxiety	–	–	–.81 (.23)**	–.24	–.12 (.29)	–.04	.10 (.37)	.02	.03 (.39)	.01
Marginal R^2 | **Conditional** R^2	–	–	.19	**.82**	.26	**.77**	.07	**.66**	.09	**.58**

Note.

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Continuous predictors (i.e., child age, parenting behaviors) are centered and standardized. Previous effects are not shown in successive models to save space. Though not shown, significant covariates were carried forward to ongoing models. For Gender, girls received the higher code. For Treatment Group, the augmented treatment group received the higher code.

† $p < .10$,

* $p < .05$,

** $p < .01$.

Table 5

Model Fixed Effects for Child Outcomes

| | Internalizing Problems | | | | Phobia Severity | |
| | Mother Report | | Father Report | | | |
	Est. (SE)	d	Est. (SE)	d	Est. (SE)	d
Unconditional Growth						
Intercept	56.75 (.89)	–	55.46 (1.01)	–	4.74 (.13)	–
Months since Intervention	−.26 (.04)**	−.12	−.20 (.05)**	−.03	−.08 (.01)**	−.10
Marginal R^2 | **Conditional** R^2	.12	**.58**	.06	**.63**	.18	**.34**
Covariate Effects						
Age	.32 (.76)	.05	−.26 (.97)	−.04	−.29 (.12)*	−.38
Gender	−2.25 (1.52)	−.37	−.29 (1.87)	−.04	.16 (.23)	.21
AD Comoibidity	7.50 (1.53)**	1.23	6.52 (1.88)**	.95	.20 (.24)	.26
Treatment Group (Average Differences)	.03 (1.66)	.00	−.76 (1.99)	−.11	.17 (.26)	.22
Treatment Group (Trends over Time)	.10 (.07)	.02	.13 (.10)	.02	.01 (.02)	.01
Marginal R^2 | **Conditional** R^2	.26	**.60**	.17	**.64**	.19	**.34**
Generation 1 Effects						
Maternal Grandmother Care	−1.84 (.87)*	−.33	–	–	.08 (.18)	.11
Maternal Grandmother Overprotection	.41 (.92)	.07	–	–	.10 (.19)	.13
Maternal Grandfather Care	−.20 (.87)	−.04	–	–	.10 (.19)	.13
Maternal Grandfather Overprotection	−.74 (.95)	−.13	–	–	−.11 (.19)	−.14
Paternal Grandmother Cars	–	–	.19 (1.18)	.03	.04 (.19)	.05
Paternal Grandmother Overprotection	–	–	−1.21 (1.38)	−.17	.12 (.22)	.16
Paternal Grandfather Care	–	–	−.81 (1.20)	−.11	.03 (.19)	.04
Paternal Grandfather Overprotection	–	–	1.51 (1.37)	.22	−.08 (.22)	−.11
Marginal R^2 | **Conditional** R^2	.30	**.58**	.18	**.64**	.22	**.39**
Generation 2 Effects						

	Internalizing Problems				Phobia Severity	
	Mother Report		Father Report			
Mother Anxiety	2.45 (.58)**	.45	–	–	.13 (.15)	.32
Mother Care (Mom-Report)	−1.30 (.65)†	−.27	–	–	.00 (.16)	.00
Mother Overprotection (Mom-Report)	1.80 (.67)**	.32	–	–	−.01 (.16)	−.02
Mother Care (Child-Report)	.23 (.57)	.07	–	–	−.22 (.17)	−.55
Mother Overprotection (Child-Report)	−.17 (.63)	−.07	–	–	.43 (.20)*	1.07
Father Anxiety	–	–	2.08 (.75)**	.33	.20 (.15)	.50
Father Care (Dad-Report)	–	–	−1.45 (.84)†	−.23	−.01 (.16)	−.02
Father Overprotection (Dad-Report)	–	–	1.40 (.82)†	.22	−.61 (.17)**	−1.52
Father Care (Child-Report)	–	–	.74 (.83)	.12	.01 (.22)	.02
Father Overprotection (Child-Report)	–	–	1.32 (.83)	.21	.00 (.21)	.00
Marginal R^2 | **Conditional R^2**	.39	**.63**	.28	**.70**	.26	**.34**

Note.

† $p < .10$,

* $p < .05$,

** $p < .01$.

Continuous predictors (i.e., child age, parenting behaviors) are centered and standardized. Though not shown, significant covariates were carried forward to ongoing models. Marginal R^2 accounts for fixed effects only. Conditional R^2 accounts for both fixed and random effects. For Gender, girls received the higher code. For Treatment Group, the augmented treatment group received the higher code.