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## Attachment, Household Chaos, and Children's Health

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### Abstract

**Introduction**—Despite growing interest in the links between sociocontextual factors and children’s behavioral functioning, few studies have investigated how such factors, in combination, relate to health outcomes or vary across mental and physical well-being. We evaluated the direct and interactive associations of parental attachment and household chaos with preschool-aged children’s mental and physical health.

**Method**—Ninety-four parents completed questionnaires about their attachment styles, disorganization and confusion in the home, and their children’s health functioning.

**Results**—Attachment avoidance and anxiety in parents predicted poorer mental health in children, particularly in highly chaotic homes. Moreover, parental attachment anxiety, but not avoidance, predicted poorer reported physical health in children, and, in conjunction with chaotic homes, more hospitalizations.

**Discussion**—The results help illuminate how multiple domains in children’s immediate environment jointly influence their physical and mental health, and how these influences may vary across domains of functioning. Findings have implications for targeting interventions to have impact across facets of children’s health.

### Keywords

child physical health; child mental health; household chaos; adult attachment

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In recent years, increasing attention has been directed toward understanding the ways in which sociocontextual factors influence children’s well-being, in physical and mental health domains (Boyce & Ellis, 2005; Evans, 2006). In the present study, we examined how two key components of young children’s social worlds, namely their parents and home environment, relate to the children’s physical and mental health. Critically, we focused on the direct and interactive links of caregiver attachment and chaos in the home – factors that

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are central to children's development – with children's well-being. We also simultaneously examined physical and mental health in order to identify common (and distinct) correlates.

Attachment refers to developed expectations about the responsiveness of others, especially in times of need (Bowlby, 1969/1982). In his seminal work on attachment, Bowlby largely focused on infant-caregiver attachment, however, he also theorized that attachment had life-long implications, including for parenting (Bowlby, 1979). In the 1980s, others focused specifically on examining attachment in adulthood (Hazan & Shaver, 1987; Main, Kaplan, & Cassidy, 1985). Attachment styles in adults are characterized by two dimensions: avoidance, the tendency to reject emotional closeness with others; and anxiety, a preoccupation with relationships, including fear of rejection and abandonment (Fraley & Shaver, 2000). Attachment style has a wide range of implications for behavior and adaptive functioning. A recent review found that self-reported attachment in parents predicted their sensitivity, responsiveness, and supportive behavior toward their children (Jones, Cassidy, & Shaver, 2015). Avoidance is consistently associated with lower responsiveness and less support of children (Edelstein et al., 2004; Goodman, Quas, Batterman-Faunce, Riddlesberger, & Kuhn, 1997; Selcuk et al., 2010). Findings regarding anxiety in parents are similar, but more variable (e.g. Goodman et al., 1997; Roisman et al., 2007). Sensitive and supportive care is essential in buffering children against health risks (Miller et al., 2011) and promoting children's socioemotional (Belsky, 1990; Giallo, Cooklin, Wade, D'Esposito, & Nicholson, 2014; Luecken, Roubinov, & Tanaka, 2013; Van Loon, Van de Ven, Van Doesum, Witteman, & Hosman, 2014), and self-regulatory (Bernier, Carlson, & Whipple, 2010; Luecken et al., 2013; Spangler, Schieche, Ilg, Maier, & Ackermann, 1994) abilities. Children of parents high in avoidance, anxiety, or both, therefore, may have poorer physiological and behavioral regulation when faced with challenges and may have increased health problems.

Adults high in avoidance or anxiety are also more likely to suffer from poor mental health (Brennan & Shaver, 1995; Feeney & Ryan, 1994; Gumley, Taylor, Schwannauer, & MacBeth, 2014; Kotler, Buzwell, Romeo, & Bowland, 1994; Mickelson, Kessler, & Shaver, 1997; Rholes & Simpson, 2004). And, poorer mental health in parents is associated with poorer mental (Essex, Klein, Cho, & Kraemer, 2003; Van Loon et al., 2014) and physical (Lim, Wood, & Miller, 2008; Shalowitz, Berry, Quinn, & Wolf, 2001; Wolf, Miller, & Chen, 2008) health in children. Thus, to the extent that parents higher in attachment avoidance or anxiety have elevated mental health problems, their children may also exhibit poorer mental and physical health.

Beyond parents' attachment, children's home environments exert a range of influences on their functioning. Children living in chaotic households (e.g., lack of organization, confusing and unpredictable schedules, loud noise) exhibit more behavioral problems (Berry et al., 2016; Coley, Lynch, & Kull, 2015; Deater-Deckard et al., 2009; Dumas et al., 2005; Gregory, Eley, O'Connor, Rijdsdijk, & Plomin, 2005; Hanscombe, Haworth, Davis, Jaffee, & Plomin, 2011; Jaffee, Hanscombe, Haworth, Davis, & Plomin, 2012; Mills-Koonce et al., 2016; Valiente, Lemery-Chalfant, & Reiser, 2007). These behavioral problems may result because disorganization and a lack of routines preclude children from developing self-regulatory abilities or may lead to chronic states of anticipatory arousal in children (Brody & Flor, 1997; Evans, Gonnella, Marcynyszyn, Gentile, & Salpekar, 2005). Indeed, greater

chaos is also related to lower quality parenting (Vernon-Feagans, Garrett-Peters, Willoughby, Mills-Koonce, & Key, 2012) and higher levels of distress in the family, which are both associated with increases in children's behavior problems (Cummings & Davies, 2002; Dumas et al., 2005; Grych, Fincham, Jouriles, & McDonald, 2000; Mills-Koonce et al., 2016).

We are aware of two studies that have addressed the impact of household chaos on children's physical health (Coley et al., 2015; Kamp Dush, Schmeer, & Taylor, 2013). Both found that chaos predicted poorer physical health in children, beyond the contributions of SES, in primarily low-income samples. Other research similarly shows that elements of household chaos affect children's health. Children in families with less established routines engage in fewer healthy behaviors (Greening, Stoppelbein, Konishi, Jordan, & Moll, 2007). High levels of noise, lack of routine, and unpredictability can lead to chronic arousal or distress (Evans et al., 2005). The detrimental physiological impact associated with this chronic arousal (Chen, Cohen, & Miller, 2010; Evans, Lercher, Meis, Ising, & Kofler, 2001) may undermine children's immune functioning. Lack of structure, noise, and disorganization may also lead to increased hazards and injury risk in children's environments (Matheny, 1987).

In light of extant research, we hypothesized that children of insecurely attached parents would evince increased mental and physical health symptoms. Specifically, our first hypothesis (H1) was that children of parents reporting higher levels of attachment insecurity (avoidance, anxiety, or both), in their adult relationships, would evince higher rates of externalizing symptoms (H1a), internalizing symptoms (H1b), general health problems (H1c), and overnight hospitalizations (H1d). We expected that children in more chaotic home environments would also fare poorly on these mental and physical health outcomes (H2a-c), although these hypotheses were tentative given limited existing empirical evidence. Finally, we expected interactions between parental attachment and household chaos (H3). We hypothesized that children whose parents were insecurely attached, and who lived in highly chaotic homes, would have the highest levels of mental (H3a,b) and physical health problems (H3c,d) given that the attachment system is most strongly activated in the face of stress (Bowlby, 1982). Children of parents low on avoidance and anxiety were not expected to vary in health functioning as a result of home chaos.

## Method

### Participants

Ninety-four parents (96.8% mothers)<sup>1</sup> of children (55% girls), ages 54–71 months ( $M = 63.04$ ,  $SD = 4.35$ ) served as participants. The children about which parents were reporting were 68.1% Caucasian, 5.5% Asian, 4.4% Hispanic, 1.1% African American, and 20.9% "other" or multi-ethnic. Three parents declined to provide ethnicity information. Most parents had a college education (mothers 78.4%, fathers 75%), and most family incomes were above \$80,000. Families were originally recruited from a database of parents interested in university research and flyers posted in family-friendly locations (e.g., day care facilities,

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<sup>1</sup>When analyses were repeated with fathers excluded, results remained consistent.

parks) to participate in a longitudinal project concerning children's health during the transition to kindergarten. Only data collected from parents at the outset of the study, before children began kindergarten, are reported here. Sixteen parents did not complete some portion of the questionnaires, usually due to time constraints. Thus, sample sizes vary slightly across the analyses.

### Procedures and Measures

All procedures were approved by appropriate review boards. Participation took place at families' homes or, for a few families, in a university laboratory (families were given the option of either location, those who selected the university did so because of convenience or proximity to other family activities). Following parental consent, a researcher asked parents to complete a packet of questionnaires in a quiet location while the researcher interacted with the child. After the questionnaires were complete, parents were thanked for their participation, and subsequent visits were scheduled for the larger, longitudinal project. Questionnaires relevant to the current study are as follows:

**Adult attachment**—The Relationship Questionnaire (RQ) is a widely-used self-report measure of adult attachment (Bartholomew & Horowitz, 1991). Respondents select which of four described attachment styles best describes them and rate, on 7-point scales (not at all like me to very much like me), how well each of the four descriptions matches their relationship style. Scores on the RQ demonstrate moderate stability over an 8-month period and high discriminant validity (Griffin & Bartholomew, 1994; Scharfe & Bartholomew, 1994). The four similarity ratings were subjected to a factor analysis (see Griffin & Bartholomew, 1994) to create scores for attachment avoidance and anxiety. As expected, two components were retained. Self-rated similarity to style B (high avoidance, high anxiety), and style D (high avoidance, low anxiety) mapped on the first factor with loadings .66. Self-rated similarity to style B (high avoidance, high anxiety) and style C (low avoidance, high anxiety) mapped on the second factor with loadings .25. Because both items loading on the first factor were characterized by high avoidance this factor was labelled "avoidance". Because both items loading on the second factor were characterized by high anxiety, this factor was labelled "anxiety". The continuous avoidance and anxiety scores were used as the attachment measures in all relevant analyses in the present research. The avoidance scores ranged from -1.49 to 2.17 ( $M = 0.00$ ,  $SD = 1.00$ ) and anxiety scores ranged from -1.56 to 3.32 ( $M = 0.00$ ,  $SD = 1.00$ ).

**Household chaos**—The Confusion, Hubbub, and Organization Scale (CHAOS) is a 15-item, standardized questionnaire that measures household confusion and disorganization (Matheny, Wachs, Ludwig, & Phillips, 1995). The measure is internally consistent and valid (Dumas et al., 2005; Matheny et al., 1995). Cronbach's  $\alpha$  in the present study was 0.57. Parents indicate whether statements (e.g., "It's a real zoo in our home.") are "true" (1) or "false" (0) of their household. Scores are summed to create a composite chaos score. In the current study, there were instances in which parents did not respond to one or more items ( $N=16$ ) on the scale. Thus, the summed scores were not appropriate for this dataset. Instead, chaos scores were calculated as the percentage of completed items endorsed. Parents

endorsed anywhere from 6.3% to 62.5% of the CHAOS items to which they responded ( $M = 25.9\%$ ,  $SD = 13.3\%$ ).

**Children's health functioning**—Children's mental and physical health functioning were assessed via the Health and Behavior Questionnaire (HBQ) (Boyce et al., 2002). This reliable and valid measure of children's mental and physical health is standardized for use with four to eight year-olds (Essex et al., 2002; Lemery-Chalfant et al., 2007). The HBQ has moderate to high internal consistency. It includes a list of statements about emotions and behaviors. Parents rate their child's similarity using a 3-point scale (never/not true to often/very true). Composite scores for internalizing (e.g., depression, anxiety) and externalizing (e.g., conduct problems, oppositional defiance) symptoms are calculated. In the present study, parent ratings of their children's internalizing symptoms averaged 0.32 ( $SD = 0.21$ ); Cronbach's  $\alpha = 0.82$ , and externalizing symptoms averaged 0.29 ( $SD = 0.22$ ); Cronbach's  $\alpha = 0.81$  on the 3-point scale. Because of positive skew, square-root-transformed versions of both variables were used in all relevant analyses.

Other questions on the HBQ ask about the child's general physical health (e.g. "In general, how much difficulty, pain, or distress does your child's health cause him or her?"). Responses are on a five-point scale (not at all, extremely) and are averaged to create a general health problem score. The mean general health problem score in the present study was 1.40 ( $SD = 1.61$ ). Another question asks how many times the child has stayed overnight at the hospital because of an illness or injury. The distribution of parents' responses in the current sample was zero-heavy (only 19.3% of children,  $N = 17$ , experienced one or more overnight stays at the hospital). A dichotomous "no overnight hospitalizations" versus "one or more" was created.

**Adults health functioning**—The Brief Symptoms Inventory (BSI) (Derogatis & Melisaratos, 1983) is a widely used, valid, and reliable measure of adult mental health in which respondents rate the frequency of symptoms over the past week using a 5-point scale (never to always). The BSI is composed of nine subscales, including somatization, which was examined in preliminary analyses in the present study. The somatization subscale is composed of seven interrelated items. Internal reliability for somatization was high in the present study, Cronbach's  $\alpha = 0.74$ . Parents reported a mean somatization score of 1.18 ( $SD = 0.36$ ).

## Results

Child age ( $r_s = -.00$  to  $.16$ ) and gender ( $t_s < -1.25$ ) and parent gender ( $t_s < 0.12$ ) were unrelated to the variables of interest and are not considered further. To test the study hypotheses, we conducted three hierarchical regressions with the outcomes: children's externalizing (a) symptoms, internalizing symptoms (b), and general physical health (c) and one primary logistic regression with two follow-up models. The primary dichotomous outcome was whether the child had experienced an overnight hospitalization (d). Parental avoidance, parental anxiety, and household chaos were entered at Step 1 in order to test the main effects of attachment insecurity (H1) and household chaos (H2) on children's health. All two-way interactions were entered at Step 2, and in the linear regression models, the

three-way interaction term was entered at Step 3. These interactions tested the potential combined effects of parental attachment and household chaos on children's health (H3). Individual predictor variables were centered prior to the calculation of interaction terms to avoid issues of multicollinearity. The three-way interaction was not included in the logistic regression because few parents reported their child experienced an overnight hospitalization, leading to instances where cells in the higher-order interaction matrix had no cases.

A point about our analytic approach needs to be made. Because insecure adult attachment has been linked to greater self-reporting of mental and physical health symptoms, we tested the possibility that associations between parents' attachment and children's health functioning were due to mental health reporting biases in parents. Specifically, we repeated all analyses with parental somatization as an additional predictor at Step 1. Patterns of results remained consistent, although the sample size was reduced due to missing data. Thus, parental somatization was not considered in the main analyses.

### Children's Mental Health

First children's externalizing symptoms were considered. Parental avoidance alone (H1a), and parental avoidance in conjunction with anxiety and chaos (H3a), predicted children's externalizing symptoms (Table 1). As shown in Figure 1, among parents reporting high anxiety, household chaos predicted higher externalizing symptoms. Among parents reporting low attachment avoidance and anxiety, household chaos was unrelated to children's externalizing symptoms. As shown in Figure 2, among parents high in avoidance and low in anxiety, household chaos again predicted higher externalizing symptoms, whereas, unexpectedly, among parents high in avoidance and anxiety, household chaos was unrelated to externalizing symptoms. Taken together, the results suggest that children of parents who report high attachment avoidance and anxiety or low attachment avoidance and anxiety are not differentially affected by chaos in the home. However, when either parental attachment anxiety or avoidance is elevated (but not both), children's externalizing symptoms increase as chaos in the household increases. In terms of internalizing symptoms, parental avoidance was the only significant predictor (Table 2). Children of parents with higher attachment avoidance had higher reported internalizing symptoms (H1b). These findings largely support our hypotheses in that attachment insecurity predicted more mental health problems (H1a,b) and attachment insecurity interacted with household chaos to predict some mental health problems, namely, externalizing symptoms (H3a).

### Children's Physical Health

Similar to the expected associations with mental health, we hypothesized main effects of attachment avoidance and anxiety (H1c,d) and household chaos (H2c,d) on children's physical health. We also expected the children of parents high on either of the attachment dimensions, who were living in high chaos homes, to have the poorest physical health (H3c,d). Only attachment anxiety predicted general physical health (Table 3) (H1c), and attachment anxiety, in conjunction with household chaos, predicted the likelihood of experiencing at least one overnight hospitalization (Table 4) (H3d). We followed up the interaction by re-running the model predicting likelihood of overnight hospitalizations, each time setting one of the predictor variables at high or low values to examine movement in



each model for the variable kept constant (Aiken & West, 1991). Consistent with our hypotheses, the likelihood of experiencing at least one overnight hospitalization was greatest for children living in high chaos homes with parents high in attachment anxiety, OR = 5.53, 95% CI = 1.39, 21.99,  $p = .015$ .

## Discussion

Understanding the ways that parents and the environment relate to, and may shape, children's mental and physical health is critical to early intervention and prevention efforts. Our results help to advance this understanding by demonstrating the need to concurrently consider multiple aspects of children's immediate social context—in the present study, parents and the environment—when identifying children at risk for both mental and physical health problems.

Consistent with limited prior work concerning the relations between parents' attachment and children's mental health (Berant, Mikulincer, & Shaver, 2008; Karabekiroglu & Rodopman-Arman, 2011; Whiffen, Kerr, & Kallos-Lilly, 2005), parental avoidance predicted increased internalizing symptoms in children. In addition, though, when attachment anxiety and avoidance were combined with home environment in the present study, their combination meaningfully predicted externalizing symptoms in children. Specifically, parents who were the most distracted (high anxiety), or the least overtly distracted (high avoidance), by their attachment relationships seemed to have children more heavily influenced by their physical environment. Perhaps this is because these parents were the least likely to be attentive to their child, in the first instance because of distraction and in the second, because of overall withdrawal.

We were surprised that the rates of externalizing behaviors were similar for children whose parents were low on both attachment avoidance and anxiety and for children of parents who were high on both, regardless of home environment. In the former case, perhaps children are buffered against environment effects because of sensitive caregiving. In the latter case attachment is highly variable and it may manifest in a greater variety of child outcomes. Indeed, the variance in externalizing behaviors was slightly elevated for these children. As this study is the first to simultaneously examine the effects of adult anxiety and avoidance on children's externalizing behaviors, further investigation is necessary.

In regards to parental attachment and children's physical health, parental anxiety was associated with poorer reported general health in children, and in conjunction with household chaos, with the likelihood of overnight hospitalizations. Parents who are overly concerned with relationships provide limited support to their children during stressful events, perhaps because of their preoccupation with their own relationship needs (see Jones et al., 2015 for a review). This lack of sensitive and responsive care may inhibit the development of children's physiological regulation, which may lead to poorer physical health. Further, insecurely attached adults behave in less supportive and sensitive ways to their children and endorse the use of harsh disciplinary practices (Goodman et al., 1997; Rholes, Simpson, Blakely, Lanigan, & Allen, 1997), which may contribute to similar attachment styles in children (Verhage et al., 2016), along with the resultant health problems



often evident in insecurely attached individuals (McCartney, Owen, Booth, Clarke-Stewart, & Vandells, 2004; Munson, McMahon, & Spieker, 2001). Finally, parents' own experiences of distress or tendency to perceive events as stressful may also inhibit their ability to attend to their children or evaluate a chaotic environment for potential hazards. This may place children at risk for injuries or illnesses, including those that result in overnight hospital visits.

Although the present study advances knowledge about the risk factors in the immediate environment for young children's health functioning, there are limitations. First, the sample consisted of middle and upper socioeconomic (SES) families. The extent to which these patterns hold across families from varying SES backgrounds is not yet known, but is of importance given that SES is a powerful predictor of health (Adler et al., 1994; Chen, Matthews, & Boyce, 2002; Condliffe & Link, 2008; Evans, 2016; Lynch, Smith, Kaplan, & House, 2000). Second, the study's questionnaires were completed by parents. Although parent reports are frequently used in developmental and pediatric research, multiple indices of parental attachment (e.g. to romantic partners and other family members), household chaos (e.g. observational measures), and children's health (e.g. reports from other caregivers, objective measures such as doctor visits and immune functioning) should be considered in future research. Third, these data were cross-sectional and correlational and thus we cannot infer the causal direction of our findings. Future research is needed to follow up these findings with a longitudinal design, ideally, one that examines changes in health outcomes for children who experience shifts in caregiver attachment styles or household chaos, for example, via an experimentally manipulated intervention.

In conclusion, these findings demonstrate that parent characteristics and structure in children's home environments are associated with children's mental and physical health. This study demonstrated that multiple aspects of children's environments interactively link to children's health suggesting that future work should continue to simultaneously consider variables from multiple domains central to children's lives. These results also support intervention efforts for children's mental and physical health that heavily involve the children's primary caregiver(s), and tentatively suggest that such intervention efforts could be improved by intervening at multiple levels – including at the level of the caregiver (e.g. attachment style) and the home environment (e.g. household chaos). Further, these findings complement recent theoretical discussions and empirical findings highlighting the co-morbidity of health problems (Adams, Wisk, & Chien, 2017; Boyce & Ellis, 2005) by showing that the same aspects of children's environments can have implications for multiple health domains. Thus, research aimed at identification of risk factors will benefit from continued exploration of multiple domains of children's health simultaneously. Continued investigations of this topic may identify key risk factors in the development of children's health problems and help target interventions to reduce children's risk.

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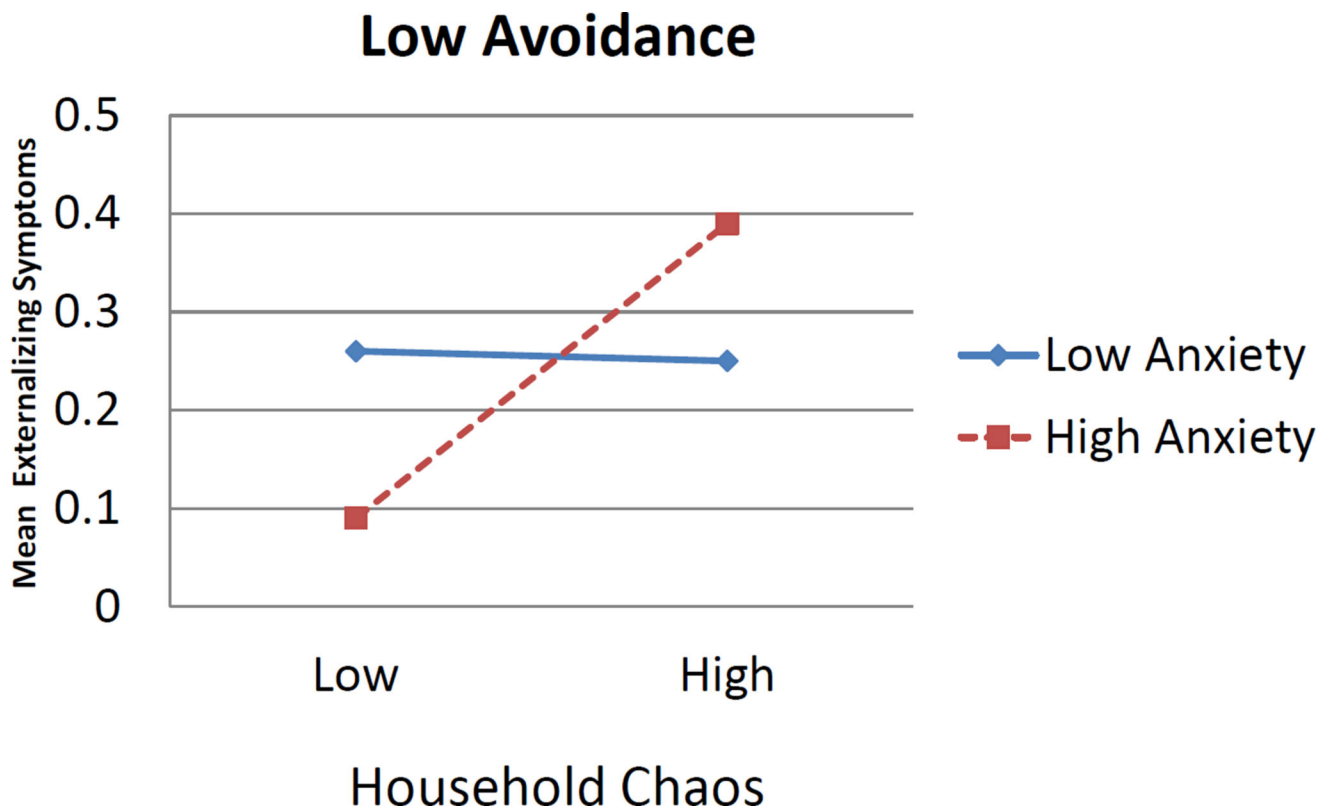
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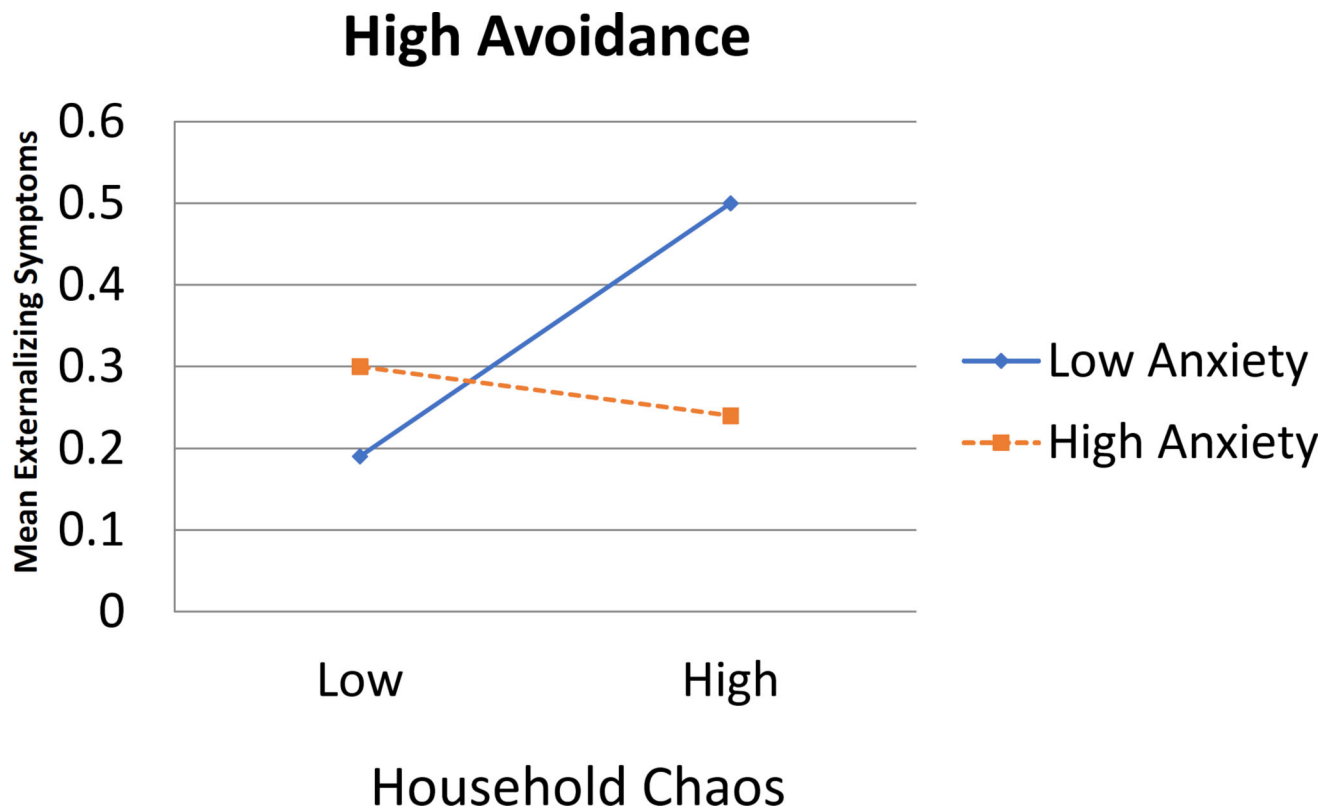
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**Figure 1.**

Plot of the significant interaction predicting children's externalizing symptoms as a function of their parents' attachment anxiety and household chaos among the children of parents who scored lower on attachment avoidance.



**Figure 2.**

Plot of the significant interaction predicting children's externalizing symptoms as a function of their parents' attachment anxiety and household chaos among the children of parents who scored higher on attachment avoidance.



Regression Analysis Predicting Externalizing Symptoms from Parent Attachment and Household Chaos

**Table 1**

	<b>B</b>	<b>SE</b>	<b>95% Confidence Interval for B</b>
Step 1			
Parental avoidance	0.05*	0.02	0.00 – 0.10
Parental anxiety	-0.02	0.02	-0.06 – 0.03
Household chaos	0.00 <sup>†</sup>	0.00	0.00 – 0.01
Step 2			
Parental avoidance × Household chaos	0.00	0.00	-0.01 – 0.00
Parental anxiety × Household chaos	0.00	0.00	-0.01 – 0.00
Parental avoidance × Parental anxiety	0.01	0.02	-0.03 – 0.06
Step 3			
Parental avoidance × Parental anxiety × Household chaos	-0.01*	0.00	-0.01 – 0.00

Note.  $R^2 = 0.10$  for Step 1,  $p = .040$ ;  $R^2 = .05$  for Step 2,  $p = .250$ ;  $R^2 = .07$  for Step 3,  $p = .017$ ;

<sup>†</sup>  $p < .10$ ,

\*  $p < .05$

Regression Analysis Predicting Internalizing Symptoms from Parent Attachment and Household Chaos

**Table 2**

	<b>B</b>	<b>SE</b>	<b>95% Confidence Interval for B</b>
<b>Step 1</b>			
Parental avoidance	0.05*	0.02	0.00 – 0.09
Parental anxiety	0.04 <sup>+</sup>	0.02	0.00 – 0.09
Household chaos	0.00	0.00	0.00 – 0.01
<b>Step 2</b>			
Parental avoidance × Household chaos	0.00	0.00	0.00 – 0.01
Parental anxiety × Household chaos	0.00	0.00	-0.01 – 0.00
Parental avoidance × Parental anxiety	0.04 <sup>+</sup>	0.02	-0.01 – 0.08
<b>Step 3</b>			
Parental avoidance × Parental anxiety × Household chaos	0.00	0.00	-0.01 – 0.00

Note.  $R^2 = 0.11$  for Step 1,  $p = .030$ ;  $R^2 = .06$  for Step 2,  $p = .200$ ;  $R^2 = .02$  for Step 3,  $p = .254$ ;

<sup>+</sup>  $p < .10$ ,

\*  $p < .05$

Regression Analysis Predicting General Physical Health from Parent Attachment and Household Chaos

**Table 3**

	<b>B</b>	<b>SE</b>	<b>95% Confidence Interval for B</b>
Step 1			
Parental avoidance	0.16	0.18	-0.20 – 0.52
Parental anxiety	0.55**	0.18	0.20 – 0.90
Household chaos	0.01	0.01	-0.02 – 0.04
Step 2			
Parental avoidance × Household chaos	-0.01	0.02	-0.04 – 0.02
Parental anxiety × Household chaos	0.00	0.02	-0.03 – 0.04
Parental avoidance × Parental anxiety	-0.33 <sup>+</sup>	0.17	-0.66 – 0.01
Step 3			
Parental avoidance × Parental anxiety × Household chaos	-0.02	0.02	-0.05 – 0.02

Note. R<sup>2</sup> = 0.13 for Step 1, p = .013; R<sup>2</sup> = .05 for Step 2, p = .209; R<sup>2</sup> = .01 for Step 3, p = .319;

<sup>+</sup> p < .10,

\* p < .05,

\*\* p < .01

**Table 4**  
 Logistic Regression Analysis Predicting Overnight Hospitalizations from Parent Attachment and Household Chaos

	<b>B</b>	<b>Wald</b>	<b>Odds Ratio</b>	<b>95% Confidence Interval</b>
Step 1				
Parental avoidance	-0.18	0.32	0.83	0.45 – 1.56
Parental anxiety	0.50	3.19 <sup>+</sup>	1.65	0.95 – 2.86
Household chaos	-0.03	1.03	0.97	0.93 – 1.03
Step 2				
Parental avoidance × Household chaos	-0.08	3.84 <sup>+</sup>	0.93	0.86 – 1.00
Parental anxiety × Household chaos	0.10	5.72 <sup>*</sup>	1.11	1.02 – 1.20
Parental avoidance × Parental anxiety	0.37	1.17	1.45	0.74 – 2.83

<sup>+</sup>  $p < .10$ ,

<sup>\*</sup>  $p < .05$