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An experimental test of the impact of adolescent anxiety on parental sick role reinforcement behavior



Sarah A. Bilsky^{a,*}, Renee M. Cloutier^b, Teah-Marie Bynion^a, Matthew T. Feldner^{a,c}, Ellen W. Leen-Feldner^{a,**}

^a Department of Psychological Science, University of Arkansas, Fayetteville, AR, United States

^b Department of Psychology, University of North Texas, Denton, TX, United States

^c Laureate Institute for Brain Research, Tulsa, OK, United States

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ABSTRACT

A large body of work links parental sick role reinforcement behavior to adolescent panic vulnerability. To date, however, little work has examined the role of the adolescent in this process. The current study addressed this gap in the literature, using a novel method to experimentally test the impact of adolescent anxiety during a strawbreathing task on parental propensity to engage in sick role reinforcement behavior. An unselected sample of 51 early adolescents (26 female, 10–14 years) and their parents participated in the study. Adolescents were trained to mimic a straw-breathing task, and adolescent reactions to the task were scripted. Parents were randomly assigned to watch their adolescent react either a) anxiously or b) non-anxiously to the straw-breathing task. Parents who viewed their adolescent react anxiously ended the task earlier, reported that they would reinforce more sick role behavior, and reported more negatively valenced reactions during the task than parents who viewed their adolescent react non-anxiously to the task. No group differences emerged in terms of parental self-reported or physiological arousal during the task. Results suggest that adolescent anxiety increases parental sick role reinforcement behavior. Findings are discussed in terms of future directions for reducing parenting behaviors thought to increase vulnerability for panic among adolescents.

1. Introduction

Scholars have highlighted the need for constructing etiological models of panic disorder that include developmental factors that may increase risk for panic symptomology (e.g., Craske, 2003). This is a pressing concern, as panic and related complaints are associated with high societal costs and impairment (Lépine, 2002), begin early in life, and have a chronic course (Kessler, Alonso, Chatterji, & He, 2014). For example, evidence suggests that adults with panic disorder tend to unnecessarily utilize high-cost health care resources (e.g., a panic attack leads to a costly trip to the emergency room; Buccelletti et al., 2013; Lynch & Galbraith, 2003). Further, these processes begin early in life. Evidence from the Netherlands suggest that families with anxious offspring spend 21 times as much on healthcare as families with non-anxious offspring (Bodden, Dirksen, & Bogels, 2008). For this reason, it is critical to consider factors that may increase panic-related vulner-ability early in life. The current paper seeks to better understand the

link between adolescents' description of their bodily experiences and parental responses that may engender panic vulnerability in offspring.

Adolescence is a core-risk period for the onset of panic attacks (Beesdo, Knappe, & Pine, 2009). This may be due, in part, to the onset of puberty. Although puberty *itself* is not a risk factor for psychopathology, as it is a normative developmental process, it is nonetheless a sensitive period during which there is an increased likelihood that anxiety and related symptoms will develop among vulnerable youth (Reardon, Leen-Feldner, & Hayward, 2009). Indeed, among youth vulnerable by virtue of anxiety sensitivity, advancing pubertal status predicts increased anxious reactivity to bodily arousal (Leen-Feldner et al., 2006). Primary and secondary sexual characteristics typically emerge in early-to mid-adolescence (i.e., between 10 and 14 years) with most youth in this age range experiencing the physiological and hormonal changes that characterize puberty (Herman-Giddens, 2007; Susman & Rogol, 2004). Consequently, the emergence of new, ambiguous bodily sensations is common during this developmental window,

E-mail addresses: sabilsky@uark.edu (S.A. Bilsky), eleenfe@uark.edu (E.W. Leen-Feldner).

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^{*} Corresponding author.

^{**} Corresponding author. University of Arkansas, Department of Psychological Science, Anxiety Research Program, 216 Memorial Hall, Fayetteville, AR, 72701, United States.

making it a fecund phase in which to examine panic-related processes.

Learning theories of panic suggest that the repeated pairing of bodily sensations (e.g., racing heart, sweating palms) with fear results in a classically conditioned association between somatic arousal and fear (Bouton, Mineka, & Barlow, 2001). Over time, bodily sensations come to elicit increasing anxious arousal and ultimately, for some, panic attacks. Operant contingencies maintain avoidance of bodily arousal and limit opportunities for extinction learning (Craske, Treanor, Conway, Zbozinek, & Vervliet, 2014; Mowrer, 1960). Key socializing agents, such as parents, are theorized to facilitate these learning processes among offspring (Watt, Stewart, & Cox, 1998). Consistent with this perspective, research suggests that parents can facilitate fear of bodily arousal among offspring, via vicarious conditioning, verbal transmission of information, as well as positive and negative reinforcement (Ehlers, 1993; Leen-Feldner, Blumenthal, Babson, Bunaciu, & Feldner, 2008; Stewart et al., 2001; Watt & Stewart, 2000; Watt et al., 1998). For instance, if a parent responds repeatedly to an adolescent female's somatic complaints (e.g., gastrointestinal distress) by becoming visibly distressed, telling her the symptoms could be dangerous, or allowing her to skip an aversive after-school activity, she develops a learning history that may increase panic risk. Notably, adolescent reports of parental "sick role reinforcement" (i.e., rewarding behavior consistent with reporting/focusing on somatic perturbation) are associated with elevated psychological vulnerabilities for panic (anxiety sensitivity) and panic symptoms (Knapp, Frala, Blumenthal, Badour, & Leen-Feldner, 2013). Further, experimental evidence suggests parental modeling of anxious behavior in response to bodily arousal (vicarious conditioning) increases adolescent offspring escape behavior in response to bodily arousal (Bunaciu et al., 2014). Taken together, evidence converges to suggest that parental behavior in the context of somatic perturbation is important to consider as a factor that could increase adolescent panic-related vulnerability.

Few studies have examined the role of adolescents in influencing how parents respond to reports of bodily arousal. This relative neglect is unfortunate, because a large body of work suggests youth influence the parenting they receive (i.e., offspring-driven effects; O'Connor, 2002). Critically, adolescence is a developmental period characterized by a modest re-negotiation of the parent-child relationship (Laursen & Collins, 2009) in which youth seek to more directly influence the outcome of parent-child interactions (Wray-Lake, Croute, & McHale, 2010). Indeed, evidence suggests that adolescent anxiety influences parenting behavior. For example, experimental and behavioral genetic work indicates that mothers demonstrate more overinvolved behavior with anxious as compared to non-anxious children and early adolescents (Eley, Napolitano, Lau, & Gregory, 2010; Hudson, Doyle, & Gar, 2009). Given the profound bodily changes that characterize adolescence (Whitehead, Busch, Heller, & Costa, 1986), offspring-driven effects may be particularly relevant in the context of sick role reinforcement behavior. Specifically, adolescents' descriptions of their somatic experiences may influence parenting behavior. For example, parents may be more inclined to encourage sick role behavior (e.g., staying home from school, providing special attention) if an adolescent describes benign somatic symptoms as anxiety provoking (e.g., "I feel lightheaded, and I'm worried that I am going to pass out.") as compared to an adolescent who reports symptoms in a non-anxious manner (e.g., "I feel lightheaded But I doubt it's anything to worry about."). Indeed, in a recent study, when parents read a vignette in which they were asked to imagine their adolescent offspring describing ambiguous physical sensations anxiously, parents reported that they would reinforce significantly more sick role behavior than when they read a vignette in which they were asked to imagine that their offspring described ambiguous physical sensations non-anxiously (Bilsky, Feldner, Bynion, Rojas, & Leen-Feldner, 2018).

Finally, although a limited body of research has examined parental behavior in response to adolescent anxiety, no work has examined parental affect as a function of adolescent anxiety. This gap needs to be addressed; if offspring displays of anxiety increase parental distress, then aspects of the parent's affective experience, such as distorted thinking and cognitive-behavioral efforts to manage the distress, may drive parental interactions with their child (e.g., Ginsburg, Silberman, & Kurtines, 1995). Indeed, theoretical work suggests that if parents become distressed in the presence of offspring anxiety, they may engage in maladaptive parenting behavior designed to improve their *own* affect (e.g., Moore, Whaley, & Sigman, 2004; Wood, McLeod, Piacentini, & Sigman, 2009). However, empirical support for this perspective has been modest. For instance, recent work suggests maternal anxiety disorder status does not influence parenting behavior (e.g., overinvolvement or criticism) in the context of an adolescent social threat task (Gar & Hudson, 2008). Of note, the work to date has not examined real-time parental distress as a function of offspring display of anxiety where more subtle differences may be observed. Indeed, examining the impact of adolescent anxiety on real-time parental distress may help inform models of youth anxiety psychopathology in which shared genetic vulnerabilities and reciprocal parent-offspring influences shape the development and course of anxiety (Rapee, Schniering, & Hudson, 2009).

Taken together, there is emerging evidence to suggest adolescents influence parental behavior, including sick role reinforcement, as a function of how adolescent bodily sensations are reported. However, there is neither experimental nor correlational research evaluating the impact of real time adolescent descriptions of ambiguous bodily sensations on parental sick role reinforcement behavior and distress. The current study sought to address these limitations, by experimentally examining whether adolescents' descriptions of bodily sensations elicited by a straw-breathing task affected these parenting outcomes. A novel experimental manipulation was employed in which adolescents were trained to mimic a straw-breathing task; then their reactions to the task were scripted (anxious or non-anxious) and presented to their parents. It was hypothesized that, parents who observed their adolescent react anxiously (c.f. non-anxiously) would evidence elevated parental sick role reinforcement operationalized as a) decreased latency to behaviorally intervene to address offspring concerns and b) self-reported endorsement of sick role reinforcement behavior (e.g., telling your child to go lay down). Further, in terms of parental distress during the task, it was hypothesized that parents would a) report progressively more negatively valenced affect, b) report progressively more affective arousal, and c) evidence progressively increased physiological responding in the presence of offspring anxious reactions than in the presence of offspring non-anxious reactions. Although the current study design (which allows parents to "escape" the task) precludes testing the full mediation model (i.e., parental distress mediating the relation between adolescent anxiety and sick role reinforcement behavior), measuring the effects of the experimental manipulation on a hypothesized intervening variable (e.g., parental distress) will provide initial evidence for parental distress as a putative link in the causal chain between adolescent anxiety and parental behavior (Kraemer, Stice, Kazdin, Offord, & Kupfer, 2001).

2. Method

2.1. Participants

Dyads consisting of parents with adolescents between the ages of 10 and 14 years old were recruited from the local community via radiobased advertising, flyers, and recruitment booths set up at various events. Other than offspring age, there were no other inclusion criteria. Exclusion criteria for offspring in the study were as follows: a) chronic cardiovascular illness (e.g. asthma); b) acute respiratory illness (e.g., bronchitis); c) possible pregnancy (by self-report); d) inability to read or write. Parental medical and psychological history was not included as exclusionary criteria, as parents would not be instructed to undergo a full voluntary hyperventilation. Consistent with previous work Download English Version:

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