Perceived Adverse Parenting in Childhood and Psychological Distress Among Psychotherapy Patients

The Mediating Role of Pathogenic Beliefs

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Abstract: The way people derive inferences from actual adverse experiences plays an important role in the development of psychopathology. This study aims to examine the mediating role of pathogenic beliefs (*i.e.*, emotion-laden, powerful, painful convictions about self and others) on the relation between perceived adverse parenting behaviors in childhood and subsequent adult psychopathology. Participants (mostly Caucasian and heterosexual) were 204 consecutively admitted patients with a range of psychological difficulties, including depression, anxiety, and interpersonal problems, at a low-fee outpatient clinic. Participants completed standard self-report assessments of perceived parental style, depressive and anxiety symptoms, and a clinically derived measure of pathogenic beliefs. We examined the indirect effects of adverse parenting on anxiety and depressive symptom severity through pathogenic beliefs. Pathogenic beliefs reflecting the unreliability of others significantly mediated the relationship between adverse parenting and anxiety symptoms. The other mediation model is consistent with the theory that perceived adverse parenting contributes to the severity of depressive symptoms through beliefs about not being deserving and other people being unreliable. Within the limitations of the cross-sectional, retrospective, and self-report nature of the data, our results seem to suggest that attending to intermediary subjective beliefs might be important in understanding psychopathology development in the context of childhood adversity. Aiming to modify the beliefs in therapy might modify the symptoms. However, this would remain to be demonstrated through formal intervention research.

Key Words: Adverse childhood experience, vulnerability, anxiety, depression, internalized beliefs

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Approximately one third of all mental disorders worldwide are attributable to exposure to adverse childhood experiences (Kessler et al., 2010). Although early adverse experiences consistently predict the onset of common psychopathology, such as anxiety and depression (Huh et al., 2017), not every person who reports adverse childhood experiences develops symptoms. This implies individual differences in susceptibility to problematic child-rearing influences, or resilience/protective factors that attenuate the association between adverse childhood experiences and negative outcomes Caspi et al., 2014; Felitti, 2017).

Conceptual models regarding the etiology of psychopathology, including psychodynamic and cognitive theories (*e.g.*, hopelessness theory by Abramson et al., 1989; cognitive theory by Beck, 1976; relational theory by Blatt et al., 1979; schema theory by Young, 1994), have implicated cognitive vulnerability as a particular diathesis for psychopathology. In a similar vein, control mastery theory, an integrated cognitive-psychodynamic-relational theory of how psychopathology develops and how psychotherapy works (Silberschatz, 2005), posits that early adverse experiences are internalized as conscious or unconscious "pathogenic beliefs." These beliefs are emotion-laden, powerful, painful convictions about self and others that are unconditional, generalized, and automatic; impose considerable limitations upon individuals' sense of freedom; and contribute to severe emotional distress (Silberschatz, 2005).

Empirically, negative childhood experiences have been shown to increase the cognitive vulnerability to common psychopathology, including anxiety and depression (for a review of cognitive mediators, see Aafjes-van Doorn et al., 2020a). The empirical literature reports on the mediating role of a wide range of cognitive vulnerabilities that are related to the concept of pathogenic beliefs (*e.g.*, McGinn et al., 2005; Paredes and Calvete, 2014). For example, recent mediation studies have identified cognitive vulnerabilities for depression, such as self-criticism (Manfredi et al., 2016), hopelessness (Gibb et al., 2001), defectiveness, shame, vulnerability, and inferiority (Harris and Curtin, 2002; Matos et al., 2013). Others have suggested that self-blame, vulnerability to harm, rumination, and self-sacrifice are cognitive vulnerabilities also relevant to people with anxiety disorders (*e.g.*, Huh et al., 2017; Shahar et al., 2015).

In the current empirical literature, these inferences derived from actual adverse experiences have been assessed using standardized belief scales, developed "top-down," based on their theoretical affiliation (*i.e.*, the Ellis model and the Beck model). This means that the current empirical evidence on cognitive mediators, in the relationship between perceived adverse parenting and psychological distress, is limited by their theory-bound nature. Addressing this lack of ecological validity of these belief measures, we previously developed a novel "bottom-up" measure of pathogenic beliefs. More specifically, in a previous large community study, we reported on pathogenic beliefs as a mediating mechanism explaining the predictive relationship between self-reported adverse parenting behaviors in childhood and subsequent adult psychopathology (Silberschatz and Aafjes-van Doorn, 2017). Given the limited clinical utility of this and many other mediation studies conducted within community samples (*e.g.*, Cukor and McGinn, 2006; Harris and Curtin, 2002; Wright et al., 2009), it is important to replicate these findings in outpatient clinics.

The present study of a sample of outpatients seeking psychological care was developed to replicate previous nonclinical research that identified pathogenic beliefs as a mechanism contributing to depressive and anxious symptom distress in the context of childhood adversity. This replication study uses a refined version of the Pathogenic Belief Scale (PBS) that distinguishes three overarching themes of pathogenic beliefs, reflecting a) the unreliability of others, b) the undeservedness of the self, and c) guilt-laden beliefs against separating from others. More specifically, in line with our previous research in a community sample, we hypothesized that in this treatment-seeking sample, the measurements of pathogenic beliefs, perceived adverse parenting

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behaviors, and psychological distress would be significantly related. We also hypothesized a mediating role for pathogenic beliefs in explaining the relationship between perceived adverse parenting and psychological distress; however, our examination of particular schematic themes (*i.e.*, the three types of pathogenic beliefs) was exploratory.

METHODS

Participants and Procedures

Participants were 204 consecutively admitted patients at a low-fee outpatient clinic who were asked to complete a battery of assessment measures at intake as part of standard clinical practice. The clinic provides psychotherapy services for individuals with a range of psychological difficulties, including depression, anxiety, and interpersonal problems. Comprehensive case formulations, rather than diagnoses, are used to guide patients' treatment. To ensure a representative clinic sample, we included all intake patients regardless of types and levels of symptomatology, ages, education levels, and socioeconomic backgrounds. The study was run in accordance with the American Psychological Association standard ethical guidelines and was approved by the institutional review board (022008).

Most of the patients were women (60%; $n = 122$), identified as Caucasian (67%; $n = 137$), were in a relationship (54%; $n = 111$), and indicated a heterosexual orientation (80%; $n = 164$). Most of the patients had some postsecondary education (94%; $n = 192$). Their average age was 34.13 years (SD, 10.82).

Measures

The Pathogenic Belief Scale (PBS-34)

The PBS-34 is a 34-item brief version of the original 59-item inventory of self-reported pathogenic beliefs (PBS; Aafjes-van Doorn et al., 2020b). Unlike other self-report measures of irrational beliefs, negative automatic thoughts, or core beliefs (see Bridges and Harnish, 2010 for a review), the PBS is a nomothetic self-report measure developed for its clinical utility beyond a particular theoretical or therapeutic model. More specifically, the PBS operationalizes a transtheoretical understanding of repetitive patterns of emotion-laden beliefs that develop in younger years for adaptive reasons and that continue to influence current internal and external experience of the world. The PBS can be seen as patient generated. More specifically, the items are drawn from patients' beliefs that were actually expressed in therapy (*i.e.*, were clinically derived, based on idiographic data), Although these items might not cover all possible issues that are of greatest concern to patients, the PBS items do capture beliefs of a group of psychotherapy cases (bottom-up) and are therefore more likely to be relevant to other patients than items purely based on theories or researchers' assumptions (Sales et al., 2018).

In previous research, the PBS scores were shown to be internally consistent ($\alpha = 0.96$) and valid (Silberschatz and Aafjes-van Doorn, 2017) in American community samples and have been validated in patients with depressive disorder in Thailand (Neelapaijit et al., 2017, 2018). An exploratory factor analysis of the PBS-34 in a combined clinical and community sample identified three types of transdiagnostic internalized beliefs ("cannot rely on others," "undeserving," and "separation guilt") relevant to common psychopathology symptoms (Aafjes-van Doorn et al., 2020b). The PBS showed convergent validity with the measures of adverse parenting experiences and psychopathology. The first subscale "cannot rely on others" includes items such as "I cannot rely on others to maintain a stable, strong attachment" and "Others will be emotionally unreliable or rejecting." The second subscale of "undeserving" schemas includes items such as "I do not deserve to be happy" and "I am unworthy and deserve very little in life." The third subscale "separation guilt" includes items such as "Separating from parents or loved ones would be hurtful, disloyal, or make them feel abandoned" and "I must remain excessively involved with parents or loved ones."

Higher scores reflect higher levels of pathogenic beliefs, with mean scores ranging from 0 (do not agree at all) to 4 (strongly agree). Scores on the subscales were calculated by summing the ratings of the different belief items per subscale. The PBS-34 subscales in this study have good internal consistency, with Cronbach's reliability coefficients all above the recommended criterion of 0.80 (Cho, 2020): 0.91 ("cannot rely on others"), 0.88 ("undeserving"), and 0.80 ("separation guilt"). More detailed information and a copy of the PBS-34 can be obtained from the authors.

Measure of Parental Style

The Measure of Parental Style (MOPS; Parker et al., 1997) probes adult recollections of parental behaviors and attitudes during the individual's childhood. The MOPS has been used in many studies on childhood experiences–cognitive vulnerability and childhood experiences–pathology relationship (Alloy et al., 2006) and can be used as a broad-brush measure of the likelihood of exposure to dysfunctional parenting, allowing the level of any perceived adverse parenting to be simply quantified. The MOPS thus directly addresses parenting behaviors that put a child at risk for later psychopathology, including statements of unwanted parenting (*e.g.*, overprotective of me, left me alone, ignored me, made me feel guilty) and potentially traumatic parenting (*e.g.*, verbally abusive, physically abusive, made me feel unsafe). The instrument was developed by administering it to depressed adults who reported their experiences with their own parents in responding to questionnaire items, and has been validated in nonclinical studies (Picardi et al., 2013) and in clinical samples, relating adverse parenting with psychopathology (*e.g.*, Parvez and Irshad, 2013). The MOPS consists of a total of 15 statements scored on a 4-point Likert scale that participants recall about either their relationship with their mother (maternal form) or father (paternal form) during their first 16 years of life. The level of disrupted parenting practices is reflected in their respective summed MOPS scores, with higher scores indicating more perceived adverse parenting experiences (Parker et al., 1997). The MOPS has good internal consistency (reliability coefficients in the present sample are 0.89 and 0.90 for maternal and paternal parenting, respectively) and has been validated in clinical samples, relating perceived adverse parenting with anxiety and depression psychopathology (*e.g.*, Parker et al., 1997; Parvez and Irshad, 2013), as well as in nonclinical samples (*e.g.*, Penjor et al., 2019; Wiedemann et al., 2020). In the present study, we averaged the maternal and paternal scores to reflect overall adversity in childhood, as done by several other studies (*e.g.*, Valiente et al., 2014).

Beck Anxiety Inventory

The Beck Anxiety Inventory (BAI; Beck and Steer, 1990) is a 21-item self-report measure of anxiety symptoms often used in psychiatric outpatient services. Patients rate on a 4-point scale the degree to which they have been bothered by anxiety symptoms (*e.g.*, "shaky") in the past week (0 = not at all to 3 = severely). The clinical cutoff score is 16. The BAI demonstrates high internal consistency (reliability of 0.92 in the present sample) and good convergent and discriminant validity.

Beck Depression Inventory, Second Edition

The Beck Depression Inventory, Second Edition (BDI-II: Beck et al., 1996) is a 21-item self-report measure of common depressive symptoms, such as depressed mood, hopelessness, suicidal ideation, sleep disturbance, and appetite change. Patients rate their current mood over the past 2 weeks using a 4-point scale (0 = not at all to 3 = severely). The BDI-II is commonly used in psychiatric outpatient services and has good internal consistency (reliability coefficient in the present sample is 0.91), content, and discriminative validity (Beck et al., 1996; Richter et al., 1998). The clinical cutoff score is 17.

TABLE 1. Mean Scores and Zero-Order Correlations for Adverse Parenting, Pathogenic Beliefs, and Symptom Severity (N = 204)

Measure	Mean (SD)	1	2	3	4	5
1. Adverse parenting (MOPS)	11.54 (8.73)					
2. Cannot rely on others (PBS factor 1)	2.34 (1.33)	0.39**				
3. Undeserving (PBS factor 2)	0.95 (1.09)	0.29**	0.75**			
4. Separation guilt (PBS factor 3)	1.83 (1.26)	0.13	0.63**	0.54**		
5. Anxiety symptoms (BAI)	13.29 (10.78)	0.25**	0.40**	0.32**	0.30**	
6. Depressive symptoms (BDI-II)	16.94 (10.52)	0.14*	0.54**	0.58**	0.36**	0.44**

*$p < 0.05$.
**$p < 0.01$.

Analyses

Descriptive data were used to characterize the sample, and preliminary tests were conducted to assess normality of the data and associations with demographic variables. Zero-order correlations were computed to examine bivariate relationships among variables in the study. To test our second hypothesis regarding the indirect effects of perceived adverse parenting in childhood on depressive and anxiety symptoms, through pathogenic beliefs as mediators, we conducted a series of multiple regression analyses using the PROCESS macro version 3.00 (Hayes, 2017).

Analyses were conducted separately for anxiety symptoms and depressive symptoms as dependent variables, using perceived adverse parenting in childhood as the independent variable. Types of pathogenic beliefs, represented by the three subscales of the PBS-34, were selected as potential mediator variables on the basis of having a significant bivariate relationship with perceived adverse parenting experiences. If significant, multiple mediators would be entered simultaneously as parallel mediators. Indirect effects were tested using bootstrapped 95% percentile confidence intervals (10,000 resamples) for the product of paths *a* and *b*. Because of overlap between anxiety and depressive symptoms, follow-up mediation analyses were conducted examining residualized BAI and BDI-II scores (*i.e.*, using the residuals after regressing one variable on the other) as separate dependent variables, to evaluate mediated pathways to "pure" anxiety and depressive symptoms. Further follow-up analyses were conducted to examine the potential bidirectionality of the mediation model (*i.e.*, reversing the sequence of mediator and dependent variables). Thus, anxiety and depressive symptoms were separately tested as potential mediators between adverse parenting and pathogenic belief dimensions.

RESULTS

Preliminary Analyses

Collected data were examined for data entry errors, completeness, outliers, and missing values. Missing data did not seem to pose a threat to statistical validity (Cohen et al., 1983) and were dealt with by calculating prorated sum scores. No participant was removed because of a suspicious responding pattern. No gross violations of normality were detected. Preliminary analyses regarding potential relationships between the variables of interest and age and sex (using correlations and independent samples *t*-test, respectively) found no significant associations with the exception of sex and anxiety. Women had significantly higher BAI scores (mean, 14.56; SD, 11.41) than men (mean, 11.08; SD, 9.49), $t(195) = 2.21$, $p = 0.03$.

Relationships Among Variables

Table 1 presents descriptive data and zero-order correlations for the variables in the study. Reported adverse parenting behaviors were significantly positively related with symptoms of anxiety and depression. Each pathogenic belief subscale was significantly positively associated with both depressive and anxiety symptoms. Significant positive associations were observed between perceptions of adverse parenting in childhood and the two pathogenic belief subscales for "cannot rely on others" and "undeserving" schemas. Hence, these two subscales were selected as mediator variables in subsequent regression analyses.

Mediating Role of Pathogenic Beliefs in Predicting Psychopathology

Results from regression analyses testing mediation models are presented in Tables 2 and 3. Given that women reported higher anxiety than men, the model for anxiety was tested with sex as a covariate, although this was dropped from the reporting as it made no difference to the model estimate. Analyses predicting anxiety symptoms (see Table 2 for the mediation model of anxiety symptoms) revealed a significant indirect effect for perceived adverse parenting, indicated by bootstrapped confidence intervals that did not straddle zero, through the "cannot rely on others" schema. In other words, experiences of perceived adverse parenting contributed to pathogenic beliefs concerning the unreliability of others, which in turn contributed to the severity of anxiety symptoms. The completely standardized indirect effect was estimated as $ab = 0.13$, SE = 0.04, 95% confidence interval (CI) (0.05–0.22), indicating that a one standard deviation increase in perceived adverse parenting conferred 0.13 standard deviation greater anxiety through the "cannot rely on others" type of pathogenic beliefs.

With regard to depressive symptoms (see Table 3 for the mediation model for depressive symptoms), both the "cannot rely on others" and "undeserving" schemas were found to be significant mediators, as indicated by the lack of zeros in bootstrapped CIs for each of these PBS-34 domains. Thus, beliefs about others' unreliability and convictions of the individual's undeservedness were mechanisms through which perceived adverse parenting experiences contributed to the severity of depressive symptoms.

Estimation of the completely standardized indirect effects yielded $ab = 0.10$, SE = 0.04, 95% CI (0.03–0.18) through "cannot rely on others" and $ab = 0.12$, SE = 0.04, 95% CI (0.06–0.20) through "undeserving." For both anxiety and depressive symptoms, the direct effect of perceived adverse parenting was nonsignificant with the addition of pathogenic beliefs to the model.[1,2] See Figure 1 for a diagrammatic representation of these parallel mediations. Secondary analyses examining

[1]Given that the mediator was conceptually related to the independent and dependent variables, a sensitivity analysis was performed by two principal component analyses that ascertained the discriminant validity of the mediator and independent variable and the discriminant validity of mediator and outcome (see recommendations by Zhao et al., 2010).

[2]The same mediation analyses were conducted for the overall scores of the original 59-item PBS scale, showing similar significant findings. Given the clinical utility of the PBS-34 as a more discriminating measure of types of pathogenic beliefs (Aafjes-van Doorn et al., 2020b), we report the findings for this briefer measure here.

TABLE 2. Regression Analyses Examining the Indirect Effects of Adverse Parenting on Anxiety Symptoms Through Pathogenic Beliefs

Anxiety Symptoms Predicted by Adverse Parenting			
Dependent Variable			
Predictor Variables	**Coeff.**	**SE**	***t***
Cannot rely on others			
Adverse parenting (path a_1)	0.06	0.01	5.98*
Undeserving			
Adverse parenting (path a_2)	0.04	0.01	4.34*
Anxiety symptoms			
Cannot rely on others (path b_1)	2.73	0.81	3.37*
Undeserving (path b_2)	0.35	0.95	0.37
Adverse parenting (path c')	0.13	0.09	1.52
		$R^2 = 0.17$; $F(3,200) = 14.00$*	
Indirect Effects Through Pathogenic Beliefs			
Adverse Parenting on Anxiety	**Effect**	**SE**	**95% CI**
Cannot rely on others (path a_1b_1)	0.16	0.06	0.06 to 0.29
Undeserving (path a_2b_2)	0.01	0.04	−0.06 to 0.09

Coeff. indicates unstandardized coefficient.
*$p < 0.001$.

"purified" anxiety and depressive symptoms, partialling the effect of each type of symptom on the other, produced similar results—although with one key difference concerning the model for depressive symptoms. In predicting residualized anxiety symptoms, the indirect effect of adverse parenting through "cannot rely on others" remained significant, with an unstandardized estimate of $ab = 0.11$, SE = 0.05, 95% CI (0.01–0.22). In predicting residualized depressive symptoms, however, the indirect effect of adverse parenting through "cannot rely on others" was no longer significant. Rather, only "undeserving" was significant as a mediator to depressive symptoms, with an unstandardized estimate of $ab = 0.14$, SE = 0.04, 95% CI (0.06–0.23). Additional follow-up tests examining whether anxiety and depressive symptoms would

TABLE 3. Regression Analyses Examining the Indirect Effects of Adverse Parenting on Depressive Symptoms Through Pathogenic Beliefs

Depressive Symptoms Predicted by Adverse Parenting			
Dependent Variable			
Predictor Variables	**Coeff.**	**SE**	***t***
Cannot rely on others			
Adverse parenting (path a_1)	0.06	0.01	5.98**
Undeserving			
Adverse parenting (path a_2)	0.04	0.01	4.34**
Depressive symptoms			
Cannot rely on others (path b_1)	2.09	0.69	3.02*
Undeserving (path b_2)	3.92	0.82	4.81**
Adverse parenting (path c')	−0.09	0.07	−1.26
		$R^2 = 0.37$; $F(3,200) = 38.57$**	
Indirect Effects Through Pathogenic Beliefs			
Adverse Parenting on Depression	**Effect**	**SE**	**95% CI**
Cannot rely on others (path a_1b_1)	0.12	0.05	0.04–0.22
Undeserving (path a_2b_2)	0.14	0.05	0.07–0.24

Coeff. indicates unstandardized coefficient.
*$p < 0.01$.
**$p < 0.001$.

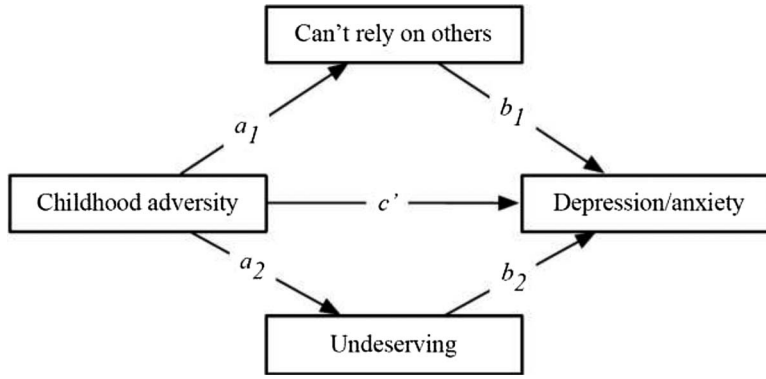

FIGURE 1. Significant mediation pathways.

mediate effects from adverse parenting to pathogenic belief domains were all nonsignificant, adding confidence to the directionality of the hypothesized models.

DISCUSSION

In a previous large community study, we reported on pathogenic beliefs as a mediating mechanism explaining the predictive relationship between perceived adverse parenting in childhood and subsequent adult psychopathology (Silberschatz and Aafjes-van Doorn, 2017). The present findings replicate and extend this previous work, demonstrating the mediating role of pathogenic beliefs in a sample of outpatients seeking psychotherapy. In line with our first hypotheses, we identified significant relationships among the self-reported measures of perceived adverse parenting experiences, pathogenic beliefs, and symptoms of anxiety and depression. Moreover, partially confirming our second hypothesis, we found that two of the three pathogenic belief subscales mediated the relationship between perceived adverse parenting in childhood and psychological distress. Specifically, beliefs concerning the unreliability of others contributed to the severity of anxiety symptoms. Beliefs about others' unreliability and convictions of the individual's undeservedness were mechanisms through which perceived adverse parenting contributed to the severity of depressive symptoms. Based on residualized results, it would appear that the significant mediation of both PBS scales to depression might be attributable to some of the variance in depression scores being due to anxiety—and that undeserving is the primary type of pathogenic belief contributing to depressive severity from adverse parenting.

"Cannot rely on others" reflects a sense of feeling unsupported and perpetually threatened with abandonment and rejection, and therefore, we would expect this to contribute to anxiety (*e.g.*, Hart et al., 2017; Saritas-Atalar and Gencoz, 2015). For example, the long-standing belief that others are unreliable may lead patients to remain socially isolated and avoid socially supportive relationships that could serve as important buffers under times of anxiety.

The "undeserving" beliefs are not merely focused on the self but focused on the self being undeserving of good outcomes/the self being bad. This is consistent with empirical mediation studies that specifically targeted depressive pathology and identified internally focused cognitive vulnerabilities, such as self-criticism (*e.g.*, Manfredi et al., 2016), defectiveness and inferiority (*e.g.*, Harris and Curtin, 2002), shame (Matos et al., 2013), and rumination (Spasojević and Alloy, 2002). Feeling undeserving or unworthy may lead patients to block opportunities from growing to their full potential (*e.g.*, not responding to an invitation for a romantic date or not applying for an award or job), which would otherwise build their self-esteem and lift their mood.

In addition, recent studies on the PBS found significantly higher PBS scores in depressed patients compared with a normative (nondepressed) sample (Neelapaijit et al., 2017, 2018). Although there was a significant simple association between separation guilt and both depression and anxiety, this theme of pathogenic beliefs was not associated with perceived adverse parenting and hence was not considered as a potential mediator. It is possible that more complex parent-child interactions (that were not captured by the MOPS) might influence separation guilt; future researchers should consider using more comprehensive assessments of parent-child dynamics to explore the potential role of separation guilt as a mediator.

The current mediation findings are consistent with prominent theories of cognitive vulnerability for anxiety and depression and support the assumption based on the control mastery theory (Silberschatz, 2005) that psychopathology often stems from adverse childhood experiences that are internalized as pathogenic beliefs. Moreover, these findings are consistent with previous findings regarding experiences of negative childhood that predict later psychopathology through maladaptive cognitive processes (Gibb, 2002). Although the idea that people draw inferences from actual adverse parenting behaviors is familiar to cognitive therapy (see Alloy et al., 2006 for a review), this study adds to its empirical validation by using pathogenic beliefs that were derived from real clinical data. In other words, the present study not only extends previous findings by delineating particular kinds of beliefs but also provides a triangulation of previous findings, by examining cognitive patterns inferred from actual clinical cases rather than from theories. This study thus corroborates other studies from a slightly different vantage point, thereby increasing confidence in its mechanism.

Limitations

Our mediation findings must be interpreted in the context of its limitations. First, we report on a relatively skewed sample of patients, in that most were highly educated, heterosexual, and Caucasian. It is possible that some of these adverse parenting styles do not lead to the same pathogenic beliefs in all cultural groups. Perceived adverse parenting may, for example, be experienced differently by inner city African-American mothers who "overprotect" their sons from dangerous encounters with the police compared with suburban White mothers. Consequently, one has to be careful in generalizing these results. In addition, given Beck's cognitive content-specificity hypothesis (Beck, 1976), future studies should further examine whether particular types of pathogenic beliefs occur in patients with other common *Diagnostic and Statistical Manual of Mental Disorders* diagnoses, including personality disorders (Parker et al., 1999). Moreover, the cross-sectional design of this study limits confidence regarding causal inferences.

This limitation of a cross-sectional design is further amplified by gaining information from adults about childhood experiences in childhood retrospectively. Although retrospective recollections of adversity are a common, valid method in this type of research (Brewin et al., 1993; Wilhelm et al., 2005), the discrepancy between

one's recollections and one's actual adversity experiences may be crucial to the development of symptoms in itself.

CONCLUSION

Our findings suggest that it is the way in which patients perceive and develop meaning about adverse parenting behaviors that ultimately influences the severity of depressive and anxiety symptoms. In other words, perceived adverse parenting experiences give rise to subjective beliefs about oneself and others that in turn contribute to adult psychopathology. Pathogenic beliefs regarding the self and others serve as mechanisms at the level of subjective experience, influencing patients' feelings of distress and impairment. Clinical efforts to address depression and anxiety, particularly in the context of a history of childhood adversity, should thus involve attention to patients' underlying convictions regarding their self-worth and the steadfastness of others. These findings thus underscore the need for therapists to actively elicit and explore the subjective meaning of patients' perceived adverse parenting behaviors with their parents rather than simply identifying the presence or level of adverse experiences itself. Some people are clearly more vulnerable than others to the negative effects of adversity (in line with the prevailing diathesis-stress view of pathology; Leighton et al., 2017). Some, despite being exposed to adverse parenting, might have subsequent emotional and social experiences that disconfirm their initial negative views about the self and others and therefore might not develop entranched pathogenic beliefs or psychopathology. Whether a person develops pathogenic beliefs might thus be related to the centrality of an adverse experience in a person's identity, that is, how meaningful an event was in a person's life (Berntsen and Rubin, 2006), Likewise, some people are better able to benefit from supportive and enriching experiences, such as those offered by the therapeutic environment (Belsky and Pluess, 2009). An important consideration for future research would be to explore the role of certain types of internalized pathogenic beliefs in predicting treatment engagement and outcome.

DISCLOSURE

The authors declare no conflict of interest.

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