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Influence of Betrayal Trauma on Schizoid Personality Pathology

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ABSTRACT

Schizoid personality pathology is among the most debilitating and enigmatic forms of personality pathology. Some have suggested that a potential etiological influence on schizoid pathology is trauma. Thus far, research on the association between trauma and schizoid pathology has focused primarily on type of trauma (e.g., abuse vs. neglect during childhood) rather than who perpetrated the trauma. This contrasts with recent research on trauma perpetrated by someone upon whom the survivor relies and/or trusts (i.e. betrayal trauma), which many studies show has a uniquely pernicious association with several forms of personality pathology. However, this has not yet been examined with respect to schizoid pathology specifically. In this study, we examined the relative associations between trauma varying degrees of betrayal and schizoid personality pathology in a sample recruited from Amazon's Mechanical Turk ($N = 300$) using a Bayesian approach to structural equation modeling. Results suggest that interpersonal trauma in general was associated with higher levels of schizoid pathology. Findings further indicate that for men but not women, trauma with a high degree of betrayal was uniquely associated with schizoid pathology. These findings contribute to the growing body of research suggesting the influence of interpersonal trauma in general and betrayal trauma in particular on personality pathology and have implications for future research on and intervention with people with high levels of schizoid pathology.

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Schizoid personality pathology is a persistent, debilitating, and often confusing problem for many people. Much of the most recent research on schizoid pathology has focused on its construct validity (Hopwood & Thomas, 2019) and its clinical correlates (including attempted and completed suicide, schizophrenia, autism spectrum disorder, and criminal offending; Attademo et al., 2021; Booules-Katri et al., 2019; Levi-Belz et al., 2019; Pulay et al., 2008; Simonsen et al., 2008). Research has focused much less on potential etiological influences on schizoid pathology. Namely, although some have speculated that trauma may be a formative influence on schizoid pathology (e.g., Guntrip,

1968; Kernberg, 1975), there is little research on which specific types of traumas might be most influential.

Schizoid personality pathology reflects a pervasive pattern of social isolation and restricted affectivity, with limited desire for social or sexual intimacy (Hopwood & Thomas, 2019) and tends to be more common in men than women (Lenzenweger et al., 2007; Lynam & Widiger, 2007). Schizoid pathology in its most debilitating form is captured by a diagnosis of schizoid personality disorder (SPD) and is typically diagnosed in terms of four or more of seven criteria (American Psychiatric Association [APA], 2022). However, within the trait-based framework of the Alternative Model of Personality Disorder (AMPD, in which moderate or greater impairment suggests diagnostic levels of personality problems; Freilich et al., 2023), SPD is characterized by four traits: Anhedonia, Intimacy Avoidance, Restricted Affectivity, and Withdrawal (Hopwood et al., 2012). Early conceptualizations suggest that SPD and schizoid pathology more generally is a reaction to trauma, more specifically pain or rejection experienced during childhood resulting in an inward retreat and escape into “schizoid fantasy” (Guntrip, 1968; Kernberg, 1975; Vaillant, 1994). Consistent with this idea, research suggests that several childhood traumatic experiences, most notably emotional and physical abuse, as well as emotional neglect are the strongest predictors of schizoid pathology (Johnson et al., 2001; Waxman et al., 2014). Although these studies are useful in highlighting the potential influence of trauma on schizoid pathology, they rely on a somewhat narrow range of trauma.

Recent research has highlighted the particularly pernicious influence of trauma with a high degree of betrayal, that is, trauma perpetrated by someone a person trusts and/or relies on for protection or support (i.e., betrayal trauma; Freyd, 1996). Research suggests that trauma high in betrayal is associated with greater severity of several forms of personality pathology over and above traumas lower in betrayal (e.g., general interpersonal and non-interpersonal trauma) including borderline (Kaehler & Freyd, 2009, 2012; Yalch & Levendosky, 2014, 2019), narcissistic (Yalch & Levendosky, 2020), and anti-social/psychopathic pathology (Grabow & Becker-Blease, 2023; Yalch et al., 2021; Yalch, Dehart, et al., 2022). Of particular relevance is a recent study showing that interpersonal trauma, both with and without an element of betrayal, is associated with schizotypal personality pathology, which is similar to schizoid pathology in that it may involve a tendency to retreat inwards in response to trauma (Yalch, Snyder, et al., 2022). This latter study also suggested that the influence of trauma high in betrayal on schizotypal pathology was unique to women, whereas general interpersonal and, to a lesser extent, non-interpersonal trauma was more influential for men. Although we might expect the influence of trauma high in betrayal to be similar for schizoid personality pathology, this has not yet been examined.

Current study

In this study, we examined the relative associations between trauma with varying degrees of betrayal and schizoid personality pathology. We hypothesized that trauma high in betrayal would be associated with schizoid pathology over and above other forms of trauma (i.e., general interpersonal trauma and non-interpersonal trauma). We further hypothesized that this association would be specific to women, whereas for men general interpersonal trauma and non-interpersonal trauma would be associated with schizoid pathology.

Method

Participants

Participants in this study included 300 men and women recruited using Amazon's Mechanical Turk (Mturk) as part of a larger study on mental health [*study details omitted to ensure author anonymity*]. The sample had somewhat more men (55%) than women (45%) and an average age of 38 years ($SD = 9.96$, range = 20–69). The majority of participants identified as White (89%) and non-Latiné (80%), with a smaller number of participants identifying as Asian (5%), Black (4%), and Multiracial and/or Other (1%). We ensured that our sample was of high quality by taking the following steps: (1) embedding a captcha at the beginning of our survey to ensure that bots could not complete the survey, (2) routing workers out of the study if they provided an inaccurate response on any of the three attention check items (e.g., “For validity purposes, please answer ‘A’ to this question”), (3) removing from the sample those who had 10% or more data missing from their responses, and (4) removing from the sample those with a score of 17 or higher on a scale of inconsistent responding (Keeley et al., 2016). Participants provided informed consent prior to starting the study, which received approval from the local institutional review board. Data for this study are available upon request.

Measures

We assessed constructs of interest using two well-validated measures (see Table 1 for psychometric information). We calculated each scale using an average of all items endorsed within that scale and standardized all scales prior to analysis.

Schizoid personality pathology

We measured schizoid pathology using four maladaptive trait subscales of the *Personality Inventory for DSM-5* (PID-5; Krueger et al., 2012). The PID-5 is a 220-item instrument measuring maladaptive traits of the AMPD. Respondents rated how much they believed trait-related statements applied

Table 1. Correlations between and psychometric information for study variables.

	1	2	3	4	5	6	7
1. High betrayal trauma	(.89)						
2. Medium betrayal trauma	.85	(.94)					
3. Low betrayal trauma	.86	.85	(.88)				
4. Anhedonia	.72	.70	.64	(.77)			
5. Intimacy Avoidance	.66	.69	.69	.72	(.83)		
6. Restricted Affectivity	.68	.73	.72	.75	.76	(.89)	
7. Withdrawal	.67	.68	.66	.81	.79	.84	(.92)
<i>M</i>	.85	.77	.81	2.54	2.61	2.75	2.81
<i>SD</i>	.64	.57	.59	.69	.75	.81	.79
Skew	.10	−.03	−.01	−.42	−.65	−.32	−.44
Kurtosis	−1.06	−1.29	−1.29	−.34	−.41	−.61	−.51
<i>D</i>	.13	.13	.13	.10	.14	.07	.08

Cronbach's α on diagonal; Spearman's ρ used to run correlations to account for non-normality; *D* = Kolmogorov-Smirnov statistic; all *ps* and *Ds* statistically significant at $p < .05$.

to them on a 4-point scale ranging from *very false or often false* (0), to *very true or often true* (3). The PID-5 subscales used in this study were Anhedonia (8 items; e.g., “I don't get as much pleasure out of things as others seem to”), Intimacy Avoidance (6 items; e.g., “I'm just not very interested in having sexual relationships”), Restricted Affectivity (7 items; e.g., “I don't react much to things that seem to make others emotional”), and Withdrawal (10 items; e.g., “I prefer not to get too close to people”).

Trauma

We measured traumatic experiences using the *Brief Betrayal Trauma Survey* (BBTS; Goldberg & Freyd, 2006), a 24-item self-report questionnaire measuring the frequency of traumatic experiences. Respondents rated exposure to traumatic experiences before and after the age of 18 using a 3-point scale ranging from *Never* (0) to *1 or 2 times* (1) to *More than that* (2). Items from the BBTS were grouped into three independent subscales ranging from high to low betrayal: high betrayal (e.g., “You were made to have some form of sexual contact, such as touching or penetration by someone with whom you were very close [such as a parent or lover]”), medium betrayal (i.e., general interpersonal trauma; e.g., “You were made to have sexual contact by someone with whom you were not close”), and low betrayal (i.e., non-interpersonal trauma; e.g., “Been in a major earthquake, fire, flood, hurricane, or tornado”).

Data analysis

We tested our hypotheses using a Bayesian approach to structural equation modeling (BSEM; Depaoli, 2021), which we implemented BSEM using the *blavaan* package in R (Merkle & Rosseel, 2018). BSEM is more robust to non-normal distributions of data (Yalch, 2016) and multicollinearity (Can et al., 2015) than conventional approaches to statistical estimation, and is thus increasingly common in trauma research (van de Schoot et al., 2017; Yalch,

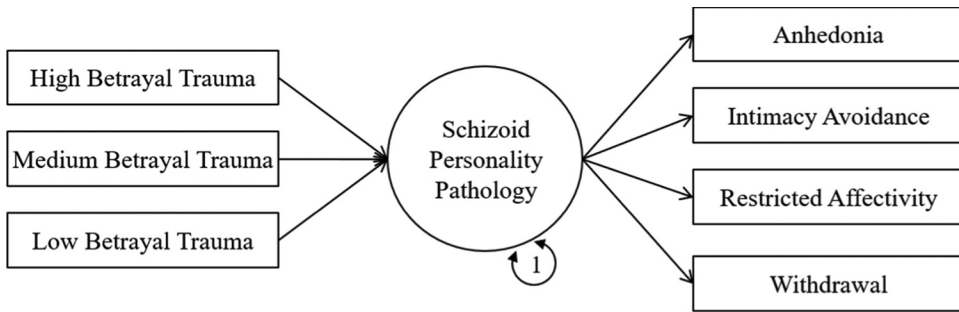


Figure 1. Graphical depiction of SEM.

2023). We estimated three BSEMs: one for the entire sample, one for women only, and one for men only. In each, we regressed a latent measurement of schizoid pathology on observed indicators of high, medium, and low betrayal trauma (see Figure 1). We estimated models using three chains of 20,000 iterations of Hamiltonian Markov chain Monte Carlo sampling each, with a burn-in period of 10,000 samples. We evaluated model non-convergence using the potential scale reduction factor and Monte Carlo standard error diagnostics and through examination of autocorrelation, density, and trace plots. Each model terminated normally with no indication of non-convergence. We determined the fit of these models using common Bayesian variants of conventional model fit indices (for review, see Garnier-Villarreal & Jorgensen, 2020), the Bayesian variants of \hat{F} ($B\hat{F}$; scores $> .95$ indicate good fit) and the McDonald's fit index (BM_c , scores $> .90$ indicate good fit). We deemed the estimate of a regression coefficient credible if zero did not fall within the densest 95% of the distribution. We refer to this area of high density as the highest density interval (HDI; for review, see Kruschke, 2015).

Results

There was a high prevalence of traumatic experience within this sample, with 85% of participants endorsing high betrayal trauma, 77% endorsing medium betrayal trauma, and 81% endorsing low betrayal trauma. Although our measurement of schizoid pathology was dimensional, we calculated how many participants endorsed an average of “sometimes or somewhat true” or higher on the items in each trait (an estimate of moderate or greater impairment, which is considered diagnostic in the AMPD). Just over a fifth (22%) of the sample endorsed high levels of all four traits. There were on average strong correlations between different forms of trauma and each other ($\rho_{\text{mean}} = .86$), between different traits of schizoid pathology and each other ($\rho_{\text{mean}} = .79$), and between trauma and

Table 2. Differences between men and women on trauma and schizoid pathology.

	Women		Men		<i>t</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
High Betrayal Trauma	.80	.62	.89	.65	1.19	–
Medium Betrayal Trauma	.71	.57	.82	.57	1.61	–
Low Betrayal Trauma	.74	.59	.87	.58	1.86	–
Anhedonia	2.46	.66	2.61	.71	1.84	–
Intimacy Avoidance	2.52	.73	2.68	.76	1.83	–
Restricted Affectivity	2.64	.83	2.84	.78	2.14	.25
Withdrawal	2.72	.77	2.89	.78	1.82	–

Cohen's *d* calculated only for statistically significant *t*-tests.

Table 3. Relative associations between trauma with varying levels of betrayal and latent measurement of schizoid personality pathology.

	Full sample			Women only			Men only		
	<i>(n = 300)</i>			<i>(n = 134)</i>			<i>(n = 165)</i>		
	β	λ	95% HDI	β	λ	95% HDI	β	λ	95% HDI
Regressions									
High Betrayal Trauma	.24*	.41	[.14, .69]	.19	.35	[–.04, .73]	.36*	.57	[.17, .98]
Medium Betrayal Trauma	.44*	.74	[.47, 1.02]	.44*	.79	[.39, 1.21]	.42*	.67	[.30, 1.05]
Low Betrayal Trauma	.16	.27	[–.02, .57]	.25*	.44	[.01, .88]	.04	.06	[–.33, .46]
Schizoid PD Trait Loadings									
Anhedonia	.86*	.51	[.45, .57]	.89*	.50	[.42, .59]	.83*	.52	[.44, .61]
Intimacy Avoidance	.86*	.51	[.45, .57]	.84*	.47	[.39, .56]	.87*	.55	[.47, .64]
Restricted Affectivity	.90*	.54	[.48, .60]	.88*	.49	[.41, .58]	.92*	.58	[.50, .67]
Withdrawal	.93*	.55	[.50, .61]	.95*	.53	[.45, .62]	.92*	.58	[.50, .67]

* indicates that 0 is not within coefficient's 95% HDI; 1 participant did not report their sex.

schizoid traits ($\rho_{\text{mean}} = .74$; see Table 1). Men and women did not differ on their levels of trauma exposure or on most schizoid traits, with the exception that men reported higher levels of Restricted Affectivity (for which the size of the difference was small; see Table 2).

Across the whole sample, high betrayal trauma had a small association with schizoid pathology and medium betrayal trauma had a medium-sized association with schizoid pathology (see Table 3). Results were similar for men, although for women medium and *low* betrayal traumas were associated with higher levels of schizoid pathology (medium- and small-sized effects, respectively).

Discussion

In this study, we examined the association between traumas with varying degrees of betrayal on schizoid personality pathology. Findings indicated that trauma high in betrayal was associated with schizoid pathology, although this was true only for men. These findings clarify our understanding of the association between trauma and schizoid pathology and have implications for future research on and potential clinical intervention for people with these problems.

The finding that interpersonal trauma in general was associated with schizoid personality pathology for both men and women was consistent with previous research on schizotypal personality pathology. Although consistent with our first hypothesis, trauma high in betrayal was associated with schizoid pathology in general, inconsistent our second hypothesis, was that this was true for men rather than women. One potential explanation for this may have to do with gender differences in reacting to traumatic betrayal. For example, women, who may be socialized to attend to interpersonal relationships more often than men, may distort their reality to protect their understanding of the world when their trust is betrayed (e.g., in the form of schizotypal pathology or dissociative symptoms, the latter of which is aligned with the roots of betrayal trauma theory; Freyd, 1996). In contrast, men may perceive this betrayal of trust as a problem with themselves, resulting in a self-focused retreat inward and detachment from the world (e.g., in the form of schizoid pathology) or in aggression against the world (e.g., in the form of antisocial/psychopathic pathology, which is also associated with trauma high in betrayal for men but not women; Yalch et al., 2021; Yalch, Dehart, et al., 2022). In any case, the finding that interpersonal trauma in general and trauma high in betrayal among men in particular is associated with schizoid pathology should alert clinicians to inquire about trauma when treating patients with schizoid pathology. Although there are no well-controlled studies of treatment efficacy for schizoid pathology (Mittal et al., 2007), it has been proposed that psychotherapy focused on interpersonal skills and communication, along with negative symptom (i.e., depressive symptoms, anhedonia, restricted affect) management, may be beneficial (Miller et al., 2001). The findings of the current study suggest the potential utility of augmenting this approach to treating schizoid pathology with trauma-focused techniques, although future research should examine this further.

We might also consider study findings from the perspective of complex PTSD, a recently formalized diagnosis that incorporates the symptoms of PTSD with disturbance in self-organization (DSO), the latter of which includes altered relationships as well as affective dysregulation (Ford & Courtois, 2020). Although the notion of DSO grew from observations of people who exhibited characteristics of borderline personality pathology (e.g., under-regulated affect and volatile interpersonal relationships; see Herman, 1992), it is equally consistent with (albeit in a different way from) schizoid pathology (characterized by suppressed affect and the absence of interpersonal relationships). Examining how DSO overlaps with schizoid pathology, including its relative overlap with borderline pathology (for review see Ford & Courtois, 2021) would be another worthwhile direction for future research.

This study had several limitations that suggest other directions for future research. One limitation of this study is its cross-sectional design, which

precludes causal interpretations of study findings (e.g., it may also be that those who have schizoid pathology are more vulnerable to experiencing trauma, rather than trauma causing schizoid pathology). Additionally, we measured study constructs using online self-report questionnaires. Although the online aspect of this study has a number of benefits in studying schizoid pathology (e.g., capturing people with schizoid pathology who otherwise may not seek therapy or other forms of interpersonal contact), self-report questionnaires can be biased in a number of ways (e.g., lower rates of trauma endorsement resulting from dissociation and/or denial). Our sample was also limited in several ways. Namely, in addition to being majority White, it was also a non-clinical sample. Study results may thus not be representative of the broader population (i.e., those who are Black, Indigenous, or other People of Color) or of those of seeking treatment for schizoid pathology. Future studies should thus improve upon this study by assessing constructs of interest using a multimethod assessment (e.g., performance-based and/or informant-report) with representative and/or clinical samples using a longitudinal study design.

In this study we examined the influence of trauma with varying degrees of betrayal on schizoid personality pathology, finding that interpersonal trauma in general (and, for men, interpersonal trauma high in betrayal in particular) was associated with higher levels of schizoid pathology. These findings contribute to the growing body of research suggesting the relevance of betrayal trauma theory to the study of personality pathology and have implications for future research on and treatment of schizoid pathology.

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