Personality and Individual Differences 89 (2016) 211–216

Contents lists available at ScienceDirect

Personality and Individual Differences

journal homepage: www.elsevier.com/locate/paid

General invalidation and trauma-specific invalidation as predictors of personality and subclinical psychopathology☆

Phan Y. Hong *, David A. Lishner

University of Wisconsin Oshkosh, USA

ARTICLE INFO

Article history:
Received 17 June 2015
Received in revised form 29 September 2015
Accepted 6 October 2015
Available online 22 October 2015

Keywords:
Invalidation
Trauma
Psychopathology
Personality

ABSTRACT

We examined the hypothesized link of general and trauma-specific invalidation to the development of personality traits and subclinical psychopathology. College students' ($N = 248$) self-reports of childhood sexual abuse, perceived invalidation to disclosure of the abuse, and perceived general invalidation by caregivers were used to predict symptoms of anxiety, depression, post-traumatic stress disorder, and borderline, narcissistic, and psychopathic personalities. Hierarchal regression analyses revealed that childhood sexual abuse and general invalidation independently predicted symptoms of anxiety, depression, PTSD, and borderline personality. General invalidation also independently predicted narcissistic and psychopathic personalities. Among a subset of participants who reported at least one instance of abuse ($N = 91$), perceived invalidation to abuse disclosure independently predicted all measured personality and psychopathology constructs, whereas general invalidation did not. These findings suggest that invalidation may play an important role in the development of personality and subclinical psychopathology.

1. General invalidation and trauma-specific invalidation as predictors of personality and subclinical psychopathology

Linehan (1993) defines invalidation as the negating, ignoring, or trivializing of emotions and thoughts by caregivers and highlighted its etiological role in the development of borderline personality disorder. A growing literature indicates that invalidation may play a more ubiquitous role in the emergence of negative intrapersonal and interpersonal outcomes. General invalidation predicts emotional dysregulation, dissatisfaction and dysfunction in romantic relationships, more negative cognitive appraisal processes, interpersonal sensitivity, aggression, poor active coping, as well as psychopathologies such as anxiety, depression, and post-traumatic stress disorder (PTSD) (Selby, Braitwaite, Joiner, & Fincham, 2008; Ullman & Filipas, 2003; Yap et al., 2008). Indeed, research suggests that invalidation is linked to a host of internalizing (e.g., depression, anxiety, and social avoidance) and externalizing symptoms (e.g., impulsivity, rule breaking, and aggression as seen in those with antisocial personality and psychopathy) (Buckholdt, Parra, & Jobe-Shields, 2014), and impedes the healthy development of attachment to others, the self, and emotions, while also impeding the formation of a healthy personality (Zhang & Zhong, 2013).

Along with illuminating the potential importance of invalidation, the literature also suggests that it may be important to differentiate between (a) specific invalidation, which is invalidation that may be anticipated or incurred upon disclosure of a particularly negative event (Peter-Hagene & Ullman, 2014), and (b) general invalidation, which is pervasive, insidious, and chronic invalidation (Linehan, 1993). Both specific and general invalidation can occur independently or jointly; thus, it may be important to consider their potential link to personality and psychopathy in tandem. We found only one study examining both types of invalidation. Specifically, Hong, Ilardi, & Lishner (2011) revealed that both specific invalidation to childhood sexual abuse and general invalidation predicted both self-reported and clinically-assessed borderline personality symptomatology. The study is limited in that it did not examine whether general invalidation and trauma-specific invalidation predicts personality and psychopathology more broadly.

1.1. The present study

There were two primary goals of the present study. The first goal was to determine whether the findings in regard to trauma-specific invalidation, specifically childhood sexual trauma, and borderline personality reported in Hong et al. (2011) could be successfully replicated. The second goal was to examine whether trauma-specific invalidation (along with general invalidation) could predict a broader range of personality characteristics and subclinical psychopathologies. Of particular interests were personality characteristics and psychopathologies sharing theoretical and empirical overlap with borderline personality given the findings from Hong et al. (2011). Borderline, narcissistic, and psychopathic personalities are referred to as the "vulnerable dark triad" because they share a significant number of interpersonal and

☆ All data were collected at the University of Wisconsin Oshkosh.

* Corresponding author at: Department of Psychology, University of Wisconsin Oshkosh, 800 Algoma Blvd., Oshkosh, WI 54901, USA.
E-mail address: hongp@uwosh.edu (P.Y. Hong).

http://dx.doi.org/10.1016/j.paid.2015.10.016
0191-8869/

intrapersonal difficulties, such as the propensity to manipulate others and poor affect and behavioral control (Bernard, 2014; Miller, Dir, Gentile, Wilson, Pryor, & Campbell, 2010). According to Linehan's (1993) biosocial theory, pervasive invalidation promotes emotion dysregulation, which ultimately undermines development of a cohesive self-identity and enhances behavioral dyscontrol. Such factors might produce common problems underlying borderline, narcissistic, and psychopathic personalities.

Similarly, research suggests significant symptom overlap between borderline personality and anxiety, depression, and PTSD, as well as evidence that individuals with these disorders are more likely to report early sexual trauma experiences compared to individuals with other disorders (Bohus et al., 2013; Fergusson, McLeod, & Horwood, 2013). Due to the overlap with borderline personality in symptom presentation and early experiences, we sought to clarify the potential etiological role of invalidation in these overlapping disorders. We predicted that general and trauma-specific invalidation would positively predict severity of self-reported anxiety, depression, and PTSD, as well as variability in borderline personality, narcissism, and psychopathy

2. Method

2.1. Participants and procedure

All aspects of the study were approved by the university ethics board and all data were gathered by graduate students. Approximately 2000 introductory psychology students from a medium-sized, Midwestern university completed an early trauma and psychopathology screening assessment. Individuals who endorsed early sexual experience (prior to age 13) or the presence of at least two symptoms on a brief screening measure (e.g., presence of suicide attempts, flashbacks, severe anxiety or depression, antisocial behaviors) were invited to participate in the study. Endorsement of any two symptoms from any disorder of interest qualified individuals to participate in the study. The final sample included 248 participants with a possible CSA experience, at least two mental illness symptoms from the disorders of interest, or both. After the informed consent procedure, participants completed a questionnaire package, received a detailed debriefing by a graduate student trained in crisis management about the purpose of the study, and were given research credit for fulfillment of course requirements. The order of the questionnaires was counterbalanced to control for order effects and fatigue.

3. Materials

3.1. Childhood sexual abuse (CSA)

The Sexual Life Experience Questionnaire (SLEQ; Finkelhor, 1993) was used to assess early sexual experiences because it is comprehensive and provides nonbiased instructions to participants. Participants reported on the most memorable sexual experience, selected the activity from a comprehensive list of sexual acts, and indicated the frequency of the act. Due to lack of agreement about the definition of CSA (Haugaard, 2000), we adopted the state's legal definition of CSA: engaging in sexual acts with a child 13 years old or younger by an individual at least 3 years older than the child (Wisconsin Act 406, 2242–2248 U.S.C. § 948.02, 2008). All participants were categorized as to whether they met the CSA criterion (0 = no CSA experience, 1 = at least one CSA experience). Severity of the CSA was rated along a 5-point scale (1 = request to do something sexual, 2 = kissing or hugging in a sexual way or seeing or showing of sexual body parts, 3 = being sexually fondled or fondling another person's genitals or other sexual organs, 4 = performing or receiving oral sex, and 5 = anal or vaginal intercourse).

3.2. Specific invalidation (SI)

Participants reporting a CSA experience completed seven follow-up items to assess specific invalidation at the time of disclosure (e.g., extent to which they were not listened to, not believed, not supported, and not helped by the person to whom they disclosed, the extent to which they felt blamed and betrayed by the person to whom they disclosed the CSA, and the degree to which they perceived the person accepted them during the disclosure experience). For those who did not disclose, specific invalidation was assessed by asking participants to report on the degree to which they anticipated invalidation if they had disclosed their CSA experience. Items were rated along a 5-point scale (1 = Not at all/Almost not at all; 3 = Somewhat/About half the time; 5 = Completely/Almost completely) and responses were averaged to obtain an index measure of specific invalidation (Cronbach's $\alpha = .942$).

3.3. General invalidation (GI)

The 73-item Parental Acceptance and Rejection Questionnaire (PARQ; Gomez & Rohner, 2011) was used to assess general invalidation because of its inclusion of four subscale indexes of relevance to Linehan's (1993) conceptualization of an invalidating environment: (1) perceived lack of warmth and affection, (2) perceived hostility and aggression, (3) perceived indifference and neglect, and (4) perceived undifferentiated rejection. Each item is rated along a 4-point Likert scale (1 = Almost always true; 2 = Sometimes true; 3 = Rarely true; 4 = Almost never true) and responses were averaged to obtain an index measure of general invalidation (Cronbach's $\alpha = .85$).

3.4. Anxiety and depression

Symptoms of anxiety and depression were measured using the Beck Anxiety Inventory (BAI; Beck & Steer, 2015) and the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996). Each scale consists of 21 self-report items rated along a 4-point scale (0 = The symptom does not occur at all or I do not struggle with the symptom at all; 3 = Severely — It bothers me a lot or I struggle with the symptom a lot) and responses were averaged to obtain index measures of anxiety and depression symptoms (Cronbach's αs were .92 and .91, respectively).[1]

3.5. Post-traumatic stress disorder symptomatology (PTSD)

The PTSD Checklist—Civilian Version (PLC; Weathers, Litz, Huska, & Keane, 1994) was used to measure PTSD because of its high reliability among nonclinical undergraduate samples (Conybeare, Behar, Soloman, Newman, & Borkovec, 2012). It consists of 17 items rated along a 5-point Likert scale (1 = Not at all; 3 = Moderately; 5 = Extremely) and respondents rated the degree to which they experienced intrusive thoughts or emotional avoidance. Responses were averaged to obtain an index measure of PTSD symptoms (Cronbach's $\alpha = .91$).

3.6. Borderline personality

Characteristics of borderline personality were measured using the Personality Assessment Inventory—Borderline Features Scale (PAI-BOR) (Morey, 1991). It consists of 24 self-report items rated along a 4-point Likert scale (1 = False; 4 = Very true). Responses were averaged to obtain an index measure of BPD (Cronbach's $\alpha = .89$).

[1] Some participants failed to respond to all items on one or more personality or psychopathology instruments. If item non-response rate for a given instrument was low (i.e., item non-response rate was less that 15%), then the participant's score was determined by averaging across the items for which responses were given. If item non-response for a given instrument was high (i.e., item non-response rate was higher than 85%), then no score for the participant was computed. This approach to computing personality and psychopathology scores is what accounts for the slight difference in degrees of freedom across several of the reported analyses.

Table 1
Correlations among analyzed variables (total sample).

Measure	1	2	3	4	5	6	7
1. CSA							
2. GI	.053						
3. Depression	.217*	.198*					
4. Anxiety	.199*	.140*	.628*				
5. PTSD	.187*	.203*	.752*	.674*			
6. BP	.193*	.275*	.570*	.450*	.534*		
7. Narcissism	−.021	.263*	.432*	.398*	.480*	.508*	
8. Psychopathy	.061	.209*	.233*	.082	.269*	.342*	.373*

Note. *$p < .05$ (two-tailed). Any correlation value of $r = .21$ or higher is significant based on Bonferroni correction. $N = 239$–248. CSA = childhood sexual abuse (0 = none, 1 = at least one experience). GI = general invalidation. PTSD = post-traumatic stress disorder symptomatology. BP = borderline personality. Higher scores indicate higher levels of the respective variable.

3.7. Narcissistic personality

Characteristics of narcissism was measured using the Pathological Narcissism Inventory, which consists of 52 items rated along a 7-point scale (1 = Not at all like me; 7 = Very much or totally like me) (PNI; Pincus, Ansell, Pimente, Cain, Wright, & Levy, 2009). Responses were averaged to obtain an index measure of narcissistic personality (Cronbach's $\alpha = .95$).

3.8. Psychopathic personality

Characteristics of psychopathy was measured using the Self-Report Psychopathy Scale (SRP-III; Paulhus, Neumann, & Hare, 2015), which consists of 64 items rated along a 5-point scale (1 = Disagree strongly, 5 = Strongly agree). Responses were averaged to obtain an index measures of psychopathy (Cronbach's $\alpha = .91$).

4. Results

Descriptive statistics for participants, reported CSA experiences, and all dependent measures can be found in Supplementary data. To examine the link between emotional invalidation and personality, hierarchal regression analyses were conducted for two groups of participants. First, the responses of all participants ($N = 248$) were analyzed to evaluate whether a history of CSA, GI, and the interaction between CSA and GI predicted symptoms of depression, anxiety, PTSD, and borderline, narcissistic, and psychopathic personalities. Second, the responses of participants who indicated at least one CSA experience ($N = 91$) were analyzed to evaluate whether CSA-specific invalidation (SI), GI, and the interaction between SI and GI predicted each of the psychopathology symptom and personality measures. Severity and frequency of CSA were included as control variables to rule out the possibility that any predictive effects of SI could not be attributed to more extreme forms of CSA. Predicted values of each dependent variable were plotted against residuals and histograms of residuals were examined for potential departure from assumptions of relationship linearity, homoscedasticity of residuals, and normality of residuals. None of the data displays suggested evidence of extreme departure from these regression assumptions. Table 1 and Table 2 list the correlations between all variables used in the total sample and CSA subgroup analyses, respectively.

4.1. Total sample ($N = 248$)

Two regression models were evaluated for each psychopathology symptom and personality measure. Model 1 included CSA history (0 = no experience, 1 = at least one experience) and GI as predictors. Model 2 included both predictors and their interaction (CSA × GI). Results of these analyses can be found in Table 3.

Relative to Model 1, inclusion of the interaction term (Model 2) did not improve prediction of depression, anxiety, PTSD symptoms, or borderline and narcissistic personalities, all $\Delta R^2 < .011$, $Fs(1, 239–244) < 2.773$, $ps > .10$. Examination of standardized beta weights in Model 1 revealed that GI and CSA independently predicted anxiety and borderline personality measures. For narcissism, GI was a significant predictor, but CSA was not. For psychopathy, Model 2 produced a significant increase in prediction, $\Delta R^2 = .017$, $F(1, 240) = 4.318$, $p = .04$. Tests of simple slopes (using unstandardized beta weights) revealed that GI was a significant predictor when CSA had not occurred ($b = .535$, $p < .001$), but was not a significant predictor when CSA had occurred ($\beta = .097$, $p = .54$).

4.2. CSA subsample ($N = 91$)

One limitation with the previous analysis is that one cannot directly examine the potential association of SI with psychopathology symptom and personality measures because CSA is confounded with SI. Only among those with a CSA experience can we measure variability in the degree of SI anticipated or incurred. Thus, we examined whether GI and SI predicted psychopathology symptom and personality measures among those who had experienced CSA. Again, two regression models were evaluated. Model 1 included GI and SI as predictors. We also included the CSA severity and CSA frequency measures as control variables to rule out the possibility that they may account for any prediction of personality and psychopathology by SI. Model 2 included all four predictors and the interaction between SI and GI. Results of these analyses are listed in Table 4.

Relative to Model 1, inclusion of the interaction term (Model 2) did not improve prediction of depression, anxiety, and PTSD symptoms, or borderline personality and narcissism measures, all $\Delta R^2 < .008$, $Fs(1, 84–85) < .803$, $ps > .37$. Examination of standardized beta weights in Model 1 revealed that only SI independently predicted symptoms of depression, anxiety, and PTSD, as well as borderline personality and narcissism measures. None of the other three variables independently

Table 2
Correlations among analyzed variables (CSA sample).

Measure	1	2	3	4	5	6	7	8	9
1. Severity									
2. Frequency	.107								
3. GI	.012	−.189							
4. SI	−.029	−.267*	.254*						
5. Depression	.039	−.010	.084	.277*					
6. Anxiety	.059	.039	.091	.243*	.666*				
7. PTSD	.134	−.026	.092	.389*	.783*	.685*			
8. BP	.082	.009	.145	.521*	.526*	.426*	.424*		
9. Narcissism	.034	−.099	.244*	.339*	.624*	.578*	.635*	.448*	
10. Psychopathy	.193	−.085	.062	.197	.387*	.134	.347*	.295*	.325*

Note. *$p < .05$ (two-tailed). Any correlation value of approximately .35 or higher is significant based on Bonferroni correction. $N = 88$–91. Severity = severity of CSA. Frequency = frequency of CSA. GI = general invalidation. SI = CSA-specific invalidation. PTSD = post-traumatic stress disorder symptomatology. BP = borderline personality. Higher scores indicate higher levels of the respective variable.

Table 3
Regression analyses predicting personality and psychopathology symptoms (total sample).

	Statistic				
Measure	R^2	β	95% CI for β	95% CI for b	t
Model 1 (depression)	.082*				
CSA		.208*	(.086, .330)	(.079, .302)	$t(240) = 3.354$, $p = .001$
GI		.188*	(.066, .310)	(.107, .504)	$t(240) = 3.304$, $p = .003$
Model 1 (anxiety)	.057*				
CSA		.192*	(.070, .314)	(.078, .353)	$t(244) = 3.088$, $p = .002$
GI		.130*	(.008, .252)	(.015, .506)	$t(244) = 2.091$, $p = .038$
Model 1 (PTSD)	.073*				
CSA.		.177*	(.055, .299)	(.088, .470)	$t(245) = 2.877$, $p = .004$
GI		.194*	(.072, .316)	(.204, .886)	$t(245) = 3.151$, $p = .002$
Model 1 (BP)	.108*				
CSA		.179*	(.061, .297)	(.065, .325)	$t(245) = 2.960$, $p = .003$
GI		.266*	(.148, .384)	(.287, .751)	$t(245) = 4.400$, $p < .001$
Model 1 (narcissism)	.070*				
CSA		−.032	(−.154, .090)	(−.279, .162)	$\|t(243) = -.523$, $p = .60$
GI		.264*	(.142, .386)	(.459, 1.246)	$t(243) = 4.270$, $p < .001$
Model 1 (psychopathy)	.047*				
CSA		.053	(−.071, .177)	(−.065, .162)	$(241) = .842$, $p = .40$
GI		.207*	(.083, .331)	(.139, .553)	$t(241) = 3.294$, $p = .001$
Model 2 (psychopathy)	.063*				
CSA		1.094*		(.097, 2.091)	$t(240) = 2.161$, $p = .032$
GI		.535*		(.262, .808)	$t(240) = 3.866$, $p < .001$
CSA × GI		−.438*		(−.853, −.023)	$t(240) = -2.078$, $p = .04$

Note. *$p < .05$ (two-tailed). $N = 243$–248. Given the lack of interpretability of standardized beta weights and confidence intervals when an interaction term is included, unstandardized betas are reported for Model 2 (psychopathy) instead. CSA = childhood sexual abuse (0 = none; 1 = at least one experience). GI = general invalidation. PTSD = post-traumatic stress disorder symptomatology. BP = borderline personality.

Table 4
Regression analyses predicting personality and psychopathology symptoms (CSA sample).

	Statistic				
Measure	R^2	β	95% CI for β	95% CI for b	t
Model 1 (depression)	.083				
CSA severity		.035	(−.176, .246)	(−.045, .063)	$t(85) = .331$, $p = .74$
CSA frequency		.067	(−.150, .284)	(−.023, .044)	$t(85) = .615$, $p = .54$
GI		.022	(−.189, .233)	(−.320, .394)	$t(85) = .207$, $p = .84$
SI		.289*	(.070, .508)	(.028, .202)	$t(85) = 2.620$, $p = .01$
Model 1 (anxiety)	.075				
CSA severity		.054	(−.153, .261)	(−.046, .079)	$t(86) = .517$, $p = .61$
CSA frequency		.112	(−.105, .329)	(−.019, .059)	$t(86) = 1.023$, $p = .31$
GI		.044	(−.167, .255)	(−.331, .503)	$t(86) = .409$, $p = .68$
SI		.263*	(.044, .482)	(.020, .223)	$t(86) = 2.388$, $p = .02$
Model 1 (PTSD)	.177*				
CSA severity		.138	(−.057, .333)	(−.023, .133)	$t(86) = 1.406$, $p = .16$
CSA frequency		.069	(−.136, .274)	(−.032, .066)	$t(86) = .672$, $p = .50$
GI		−.002	(−.267, .263)	(−.525, .517)	$t(86) = -.015$, $p = .99$
SI		.412*	(.205, .619)	(.126, .379)	$t(86) = 3.961$, $p < .001$
Model 1 (BP)	.302*				
CSA severity		.082	(−.099, .263)	(−.031, .083)	$t(86) = .900$, $p = .37$
CSA frequency		.154	(−.035, .343)	(−.007, .065)	$t(86) = 1.628$, $p = .11$
GI		.032	(−.153, .217)	(−.316, .448)	$t(86) = .343$, $p = .73$
SI		.556*	(.363, .747)	(.179, .364)	$t(86) = 5.812$, $p < .001$
Model 1 (narcissism)	.144*				
CSA severity		.041	(−.158, .240)	(−.070, .106)	$t(85) = .409$, $p = .68$
CSA frequency		.008	(−.213, .229)	(−.053, .057)	$t(85) = .072$, $p = .94$
GI		.171	(−.036, .378)	(−.104, 1.073)	$t(85) = 1.637$, $p = .11$
SI		.300*	(.089, .511)	(.060, .347)	$t(85) = 2.823$, $p = .006$
Model 1 (psychopathy)	.082				
CSA severity		.206	(−.005, .415)	(−.001, .097)	$t(84) = 1.955$, $p = .054$
CSA frequency		−.058	(−.277, .161)	(−.039, .023)	$t(84) = -.525$, $p = .60$
GI		.003	(−.246, .252)	(−.333, .341)	$t(84) = .024$, $p = .98$
SI		.188	(−.031, .407)	(−.012, .148)	$t(84) = 2.823$, $p = .09$
Model 2 (psychopathy)	.132*				
CSA severity		.045		(−.003, .093)	$t(84) = 1.865$, $p = .07$
CSA frequency		−.005		(−.036, .025)	$t(84) = -.360$, $p = .72$
GI		.830*		(.013, 1.646)	$t(84) = 2.021$, $p = .05$
SI		.870*		(.140, 1.599)	$t(84) = 2.371$, $p = .02$
GI × SI		−.333*		(−.634, −.032)	$t(84) = -2.199$, $p = .03$

Note. *$p < .05$ (two-tailed). $N = 89$–91. Given the lack of interpretability of standardized beta weights and confidence intervals when an interaction term is included, unstandardized betas are reported for Model 2 (psychopathy) instead. CSA = childhood sexual abuse (0 = none; 1 = at least one experience). GI = general invalidation. SI = CSA-specific invalidation. PTSD = post-traumatic stress disorder symptomatology. BP = borderline personality.

predicted any of the aforementioned psychopathology symptoms or personality measures. For psychopathy, Model 2 produced a significant increase in prediction, $\Delta R^2 = .051$, $F(1, 83) = 4.834$, $p = .03$. Tests of simple slopes (unstandardized) revealed that the direction of association between GI and psychopathy at 1 SD below the mean of SI was of opposite sign ($b = .444$, $p = .09$) than was the association between GI and psychopathy at 1 SD above the mean ($b = -.382$, $p = .12$).

5. Discussion

Consistent with previous research findings (e.g., Fergusson et al., 2013), we found that CSA history predicted symptoms of anxiety, depression, PTSD, and borderline personality characteristics, but not characteristics of narcissism or psychopathy. Of particular relevance, pervasive general invalidation by a primary caregiver predicted symptoms of anxiety, depression, and PTSD, as well as borderline personality and narcissism characteristics. More nuanced analyses revealed that only abuse-specific invalidation independently predicted degree of personality characteristics and psychopathology symptoms. Overall, results suggest that invalidation of experiences, both generally and in response to trauma, warrant further attention as it pertains to personality structure and development.

The present findings are generally consistent with and extend those of Hong et al. (2011), with some exceptions. First, contrary to the Hong et al. (2011) study, CSA independently predicted borderline personality characteristics. The range of sexual experiences reported that could be labeled as abuse was greater for the present study due to a less conservative definition of CSA. Some abused individuals may have been miscategorized as non-abused in the Hong et al. (2011) study, ultimately reducing the sensitivity of the abuse measure and predictive effect of CSA. Second, the measure of specific invalidation in the present study was more internally consistent and assessed more broadly experiences of specific invalidation compared to the measure used in the Hong et al. (2011) study. Use of a more sensitive and reliable measure of specific invalidation may have permitted better discrimination between specific and general invalidation. Indeed, it is notable that the degree of association between the general and specific invalidation measures of the present study was quite a bit smaller in magnitude ($r = .245$) than was the magnitude of association between the measures used in Hong et al.'s (2011) study ($r = .486$).

Also notable was an unexpected interaction of general invalidation and childhood sexual abuse on psychopathy, such that general invalidation only predicted psychopathy in the absence of CSA. One interpretation is that CSA somehow buffers against the impact of general invalidation on the emergence of certain psychopathic characteristics. However, this interaction should be interpreted in a more speculative manner until replication can better speak to its dependability as the finding was not obviously consistent with any theoretical perspective on the etiology of psychopathy of which we are aware.

5.1. Methodological considerations

The personality and psychopathology symptom measures in the present research primarily reflect subclinical forms of these constructs. Second, the study was based on retrospective reports, which may entail some degree of unreliability, although research suggests that retrospective self-reports of traumatic events and experiences surrounding the events are generally accurate (Pezdek & Taylor, 2002). Given the anecdotal assumption and some data that those with psychopathology are more prone to distorted thinking patterns (e.g., depression; Kovacs & Beck, 1978), participants high in psychopathological symptoms may have perceived more invalidation than what truly occurred in the situation.

However, there are two qualifiers to this concern. First, we are aware of no research that has examined whether psychopathologies are associated with distortion of retrospective reports of trauma; thus, it remains an unanswered empirical question. Second, the accuracy of the perception of invalidation may be less relevant because it is the perception of the event, even if it is a "misperception," that is thought to contribute to the development of psychopathology, not the objective event of invalidation itself. Perception as the causal agent and the primary influence of behavior are fundamental premises of cognitive theories (Kovacs & Beck, 1978). Indeed, the empirical literature suggests that subjective evaluation of events, rather than objective characteristics of events, may better predict psychopathology (Hendriks, van den Putte, & de Brujin, 2015; Volkovich, Tikotzky, & Manber, 2015). Thus, perceived invalidation (or lack thereof) is a formative mechanism by which one's experiences are judged and integrated in a psychologically "beneficial" or "detrimental" manner.

5.2. Future directions

Although beyond the scope of the present study, other factors such as the cumulative effects of exposure to multiple, different traumas and, thus trauma-specific invalidation, may be important to investigate (Banyard, Williams, Saunders, & Fitzgerald, 2008). It also may be worthwhile to consider the implications of environments that are consistently versus inconsistently invalidating as each may result in differential effects on personality and psychopathology. A longitudinal prospective study examining the effects of invalidation as a predictor of personality change across time would also provide better insight into how invalidation might contribute to personality development. Thus, given that the present findings speak to the potential importance of invalidation in shaping personality and psychopathology more broadly, it would be fruitful to empirically examine the mechanisms by which such shaping may occur within an individual.

Appendix A. Supplementary data

Supplementary data to this article can be found online at http://dx.doi.org/10.1016/j.paid.2015.10.016.

References

Banyard, V.L., Williams, L.M., Saunders, B.E., & Fitzgerald, M.M. (2008). The complexity of trauma types in the lives of women in families referred for family violence: multiple mediators of mental health. *American Journal of Orthopsychiatry*, *78*(4), 394–404.

Beck, A. T., & Steer, R. (n.d.). Beck Anxiety Inventory Manual. Texas: Harcourt Brace.

Beck, A.T., Steer, R.A., & Brown, G.K. (1996). *Manual for the Beck Depression Inventory-II.* Texas: Psychological Corporation.

Bernard, L. (2014). Motivation and borderline personality, psychopathy, and narcissism. *Personality and Individual Differences*, *12*(1), 12–30.

Bohus, M., Dyer, A.S., Priebe, K., Krüger, A., Kleindienst, N., Schmahl, C., ... Steil, R. (2013). Dialectical behavior therapy for post-traumatic stress disorder after childhood sexual abuse in patients with and without borderline personality disorder: a randomized controlled trial. *Psychotherapy and Psychosomatics*, *82*(4), 221–233.

Buckholdt, K., Parra, G.R., & Jobe-Shields, L. (2014). Intergenerational transmission of emotion dysregulation through parental invalidation of emotions: implications of adolescent internalizing and externalizing behaviors. *Journal of Child and Family Studies*, *23*(2), 324–332.

Conybeare, D., Behar, E., Soloman, A., Newman, M.G., & Borkovec, T.D. (2012). The PTSD Checklist—Civilian Version: reliability, validity, and factor structure in a nonclinical sample. *Journal of Clinical Psychology*, *68*(6), 699–713.

Fergusson, D.M., McLeod, G.F.H., & Horwood, L.J. (2013). Childhood sexual abuse and adult developmental outcomes: findings from a 30-year longitudinal study in New Zealand. *Child Abuse and Neglect*, *37*(9), 664–674.

Finkelhor, D. (1993). Epidemiological factors in the clinical identification of child sexual abuse. *Child Abuse and Neglect*, *17*(1), 67–70.

Gomez, R., & Rohner, R.P. (2011). Tests of factor structure and measurement invariance in the United States and Australia using the adult version of the Parental-Acceptance Rejection Questionnaire. *Journal of Comparative Social Science*, *45*(3), 267–285.

Haugaard, J.J. (2000). The challenge of defining child sexual abuse. *American Psychologist*, *55*(9), 1036–1039.

Hendriks, H., van den Putte, B., & de Brujin, G.J. (2015). Subjective reality: the influence of perceived and objective conversational valence on binge drinking determinants. *Journal of Health Communication*, *20*(7), 859–866.

Hong, P.Y., Ilardi, S.S., & Lishner, D.A. (2011). The aftermath of trauma: the impact of perceived and anticipated invalidation of childhood abuse in borderline symptomatology. *Psychological Trauma: Theory, Research, Practice, and Policy. 3.* (pp. 360–368).

Kovacs, M., & Beck, A.T. (1978). Maladaptive cognitive structures in depression. *The American Journal of Psychiatry*, *135*(5), 525–533.

Linehan, M.M. (1993). *Cognitive behavioral treatment for Borderline personality disorder: The dialects of Effective treatment.* New York: Guilford Press.
Miller, J.D., Dir, A., Gentile, B., Wilson, L., Pryor, L.R., & Campbell, W.K. (2010). Searching for a vulnerable dark triad: comparing factor 2 psychopathy, vulnerable narcissism, and borderline personality disorder. *Journal of Personality*, *78*(5), 1529–1564.
Morey, L.C. (1991). *Personality Assessment Inventory: Professional manual.* Florida: Psychological Assessment Resources.
Paulhus, D.L., Neumann, C.S., & Hare, R.D. (2015). *Manual for the Hare Self-Report Psychopathy scale.* Canada: Multi-Health Systems.
Peter-Hagene, L.C., & Ullman, S.E. (2014). Social reactions to sexual assault disclosure and problem drinking: mediating effects of perceived control and PTSD. *Journal of Interpersonal Violence*, *29*(8), 1418–1437.
Pezdek, K., & Taylor, J. (2002). Memory for traumatic events in children and adults. In M.L. Eisen (Ed.), *Memory and suggestibility in the forensic interview*. New Jersey: Lawrence Erlbaum.
Pincus, A.L., Ansell, E.B., Pimentel, C.A., Cain, N.M., Wright, A.C., & Levy, K.N. (2009). Initial construction and validation of the pathological narcissism inventory. *Psychological Assessment*, *21*(3), 365–379.
Selby, E.A., Braithwaite, S.R., Joiner, T.E., & Fincham, F.D. (2008). Features of borderline personality disorder, perceived childhood emotional invalidation, and dysfunctions within current romantic relationships. *Journal of Family Psychology*, *22*(6), 885–893.
Ullman, S.E., & Filipas, H.H. (2003). Social reactions to child sexual abuse disclosures: a critical review. *Journal of Child Sexual Abuse*, *12*(1), 89–121.
Volkovich, E., Tikotzky, L., & Manber, R. (2015). Objective and subjective sleep during pregnancy: links with depressive and anxiety symptoms. *Archives of Women's Mental Health*.
Weathers, F.W., Litz, B.T., HUska, J.A., & Keane, T.M. (1994). *PTSD Checklist-Civilian version.* Massachusetts: National Center for PTSD.
Wisconsin Act 406, 2242–2248 U.S.C. § 948.02 (2008). *Statutes on Aggravated Indecent Liberties with a Child.*
Yap, M.B.H., Allen, N.B., & Ladouceur, C.D. (2008). Maternal socialization of positive affect: the impact of invalidation on adolescent emotion regulation and depressive symptomatology. *Child Development*, *79*(5), 1415–1431.
Zhang, Y., & Zhong, J. (2013). The role of family invalidation in the development of psychopathology. *Chinese Journal of Clinical Psychology*, *21*(2), 251–255.