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ORIGINAL ARTICLE

The Role of Narcissistic Vulnerability in Predicting Adult Posttraumatic Symptoms from Childhood Sexual Abuse

Eytan Bachar · Laura Canetti · Hilit Hadar · Julia Baruch · Yehuda Dor · Sara Freedman

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Abstract The aim of the present study is to determine whether narcissistic vulnerability can aid in clarifying the debate regarding the relationship between childhood sexual abuse (CSA) and adulthood adjustment to traumatic events. 157 survivors (mean age = 31.1, SD = 10.9) of a traumatic event (war activities and road and work accidents) were assessed 1 week, 1, and 4 months following the event. Of the 157 participants, 15 reported experiencing CSA, and 26 reported experiencing childhood physical abuse (CPA). In the first-week assessment, patients were administered the Narcissistic Vulnerability Scale (NVS) and the Beck Depression Inventory (BDI). In the follow-up assessments, subjects were interviewed on the Clinician-Administered PTSD Scale. Narcissistic vulnerability was found, both in 1- and 4-month follow-ups, to increase the likelihood of participants who experienced CSA to develop PTSD symptoms later in their adult life, when exposed to other additional trauma. Narcissistic vulnerability, in both follow-ups, did not increase the likelihood of participants who experienced CPA to develop PTSD symptoms later in their life when exposed to other additional trauma. The NVS predicted the development of PTSD symptoms in the whole sample, both in the 1- and 4-month follow-ups, above and beyond the prediction of the BDI. In other words, narcissistic vulnerability can add additional information above and beyond general negative emotionality. In conclusion, it is recommended to take into consideration the interplay between CSA and the individual's narcissistic vulnerability when assessing the long term effects of CSA such as acute or chronic PTSD.

Keywords Narcissistic Vulnerability Scale · Depression · PTSD · CSA · CPA

Introduction

Clinicians repeatedly document the intense harm that childhood sexual abuse (CSA) may inflict upon persons who experience it [1]. Empirical research, however, does not always support this [1, 2]. The aim of the present study is to add a quantifiable measure of self-report narcissistic vulnerability to the existing empirical quantitative research, which may shed light on adult CSA survivors' susceptibility to the development of Posttraumatic Stress Disorder (PTSD) after exposure to an additional traumatic event.

In the empirical literature on narcissism, there is a general agreement that there are two primary forms of expression of narcissism: grandiosity and vulnerability [3, 4]. Vulnerability to narcissistic injury implies that the narcissistically inclined individual perceives the inevitable setbacks in life as narcissistic injuries, and in response reacts in grandiosity or shameful withdrawal. The underlining mechanism, which renders the narcissistically inclined individual to feel narcissistically injured, is poor self-esteem regulation [3]. All individuals have normal narcissistic needs and motives, however narcissistically prone individuals appear particularly troubled when faced

E. Bachar (✉) · L. Canetti · H. Hadar · J. Baruch · S. Freedman
Department of Psychiatry, Hadassah University Medical Center, POB 12000, Jerusalem, Israel
e-mail: eytan.bachar@mail.huji.ac.il

E. Bachar · L. Canetti · Y. Dor
Department of Psychology, Hebrew University, Jerusalem, Israel

S. Freedman
School of Social Work, Bar Ilan University, Ramat Gan, Israel

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with disappointments and threats to their positive self-image. Since no one is perfect and the world is constantly providing obstacles and challenges to desired outcomes, the narcissistically prone individual suffers from regulatory deficits and maladaptive strategies to cope with disappointments and threats to a positive self-image. The narcissistically grandiose individual copes with self-esteem dysregulation by creating an exaggerated sense of superiority and uniqueness as well as by engaging in grandiose fantasies. These individuals exhibit entitlement, exploitativeness, and a lack of empathy [3]. The individual prone to feelings of vulnerability in response to narcissistic injurycopes with self-esteem dysregulation with shameful withdrawal and sense of inferiority [3, 4].

Bachar et al. [5] in a prospective longitudinal study using the Narcissistic Vulnerability Scale (NVS), predicted the development of PTSD in adult participants who were exposed to traumatic events (war activities and road and work accidents). They found that participants who were assessed a few days after arriving to the emergency room following a traumatic event and who scored high on the NVS, showed a significantly greater tendency to develop PTSD at 1 and 4 month follow-ups. Participants whose scores on the NVS were similar to those of the normal non-traumatized population did not tend to develop PTSD, despite exposure to the same traumatic events. The present study will make use of the NVS, in studying the role of narcissistic vulnerability in the prediction of adult PTSD from childhood sexual abuse. The NVS includes three subscales, which tap these two main factors of narcissism (grandiosity and vulnerability). Vulnerability is assessed by the self-esteem regulation subscale, and grandiosity is assessed by the grandiosity and exploitation subscales. Factor analysis of the NVS found that all of the NVS subscales are heavily loaded on a single factor, legitimizing the use of a total score [5]. This feature of the NVS lends support to the empirical literature that the two primary expressions of narcissism, grandiosity and vulnerability, are inter-correlated and create a higher order factor of general narcissism [6, 7]. A higher score on the NVS represents a greater inclination to suffer from narcissistic personality disorder. Following the recent empirical literature on narcissism [3, 4, 6, 7], this instrument taps not only the grandiose expression of narcissism (which the *Diagnostic and Statistical Manual of Mental Disorders* phenomenological criteria for narcissistic personality disorder emphasizes more [8, 9]) but also the vulnerable expression of narcissism. The 'Narcissistic Vulnerability Scale' taps the whole phenomena of narcissism—grandiosity and vulnerability. The NVS authors specifically mention 'Vulnerability' in the title of the instrument, as vulnerability is the more prominent factor underlining narcissism [3, 4, 6, 7].

In contrast with the clinical literature, empirical studies regarding the long-term effects of CSA on adult adjustment to stressful life events are equivocal [1, 2]. Several studies have found that one of the most prevalent risks of CSA is the development of PTSD [10–12]. A meta-analysis also showed that children who experienced CSA are at greater risk for developing PTSD in their adult life, after exposure to an additional other trauma [13]. On the other hand, other researchers have stated that not all survivors of CSA are at equal risk and there are CSA survivors who fare well, despite early adversities such as CSA [2]. A more extreme position in this line of argument is the work of Rind et al. [1], who meta-analyzed studies using college student samples and compared them to national samples (the data of the national samples were consistent with the college students' data). They concluded that participants who survived CSA were on average slightly less well-adjusted than controls. However, they claimed that this poorer adjustment could not be attributed to CSA, because family environment was consistently confounded with CSA. They further stated that negative effects of CSA were neither pervasive nor typically intense, and the magnitude of the CSA-adjustment relationship is small, implying that CSA does not typically have intensely negative psychological effects. They were careful to state that their meta-analytic findings should not be interpreted to imply that CSA never causes intense harm and they mentioned that clinical research documents specific cases in which CSA causing harm is strongly implied. They summarized that what the findings do imply, is that the negative potential of CSA for most individuals who have experienced it, has been overstated.

Reviewing the above controversy, it seems that the literature in this field requires that studies investigate the impact of intervening variables that can improve our understanding of CSA-adjustment relationships. Thus, Cantón-Cortés et al. [14] found that the differences of blame attribution by the survivors, who blame either themselves, their family members, or an extra-familial perpetrator, explained the variability of PTSD symptoms in adults who experienced CSA.

Several studies concentrated on the role of attachment style as a mediator between CSA and adult coping with stressful life events. Thus, Pierrehumbert et al. [15] found that attachment style mediated adult CSA survivors' response to experimental perceived stress both psychologically (the ability of trauma resolution and assimilation) and physiologically (cortisol level). Shapiro and Levendosky [16] found that attachment style mediated the effects of CSA and physical abuse and neglect on coping and psychological distress. Another study found that attachment style moderated the relationship between CSA and trauma-related symptoms [17]. Mother-daughter

relationship was pinpointed in another study as an important source for evaluating coping capacities of sexually abused children [18]. Other studies focused on feelings of stigma and coping strategies of the survivors [19, 20].

Gene-Environment interaction was another factor considered as a potential mediating variable in the relationship between CSA and adult adjustment to stressful life events. Bradley et al. [21] have shown that there seems to exist an interaction between family environment, genes and childhood adversity, such that a positive environment and genetics can lead to higher resilience, despite childhood adversity. Binder et al. [22] found that the stress related gene, *FKBP5*, significantly interacted with the severity of child abuse to predict levels of adult PTSD symptoms.

Moor and Silvern [23] studied the variable of perceived parental failure of empathy in a sample of female students to predict adult symptoms of maladjustment from CSA. They found that parental empathy failure mediated the long-term effect of childhood physical abuse (CPA) and extra-familial sexual abuse on adult maladjustment.

The role of narcissistic vulnerability in predicting adult PTSD from CSA, in this current study, is in line with the study of Moor and Silvern [23] on parental empathy failure. Thus, for example, according to at least one psychological theory, self-psychology [24, 25], parental empathy failure will result in greater narcissistic vulnerability in the offspring. Simon [26] described a cluster of symptoms that he coined "trauma-associated narcissistic symptoms" (TANS) which include emotions such as humiliation, shame, embarrassment, and rage. He suggested that the TANS accompany posttraumatic reaction to an event that does not necessarily threaten life, but threatens the self-image. The traumatic event that elicits the TANS, involves assault from another individual in direct contact, where as PTSD reaction in general may not always involve direct contact with the perpetrator, such as situations of war or natural disasters.

Simon [26] argued that rape and sexual abuse are traumatic events that activate the additional symptoms of narcissistic features of the TANS in addition to the PTSD reaction. According to Simon, sexual abuse may involve stronger narcissistic injury than physical abuse, because being involved in an act that is extremely prohibited (even if participation was involuntary) shatters the self-image and increases self-esteem dysregulation. He predicted, on the basis of clinical cases, that persons high in narcissistic vulnerability are at greater risk of developing PTSD after exposure to a traumatic event in general, and one that involves narcissistic injuries in particular.

Following the findings that narcissistic vulnerability predisposes the individual to develop PTSD [5], as well as the report that sexual abuse is a traumatic event that specifically renders the victim to develop narcissistic vulnerability [26], we hypothesize that narcissistic vulnerability increases the likelihood of participants who suffered from CSA to develop PTSD symptoms after exposure to additional other trauma (war activities and accidents), later in their adult lives.

CSA and CPA

Childhood adversities are highly interrelated [27]. Thus, several authors have mentioned the observation that physical abuse often accompanies sexual abuse and that the CSA-adjustment relationship will tend to disappear if the factor of physical abuse is held constant [28, 29]. Though Kessler et al. [27] suggest that there is only weak specificity for the association of specific childhood adversity to specific disorder, researchers have studied whether childhood abuse subtypes, physical, sexual, or emotional, differentially predict PTSD symptom severity. It was found that emotional and sexual abuse, rather than physical abuse, were related to PTSD symptom severity in a sample of hospitalized adolescents [30]. Furthermore, in a sample of non-hospitalized adolescents, researchers found that CSA is a relatively stronger predictor of PTSD symptoms than CPA [31, 32]. Similar results showed that survivors of CSA reported more negative mental health outcomes in their adult life than survivors of other types of childhood abuse [33].

Based on these findings and the clinical theoretical expectation brought by Simon [26], that CSA entails stronger elements of narcissistic injury (humiliation, shame, and embarrassment) than CPA, we hypothesize that narcissistic vulnerability will not increase the likelihood of participants who suffered from CPA in their childhood to develop PTSD after exposure to additional other traumatic events in their adult life.

Narcissistic Vulnerability Above and Beyond Depression?

Depression often accompanies PTSD [34–36]. This comorbidity led authors from the late 90s to emphasize that in spite of this extensive comorbidity, PTSD can be differentiated from MDD and can be considered as an independent category [35, 37]. In this line of thinking, the current study explores whether narcissistic vulnerability predicts the development of PTSD above and beyond depression. It explores whether this variable explains an additional proportion of the variance which is unique and can't be attributed to the variance explained by depressive symptoms namely general negative emotionality, which can be measured by self-report scales of depression.

In sum, this study examines three hypotheses:

1. Narcissistic vulnerability increases the likelihood of participants who suffered from CSA to develop PTSD symptoms after exposure to additional other trauma later in their adult lives.
2. Narcissistic vulnerability will not increase the likelihood of participants who suffered from CPA in their childhood to develop PTSD after exposure to additional other traumatic events in their adult life.
3. Narcissistic vulnerability predicts the development of PTSD above and beyond depression.

Methods

Participants

A total of 261 individuals were admitted to an emergency room (ER) following a traumatic event (road accident—80 % of the participants, terrorist act—10 %, and work accidents—10 %) within the time period of 18 months of the present study and were seen by a clinical psychologist. They were invited to participate in the study if their age was between 18 and 65. Participants were not included in the study if they currently suffered from head injury, serious physical illness, or traumatic injury requiring a surgical operation. Participants were asked if they had experienced previous traumatic events. Participants who reported experiencing previous traumatic events other than CSA or CPA were excluded.

A total of 157 agreed to participate in the study and were invited to take part in three assessments: a few days (4–6 days), 1, and 4 months following the trauma. These dates correspond with the criteria for PTSD as described by the *Diagnostic and Statistical Manual of Mental Disorders [*8], which describes 1 month as the acute phase and 4 months as the chronic phase. The fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders [*9], which was published after the data-gathering phase of this study, eliminates the distinction between acute and chronic phases of the disorder.

Out of the 157 participants, 15 reported experiencing sexual abuse in their childhood (close to the percentage of CSA in the population—14.4 % [38]). The present study complies with Israel Central Bureau of Statistic criteria for CSA age range 6–16 years. 26 reported experiencing physical abuse in their childhood (no such data is available in the Israel Central Bureau of Statistics [38]), 116 participants reported no childhood abuse. The participants provided a written informed consent. The 104 subjects who were seen at the ER and did not participate in the study, did not differ significantly from participants on the demographic variables of gender, marital status, religiosity, education. Out of these 104 subjects, 81 were non-eligible and 23 refused to participate.

Instruments

Narcissistic Vulnerability Scale (NVS) [5]

This is a 5 point Likert scale self report questionnaire which consists of 48 items: 10 for grandiosity (for example: "I have the feeling that one day I'll do something great"; "I spend a great deal of time daydreaming about my future successes"), 11 for exploitation (for example: "If a person should have done a job for me and he has some troubles, I believe that first and foremost he should have given me the service and I don't care what his troubles are"; "It is really not so bad if I exploit people a little"), and 14 for self-esteem regulation (for example: "The slightest criticism depresses me"; "When even the slightest question is raised about my performance, my world seems to collapse").13 additional items do not relate to the concept of narcissistic vulnerability and were not scored or analyzed in the factor analysis. They were interspersed among the items to prevent a response set. The test's reliability, internal validity, and consistency were established in a series of studies [5]. The scale's test–retest reliability (during a 2-week interval) was found to be .92 ($p < 0.001$). Exploratory factor analysis with varimax rotation was conducted. According to the exploratory factor analysis, the items, in most cases, were gathered into the three factors that Bachar et al. [5] had expected (self-esteem regulation, exploitation, and grandiosity).

To ensure that the subscales of the NVS aggregate to unifactor, thus enabling the use of a total score, the researchers performed high order factor analysis. They found that all of the NVS subscales were highly loaded (beyond .70) on a single factor. This factor explained 52.8 % of the variants, legitimizing the use of a total score. The alpha Cronbach coefficient in that paper was .88, and in the present paper, .89 [5].

Beck Depression Inventory (BDI) [39]

The Beck Depression Inventory (BDI) is a widely used self-report measure of depression. The BDI has been administered to a variety of clinical populations, and its reliability and validity have been extensively documented. The alpha Cronbach coefficient in Beck et al.'s paper was .86 [40], and in our study it was .87.

Stressful Life Events Screening Questionnaire (SLESQ) [41]

This questionnaire asks for the presence or absence of potentially traumatic events using 13 questions. Of them, three questions relate to sexual abuse, and two to physical abuse. The three CSA questions refer to whether the participants had ever been exposed in their childhood to anyone who succeed or tried to physically force them to have intercourse, oral or anal sex against their wishes or when they were in some way helpless. The two CPA questions refer to whether the participants had ever been exposed to repeated physical attack or harm in their childhood. Participants who answered yes on one or more of the three questions pertaining to CSA were marked as CSA survivors and participants who answered yes on one or more of the two questions pertaining to CPA were marked as CPA survivors.

Clinician-Administered PTSD Scale (CAPS) [42]

The Clinician-Administered PTSD Scale (CAPS) is a structured clinical interview for assessing PTSD according to *DSM-IV* criteria [42]. The CAPS quantifies symptom frequency and severity for each PTSD diagnostic criterion. The CAPS has excellent psychometric properties. Test–retest reliability ranged from .77 to .96 for the symptom clusters, and .90 to .98 for all items. Against SCID PTSD diagnosis, the CAPS total score was found to have good sensitivity (.84) and excellent specificity (.95). Regarding convergent validity, the CAPS strongly correlated with other indices of PTSD. Internal consistency (alpha coefficients) for severity scores (frequency + intensity) ranged from .85 to .8 [7, 42] and in the present study from .84 to .85.

Procedure

Eligible subjects were interviewed by clinicians and were given self-report questionnaires: the NVS, the BDI and the SLESQ. One month and 4 months afterward (in line with the *DSM-IV* criteria), subjects were invited to revisit the Center for Traumatic Stress. In both of these sessions, participants were interviewed by an experienced psychiatrist who administered the CAPS. Each session lasted 1 h. Patients were paid the Israeli equivalent of 25 dollars for participating in each session. If participants reported difficulties in arriving to the clinic laboratory, the hospital provided transportation. These efforts were fruitful in preventing any dropout between the first and 4 month assessments.

Data Analysis

Comparisons of demographic characteristics of the three groups: CPA, CSA and no childhood abuse participants, were done by one-way analysis of variance on interval measures, or Chi square tests on categorical measures. Comparisons on the same demographic variables between participants and refusals, were done by *t* tests on interval measures, or Chi square tests on categorical variables. Amongst the sexually abused participants we compared those who reported CSA only (8 participants), to those who reported both CSA and CPA (7 participants) in all the study variables, and we also compared between males (7 participants) and females (8 participants) in these variables. In these comparisons, given the small number of participants in each group, we used Mann–Whitney non parametric tests. In order to predict CAPS from NVS total and CSA, and to predict CAPS from Grandiosity and CSA, stepwise multiple regressions were performed. Stepwise multiple regressions were also calculated to predict CAPS from NVS total and the BDI, and to predict CAPS from NVS subscales and the BDI. All p values were two tailed. All statistical calculations were performed using SPSS 21.0 for Windows.

Results

Demographic Variables of the Three Groups

No significant differences were found between participants who experienced CSA, CPA, and no childhood abuse in most demographic variables: age, gender, religiosity and education (see Table 1). Since marital status Chi square was almost significant between the three groups, we explored follow-up contrasts. A significant difference in marital status was found between the CSA and the no childhood abuse samples: 20 % of CSA were divorced while only 4.3 % of the participants with no childhood abuse were ($c^2_{(2)} = 6.8$, $p = 0.03$). Of the 15 participants who reported experiencing CSA, 7 had also reported CPA. This corresponds to reports in the literature that sexual abuse is often accompanied by physical abuse [28, 29].

Amongst the sexually abused participants, no significant differences were found between those who reported CSA only, and those who reported both CSA and CPA, in any of the study variables. We performed Mann–Whitney's U test: the means of the CAPS total score, 1 month after the current traumatic event for CSA only versus CSA and CPA were 34.5 and 41.3, respectively ($U = 20.5$, $Z = -.07$, not significant), and the means of the CAPS after the 4-month

Table 1 Characteristics of participants

Variable	CSA ($n = 15$)	CPA ($n = 26$)	No Abuse ($n = 116$)	F/χ^2	p
Age (years)	31.3 ($SD = 10.5$)	33.4 ($SD = 13.7$)	30.6 ($SD = 10.2$)	.718	.490
Gender (%)				1.38	.503
Male	46.7	65.4	57.8		
Female	53.5	34.6	42.2		
Marital status (%)				8.87	.064
Married	26.7	34.6	48.7		
Single	53.5	50.0	47.0		
Divorced	20.0	15.4	4.3		
Religiosity (%)				3.79	.435
Secular (irreligious)	28.6	45.8	42.1		
Traditional (partial religious practice)	35.7	37.5	25.3		
Orthodox (full religious practice)	35.7	16.7	32.5		
Education (years)	13.1 ($SD = 2.8$)	13.4 ($SD = 1.9$)	13.4 ($SD = 2.5$)	.074	.929

CSA childhood sexual abuse, *CPA* childhood physical abuse

follow-up for CSA only versus CSA and CPA were 32.8 and 36.4 respectively ($U = 24$, $Z = -.46$, not significant). The means of the NVS grandiosity subscale for CSA only versus CSA and CPA were 23.6 and 24.3 respectively, ($U = 27$, $Z = -.12$, not significant) and the means of the NVS total score for CSA only versus CSA and CPA were 84.6 and 87.7 respectively ($U = 23.5$, $Z = -.52$, not significant), showing that the addition of physical abuse to the sexual abuse did not change the CAPS or the NVS scores.

Amongst the sexually abused participants, no significant gender differences were found in any of the study variables. We performed Mann–Whitney's U test: the means of the CAPS total score 1 month after current traumatic event for males versus females were 33.8 and 41.9 respectively ($U = 15$, $Z = -.86$, not significant), and the means of the CAPS at the 4-month follow-up for males versus females were 24.9 and 42.9 respectively ($U = 22.5$, $Z = -.64$, not significant). The means of the NVS grandiosity subscale for males versus females were 22.4 and 25.3 respectively ($U = 17$, $Z = -1.28$, not significant), and the means of the NVS total score for males versus females were 83.3 and 88.5 respectively ($U = 23.5$, $Z = -.52$, not significant).

Hypotheses Testing

Stepwise multiple regression confirms the study's first hypothesis about the role of narcissistic vulnerability in predicting the CAPS total score from CSA. In this analysis, CSA was coded 1 and no CSA was coded 0. When studying the NVS total score in the prediction of the CAPS 1 month after the current trauma, the results of the regression indicated that the NVS total score and the interaction between the NVS total and CSA significantly predicted posttraumatic symptoms ($F_{(2,89)} = 6.96$, $p = .002$; see Table 2). The NVS total score was first to enter the model ($R = .30$; $\beta = .27$) and the interaction between the NVS total and CSA entered second and the model increased to $R = .37$ ($\beta = .21$). In other words, narcissistic vulnerability increased the likelihood of participants who experienced CSA to develop PTSD symptoms later in their adult life when exposed to other additional trauma.

In the prediction of the CAPS total score 1 month after the current traumatic event, the results of the regression indicated that the grandiosity subscale of the NVS and the interaction between grandiosity and CSA significantly predicted posttraumatic symptoms ($F_{(2,89)} = 9.41$, $p < .001$) (see Table 2). The grandiosity subscale was first to enter the model ($R = .36$; $\beta = .32$) and the interaction between grandiosity and CSA entered second and the model increased to $R = .42$ ($\beta = .22$).

Similarly, in the prediction of the CAPS total score four months after the current traumatic event, the results of the regression indicated that the grandiosity subscale of the NVS and the interaction between grandiosity and CSA significantly predicted posttraumatic symptoms ($F_{(2,105)} = 10.07$, $p < .001$) (see Table 2). The interaction between grandiosity and CSA was first to enter the model ($R = .31$; $\beta = .27$) and the grandiosity subscale entered second and the model increased to $R = .40$ ($\beta = .26$). In the prediction of the CAPS after 4 months from the NVS total score and CSA, results indicated that only the interaction between the

Table 2 Variables predicting PTSD symptoms 1 month after current traumatic event (CAPS1) and after 4 months follow-up (CAPS4)

Predicted	Predictors	R	R^2	ΔR^2	p	β	p
CAPS1	Grandiosity	.36	.13	.13	<.001***	.32	.002**
	CSA × Grandiosity	.42	.18	.05	.030*	.22	.030*
CAPS1	NVS total	.30	.09	.09	.003**	.27	.009**
	CSA × NVS total	.37	.14	.04	.038*	.21	.038*
CAPS4	CSA × Grandiosity	.31	.09	.09	.001***	.27	.004**
	Grandiosity	.40	.16	.07	.004**	.26	.004**
CAPS4	CSA × NVS total	.28	.08	.08	.003**	.28	.003**

CSA childhood sexual abuse, *NVS* Narcissistic Vulnerability Scale, *CAPS* Clinician administered PTSD Scale, *PTSD* posttraumatic stress disorder

* <0.05, ** <0.01, *** <0.001

NVS total score and CSA predicted posttraumatic symptoms ($F_{(1,106)} = 9.08$, $p = .003$) ($R = .28$, $\beta = .28$). Thus in all the above regression analyses, narcissistic vulnerability (the subscale of grandiosity and the total score of the NVS) increases the likelihood of participants who experienced CSA to develop PTSD later in their adult life, when exposed to other additional trauma.

As was expected, narcissistic vulnerability did not increase the likelihood of participants who reported experiencing CPA to develop PTSD symptoms in their adult life, after exposure to other additional trauma. CPA did not predict PTSD symptoms and did not show a significant interaction with the grandiosity subscale or the NVS total score, neither at the one-month follow-up nor at the four-month follow-up.

Finally, the NVS predicted the development of PTSD symptoms in the one-month assessment in the whole sample, above and beyond the prediction of the BDI. In other words, narcissistic vulnerability adds information above and beyond general negative emotionality. In the prediction of the CAPS after 1 month, stepwise regression analysis indicated that the grandiosity subscale of the NVS and the BDI significantly predicted PTSD symptoms ($F_{(2,109)} = 65.48$, $p < .001$). The BDI was first to enter the model ($R = .72$; $\beta = .67$, $p < .001$), and grandiosity entered second and the model increased to $R = .74$ ($\beta = .18$, $p = .01$). In the prediction of the CAPS after 4 months, stepwise regression analysis indicated that the grandiosity and the self-esteem regulation subscales of the NVS and the BDI significantly predicted PTSD symptoms ($F_{(3,125)} = 39.70$, $p < .001$). Here, 4 months after the current traumatic event, the grandiosity subscale of the NVS entered the model only with the inclusion of an additional subscale of the NVS, self-esteem regulation. The BDI was first to enter the model ($R = .67$, $\beta = .69$, $p < .001$), self-esteem regulation entered second and the model increased to $R = .68$, ($\beta = -.24$, $p = .002$), and grandiosity entered third and the model increased to $R = .70$, ($\beta = .19$, $p = .013$).

Discussion

The present study adds to the current literature on the relationship between CSA and PTSD development in adulthood after exposure to additional trauma, by examining the impact of narcissistic vulnerability. Clinicians, theoreticians, and researchers agree upon the essential features characterizing people who are narcissistically injured, namely poor self-esteem regulation, which is expressed in fluctuations between two extremities, feelings of inferiority or grandiosity [3, 4, 7, 24, 43]. The pole of grandiosity is often accompanied by a sense of entitlement and tendency towards exploitation of others. In the present study, the total score of the NVS which sums up the three subscales (poor self-esteem regulation, exploitation, and grandiosity), as well as the subscale of grandiosity alone, increased the likelihood of people who experienced CSA to develop PTSD symptoms later in their adult life when exposed to additional other trauma. Amongst all the variables of the NVS, the subscale of grandiosity was the strongest predictor of the development of PTSD symptoms. Grandiosity (as an expression of poor self-esteem regulation) was pin-pointed as the best predictor of susceptibility to develop PTSD after the blow of the traumatic event, which shatters grandiose expectations of invulnerability [44].

The present study's findings correspond with Moor and Silvern's findings that parental empathy failure mediates the long-term effect of CPA and extra-familial sexual abuse on adult maladjustment [23]. Narcissistic vulnerability is thought to be caused primarily by parents' poorer capacities to empathize with their offspring's perspective [45].

Higgins et al. [46] and Stith et al. [47], raise the question of whether childhood abuse can be differentiated from general parental familial bad environment. Rind et al. [1] state that one cannot show the impact of childhood abuse beyond general familial bad environment. On the other hand, others have found statistically that abuse is harmful above and beyond the general familial situation [48, 49]. Using a research design of comparison groups, Peleikis et al. [50] showed that PTSD symptoms are explained by childhood abuse, while mood symptoms are explained by the general parental familial environment. The variable of CPA that we used in our research might be considered one possible indicator of general bad environment.

A large meta-analysis criticized the methodological pitfall of many studies that compared their CSA groups to controls who suffered no abuse at all [1]. Therefore, one of the strengths of the present study is that we include in our sample, as a control to CSA, in addition to participants who suffered no childhood abuse, participants who suffered CPA.

Divorce rates of CSA survivors in our sample were significantly higher than in the non-abused group. These findings correspond with reports in the literature of less readiness for marriage [51] and reporting current problems in marriage [52]. These findings should increase awareness of clinicians and researchers to the long-term effects of CSA on establishing intimate relationships, attitudes of CSA survivors towards marriage and the ability to maintain stable relationships.

An important limitation of our study is that we did not gather information on CSA subtypes or duration. Though, as Rind et al. [1] showed in their meta-analysis, most studies they reviewed combined all CSA subtypes, and found that frequency of CSA and duration were not related to outcome. Brown and Finkelhor [53], on the other hand, did find that these variables were related to outcome. This discrepancy might ensue from the fact that the Rind et al. [1] study was limited to college student samples while Brown and Finkelhor [53] review studies with more heterogeneous samples.

Rind et al. [1] questioned the current social definition of CSA that includes both "unwanted" and "willing" experiences. They argued that the current definition is over-inclusive and suggested that it should include only those events that the child experienced as "unwanted." We did not make such a distinction in our sample, nor do we believe that such a distinction is correct or appropriate to make.

Another limitation of our study is the relatively small number of CSA survivors. Still, the proportion is close to the proportion in the general population. In our study the proportion was 9.5 % and in the general population it is 14.4 % [38]. Future studies may refer to support centers for sexual abuse and follow survivors in large numbers, perhaps even in a longitudinal study. Such greater samples of CSA may enable the important differentiation between intra-familial versus extra-familial victimization. Fischer and McDonald [54] found that intra-familial victims suffered greater physical and emotional injury than extra-familial victims. Such greater samples in future studies may also broaden the scope to include physiological measures such as different levels of cortisol daytime rhythm and measures of brain activity, that may differentiate according to the age of the assault (early childhood, middle childhood and adolescence) [55, 56].

It is possible that perhaps some of our CSA participants had already suffered from PTSD even before our investigation in the emergency room. However, even if this is the case, it does not change our findings, that narcissistic vulnerability increases the likelihood of CSA survivors to develop or maintain PTSD in adulthood.

Summary

Our paper reviewed the gap between clinician's reports that childhood sexual abuse (CSA) is one of the severest traumas that an adult can inflict upon a child, and the surprising lack of full support from the empirical literature. One of the logical ways to assess or estimate the extent of harm that supposedly follows CSA is to search for possible late effects over years into adult life.

Several studies addressed these possible late effects in investigating the capacity of CSA survivors to cope with challenging situations in adulthood. The present study made use of the latter paradigm, namely investigating reactions to additional trauma in adult life of participants who suffered sexual abuse in their childhood.

A meta-analysis done by Ozer et al. [13] found that children who experienced CSA are at greater risk for developing PTSD in their adult life, after exposure to an additional other trauma. But, on the other end of the controversy, Rind et al. [1] in another meta-analysis, reached a surprising and perhaps hazardous conclusion that negative effects of CSA on adult life were neither pervasive nor typically intense and that the magnitude of the CSA-adjustment relationship is small, implying that CSA does not typically have negative psychological effects. They summarized that what the findings do imply is that the negative potential of CSA for people who have experienced it has been overstated.

Reviewing the above controversy it seems that the literature in this field requires that studies investigate the impact of intervening variables that can improve our understanding of CSA-adjustment relationships. Our findings contribute to this goal. We found that narcissistic

vulnerability increases the likelihood of participants who experienced sexual abuse in their childhood to develop PTSD symptoms later in their adult life when exposed to additional other trauma.

One of the strengths of our study was the inclusion of childhood physical abuse as a control for the variable of abuse or general bad family environment. A limitation of our study was its retrospective cross-sectional nature. It is recommended that future studies follow children who were identified as suffering from CSA into their adult life and investigate their psychological functioning.

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