Narcissistic Vulnerability and the Development of PTSD
A Prospective Study

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Abstract: This study empirically examined the role of narcissistic traits and narcissistic vulnerability in the development of post-traumatic stress disorder (PTSD). One hundred forty-four survivors of a traumatic event were assessed 1 week, 1 month, and 4 months following the event. In the first-week assessment, patients were administered the Narcissistic Vulnerability Scale and self-reported rating scale to assess event severity and symptoms ensuing from the impact of the traumatic event: depression, intrusions, avoidance, and arousal. In the follow-up assessments, subjects were interviewed on the Clinician-Administered PTSD Scale and were readministered the self-rating symptoms scale. Survivors who developed acute (1 month) and chronic (4 months) PTSD had significantly higher levels of narcissistic vulnerability in the first-week assessment. Narcissistic Vulnerability Scale scores predicted PTSD status with sensitivity of 81.6% and 85.1% and specificity of 40.4% and 38.6% at the 1-month and 4-month assessments, respectively. Narcissistic vulnerabilities contribute to the occurrence of PTSD.

Key Words: Narcissistic vulnerability, PTSD, prospective study.

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The relationship between personality and the development of PTSD among trauma survivors is of theoretical and practical interest. Reference to the clinical manifestations of narcissism and its potential involvement in predisposing the individual to develop PTSD after an exposure to a traumatic event was mentioned in the literature as early as 1919. However, empirical studies of the etiological role of narcissistic traits in the development of PTSD are missing. The references to narcissism by clinicians and theoreticians from that date resemble and overlap greatly with the factors Perry and Perry (1996) found empirically to underlie narcissistic traits or narcissistic personality disorder (NPD).

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Narcissistically vulnerable individuals were described in the clinical literature to be prone to develop PTSD after an exposure to a traumatic event because they experience the traumatic event as a narcissistic injury, as a blow to their narcissistic illusion of invulnerability. They have an exaggerated narcissistic image based on an underlying conviction of relative omnipotence. The traumatic event threatened their image of themselves as strong, brave, courageous, and able to stand up to and resist any stress or danger. After the traumatic event, they can no longer deny feelings of inadequacy or fears. Their sense of uniqueness and invulnerability is shattered, and they are forced to feel as ordinary and vulnerable as all other people (Abraham, 1921; Freud, 1919; Kelman, 1946; Simon, 2002; Ulman and Brothers, 1987).

We have developed a scale to tap the narcissistic vulnerability (NVS) for the purpose of the present study. We have phrased the questionnaire items so as to correspond to the themes that underlie the NPD, as identified by the factor analysis by Perry and Perry (1996). These factors are grandiosity, exploitation, and poor self-esteem regulation.

We hypothesized that people who score higher on the NVS a week after an exposure to a traumatic event will later (at 1 month and at 4 months) develop PTSD.

METHODS

Subjects

A total of 261 subjects who were admitted to an emergency room (ER) following a traumatic event were seen by a psychologist. They were invited to participate in the study if their age was between 18 and 65 and if they had experienced a traumatic event: road accident (80% of the participants), terrorist act (10%), and work and other accidents (9%). Subjects were not included in the study if they had previously experienced a traumatic event or if they currently suffered from head injury, serious physical illness, or traumatic injury requiring a surgical operation. Those eligible were invited to take part in three assessments: 1 week, 1 month, and 4 months following the trauma. A total of 144 agreed to participate, provided a written informed consent, and took part in the first-week assessment. Twenty-one of the subjects who participated in time 3 of the study (fourth month) did not participate in time 2 (first month), and nine subjects vice versa. Subjects who were absent from time 2 or 3 did not differ significantly from those who participated in all the assessments on any of the psychometric or demo-

graphic measures or type or severity of trauma. Moreover, the 117 subjects who were seen at the ER and refused to participate in the study did not differ significantly from participants on any of the demographic variables or type or severity of trauma.

Instruments

NVS

This scale was developed for the purpose of the present study.[1] It consists of 48 items: eight for grandiosity, 11 for exploitation, 14 for the self-esteem regulation and two for idealization subscales. Thirteen 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. Its reliability, internal validity, and consistency were established in a series of studies. In the first of this series of studies on a group of 40 undergraduate students, the scale's test-retest reliability (during a 2-week interval) was found to be .92 ($p < 0.001$). Its convergent validity—the correlation between the NVS and the Narcissistic Personality Inventory (NPI; Raskin and Hal, 1979)—was .36 ($p < 0.02$). This is only a moderate correlation, as expected, since the NPI measures only one factor (grandiosity) out of the three that were found by Perry and Perry (1996) to underlie the NPD. The correlations between the NPI and the several subscores of the NVS contribute further to convergent and divergent validity of the NVS. Thus, the correlation between the NPI and the grandiosity subscore of the NVS is, as expected, very high (.70 significant at the 0.01 level), since grandiosity is the only factor examined by the NPI. With other subscales of the NVS, exploitation and idealization, correlation dropped to .45 and .41, respectively, significant at 0.05. The divergent validity of the NVS is strengthened by the absence of correlation between the NPI and the subscale of the regulation of self-esteem in the NVS (0.03). This is because the factor of fluctuation in self-esteem and craving for approval from others is not at all examined by the NPI.

In the second experiment on another group of 40 graduate students, the α Cronbach coefficient to assess the internal consistency was calculated. Initially, there were 41 items. After removing the six items with the lowest correlations to the total, the α Cronbach of the entire scale increased to .88.

In the third experiment, 186 subjects from various sectors of education and socioeconomic status of the Israeli population participated. In this study, we have performed exploratory factor analysis with Varimax rotation. According to the exploratory factor analysis, the items, in most cases, were gathered into the three factors that we have expected (self-esteem regulation, exploitation, grandiosity—the three factors that Perry and Perry empirically delineated, 1996).

In the phase of generating the items, we primarily thought that two items could be considered as a special group—idealization (the need to be associated with powerful individuals). The factor analysis found that these two items were grouped into the grandiosity factor. We, therefore, suggest that future studies will integrate the idealization subscale into the grandiosity subscale, thus adhering to three subscales corresponding to the factor analysis of Perry and Perry (1996).

To ensure that the subscales of the NVS aggregate to unifactor, thus enabling the use of a total score, we performed high order factor analysis. We found that all 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 mean of this group of 186 subjects was 81.10 ± 22.52. Since this sample was not stratified and randomized, as might be required from a large epidemiological study, we consider this mean to be an estimate for the normal healthy Israeli population. In answer to our queries, none of these 186 subjects reported exposure to a traumatic event as defined by DSM-IV criteria A. Of this group of 186 subjects, we have selected 62 subjects with equivalent demographic characteristics (age and education) to those of the participants who were recruited after the traumatic event. The mean of this matched normal healthy group was 81.6 ± 21.

In the fourth study, another facet of the external validity of the questionnaire was examined on a group of 10 outpatients with chart diagnosis of NPD. The correlation between the NVS scores and the SCID scale for narcissistic personality disorder was very high (.53). The mean of these 10 patients was 91.5 ± 14.4, significantly different from the norm that we found in the nontraumatized population ($z = 1.9$; $p < 0.04$, one-tailed).

Beck Depression Inventory

The Beck Depression Inventory (Beck and Steer, 1984) has been used in numerous studies of various psychopathologies including PTSD and is not described here.

Impact of Event Scale-Revised

Impact of Event Scale-Revised (Weiss and Marmar, 1997) has been used in numerous studies of PTSD and is not described here.

Severity of Event Scale

The Severity of Event Scale is an 8-item questionnaire that asks whether or not during an event the subject was exposed to the generic traumatogenic dimensions mentioned by Green (1990). The instrument's total score is the sum of individual items (range = 1–16; higher scores express severe exposure). The co-occurrence of several traumatogenic dimensions in one incident is construed here as being additive, hence the use of the instrument's total score as a continuous measure of event severity.

Clinician-Administered PTSD Scale

The Clinician-Administered PTSD Scale (CAPS; Blake et al., 1995) is a structured clinical interview for assessing PTSD according to DSM-IV criteria. The CAPS quantifies symptom frequency and severity for each PTSD diagnostic criterion.

Posttraumatic stress disorder status at 1 and 4 months was defined according to the CAPS in the following way: a

symptom was scored as positive if its frequency was greater than 1 and its intensity greater than 2. Participants with one symptom of re-experiencing were considered to have fulfilled DSM-IV criterion B; three symptoms of avoidance-numbing qualified for criterion C, and two symptoms of arousal for criterion D.

Procedure

Eligible subjects were interviewed by clinicians and were given several self-report questionnaires: the NVS, the Impact of Event Scale, and the Beck Depression Inventory. Four weeks and 4 months afterward, subjects were invited to revisit the Center for Traumatic Stress. They completed the previous self-reported symptom scale of intrusions, avoidance, arousal, and depression and were reinterviewed by a clinician who administered the CAPS. Patients were paid for participating in each session.

RESULTS

Subjects who were diagnosed as suffering from PTSD at the 1-month and 4-month assessments had significantly higher narcissistic vulnerability scores at the first-week assessment. Table 1 shows that in all scales, NVS scores produced a linear order where the highest scores are for full PTSD, less for partial PTSD, and the lowest for non-PTSD.[2] The F test for the detection of linearity trends was significant for the total ($F[1,112] = 9.56$; $p < 0.0003$), for grandiosity ($F[1,112] = 11.6$; $p < 0.001$), for self-esteem regulation ($F[1,112] = 8.10$; $p < 0.005$), and for idealization ($F[1,112] = 4.8$; $p < 0.03$) in the first-month assessment, and for the total ($F[1,133] = 4.1$; $p < 0.04$), for grandiosity ($F[1,133] = 4.9$; $p < 0.03$), and for exploitation ($F[1,133] = 5.9$; $p < 0.02$) in the fourth-month assessment.

The correlations between NVS scores and scores of symptoms ensuing from the impact of the event—depression, intrusions, avoidance, and arousal, measured by self-report scales—reveal that the level of correlations between the NVS and all these self-reported symptoms are significant, similar, stable across all the measure points in time, ranging from 0.24 to 0.39.

Analyses of covariants (education, age, and event severity) and ANOVAs (gender and type of trauma) found that these variables had no statistically significant effect on the results.

To calculate the sensitivity and specificity values of the predictive power of the NVS to a 1-month and a 4-month period, a logistic regression was performed with PTSD status as the dependent variable in each of these two points in time, and NVS scores of the first week as the independent variable. NVS scores predicted PTSD status with 81.6% sensitivity and 40.4% specificity for the 1-month follow-up assessment and with 85.1% sensitivity and 38.6% specificity for the 4-month follow-up assessment.

DISCUSSION

Narcissistic vulnerability contributes to the development of PTSD in trauma survivors. The paper's findings suggest that narcissistic vulnerability should be taken into account as one of the risk factors for developing PTSD after an exposure to trauma and that this personality feature should be addressed therapeutically. The findings of any marker that can aid in the identification of a future PTSD patient after an exposure to trauma is crucial, since early treatment is mentioned as an important factor in the therapy for these patients (Shalev et al., 1996).

Some methodological limitations of the present study should be mentioned. In this study, participants were assessed a few days after the occurrence of the trauma. Of course, better empirical conditions would be to administer the questionnaires to a representative sample of the population at large prior to any trauma and to observe those who are afflicted by trauma if it happened to occur. Since such conditions are practically and ethically unattainable, we had to study the participants after a trauma took place, risking bias of self-selection in being involved in trauma and assessing levels of narcissistic vulnerability, which might already be influenced by the trauma itself. Relating to this latter possibility, we might state that although we do not know our subject's pretraumatic level of narcissism, we do know the level of narcissistic vulnerability in the general, healthy population (81.6 ± 21), and we know that this level was exhibited by the survivors who did not tend to develop PTSD.

Another methodological limitation is that we cannot know what the NVS scores could have been of those people who were approached in the ER but did not participate in the study. Nor do we have any hypothesis as to what direction, if any, they could deviate from the NVS levels of the participants.

TABLE 1. PTSD Status Determined at 1-Month and 4-Month Assessments and NVS Scores (Means and *SD*s) Obtained at the First-Week Assessment

	Total	Grandiosity	Exploitation	Self-esteem Regulation	Idealization
1-mo assessment					
Full PTSD ($N = 23$)	92.99 (17.99)	26.46 (5.28)	25.78 (6.06)	33.61 (9.48)	7.13 (1.66)
Partial PTSD ($N = 56$)	82.53 (12.72)	22.23 (4.67)	23.47 (6.50)	30.29 (8.85)	6.53 (1.94)
No PTSD ($N = 36$)	79.11 (16.17)	21.98 (4.81)	23.42 (5.99)	27.55 (7.66)	6.17 (1.89)
4-mo assessment					
Full PTSD ($N = 25$)	90.69 (19.24)	25.48 (4.58)	26.72 (8.01)	31.33 (8.00)	7.16 (1.82)
Partial PTSD ($N = 36$)	83.91 (17.55)	22.89 (4.95)	23.54 (6.03)	30.86 (9.01)	6.61 (1.94)
No PTSD ($N = 75$)	81.72 (16.77)	22.70 (4.72)	22.71 (5.55)	29.91 (8.89)	6.40 (1.89)

We suggest that future studies investigate the contribution of NVS to the development of PTSD relative to the impact of closed personality features such as negative emotionality.

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END NOTES

[1]Available free upon request from the first author. E-mail: bachare@mscc.huji.ac.il.

[2]Full PTSD: fully meeting all three criteria for intrusion, avoidance, and arousal. Partial PTSD: fulfilling either one or two of these criteria.