

POSTTRAUMATIC DISSOCIATION AS A MEDIATOR OF THE EFFECTS OF TRAUMA ON DISTRESSFUL INTROSPECTIVENESS

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This paper focuses on the stable personality trait of *introspectiveness*, exploring the relationship between introspectiveness and childhood trauma, dissociation and emotional distress. Ninety Israeli women were recruited from emergency counseling services and from academic and office employment settings. Pearson correlations between traumatic experiences and various dimensions of introspectiveness revealed significant links. Negative emotional and sexual experiences were the trauma variables that contributed most to this relationship, whereas a tendency to be aware of feelings toward family and about mortality were the dimensions of introspection that added most to this association. Prior trauma history, dissociation, introspectiveness, and emotional distress were significantly interrelated. The data from a path analysis performed suggest that introspectiveness may be better explained by the independent effect of dissociation rather than directly by trauma or by emotional distress. Theoretical and clinical implications are discussed.

The transient state of attention to the self has been termed *self-attention* (Carver & Scheier, 1981), or *self-awareness* (Buss, 1980). This paper will focus on the more stable personality trait of *introspectiveness* and will explore its relationship to dissociation and childhood trauma. Introspectiveness alludes to the degree to which dispersed attention is directed inward, toward the self, or outward, toward the outside world (Mechanic, 1979). Experimental research suggests that introspective characterological tendencies are associated with more accurate self-descriptions (Gibbons, 1987) and with increased negative affect (Gibbons, 1990; Hansell & Mechanic, 1986). Pyszczynski and Greenberg (1987)

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challenged the implied directionality of these findings when they argued that people with depression have a negative self-scheme. Introspective people who are depressed may be more likely to selectively remember negative information about themselves.

Little is known about possible pathways to the development of introspective traits. Carver and Scheier (1981) offered some helpful theoretical perspectives on the subject. They regarded introspectiveness as part of a self-regulatory feedback cycle aimed at keeping the organism “on track” in its pursuit of important objectives. Our clinical observations led us to believe that the self-regulatory introspective process in clinical child-abuse survivor populations cannot be effectively terminated by withdrawal from the self-regulatory feedback cycle. Clinical populations of trauma survivors often display a particular form of withdrawal from painful awareness called *dissociation* that has been shown to have a posttraumatic etiology (e.g., Kluft, 1991; Spiegel & Cardena, 1991). Because dissociation involves the disintegration of normally integrated systems of the self, such as memory, thoughts, sensations, feelings, behavior and awareness, we posit that trauma-related dissociation may impede the self-regulatory feedback cycle thought to be associated with growth-promoting reflective introspection, leaving survivors trapped in a chronic, distressful introspective state. We also believe that psycho-traumatic injuries require the inward allocation of attention resources and that this inward allocation of resources can, in turn, interfere with adequate monitoring of the external environment, hence contributing to the experience of dissociation. In this study we examined the role of introspectiveness in the aftermath of trauma and its relationship to dissociation and emotional distress. We predicted (1) a positive relationship between past traumatization and introspective self-monitoring, possibly reflecting an inescapable effort to control painful reminders. We expected that introspectiveness would be associated with emotional distress and predicted that (2) past trauma, introspectiveness and dissociation would emerge as co-occurring phenomena, not unlike the contradictory symptom clusters in Posttraumatic Stress Disorder (intrusiveness and numbing/avoidance). That is, we believed that survivors of trauma might be trapped in an inescapable introspective mode that co-occurs with defensive dissociation or that is even exacerbated by it. If our research hypotheses were confirmed, we would perform a path analysis to shed further light on probable interrelationships between the investigated variables and to identify likely mediated pathways. In particular, we were interested in ascertaining the magnitude and significance of directional pathways connecting the independent variable – trauma, and the dependent variables – dissociation and introspectiveness, and in appraising their independent effect on emotional distress.

METHOD

SUBJECTS

To avoid the confusing effects of psychotherapy on the variables in this research, we excluded women who had not participated in any form of psychosocial treatment for more than one month. We also barred from this study women who had less than 10 years of education. Ninety Israeli women were the subjects of this study. Thirty-six were recruited from emergency shelters for abused women and from rape crisis centers. They responded to printed advertisements, posted on waiting-room bulletin boards, inviting them to take part anonymously in this research and to oral invitations presented by female volunteer workers. Fifty-four were graduate social-work students and office workers at the University of Haifa. The average age of the subjects was 33.8 ($SD = 10.2$). Forty-nine were married or living with a significant other, 32 had never been married, 7 were divorced. Two women did not reveal their marital status. They had an average of 14.3 years of education ($SD = 3.1$). Because of policies implemented in Israeli emergency shelters for women, no additional data could be obtained on traumatized participants recruited through these centers (i.e., counselor reports, peer observation, family interviews). We, therefore, were compelled to conduct this study with data based solely on self-reports.

MEASURES

Biographic Data Questionnaire This instrument was built by the authors and provided descriptive personal data, such as age, sex, marital status, education, employment, and treatment history.

Dissociative Experiences Scale - Hebrew version (H-DES) The Dissociative Experiences Scale (DES) was developed in the United States (Bernstein & Putnam, 1986; Carlson & Putnam, 1993) and is used to measure the frequency of 28 dissociative experiences that are considered important aspects of the dissociation construct (Putnam, 1991). The instrument has been shown to be a valid and reliable screening instrument (Frischholtz et al., 1990; Waller, 1995). The Hebrew translation of the DES (H-DES) has been shown to have high reliability and validity (Somer, Dolgin, & Saadon, 2001). The instruments' total score test-retest reliability coefficient was .87 ($p < 0.0001$, $N = 141$). Split-half reliability coefficient (calculated using the Spearman Brown formula) was .86 ($p < 0.0001$, $N = 584$). Cronbach's alpha coefficient for the H-DES was 0.91 ($N = 584$). Convergent validity was calculated by comparing scores of the H-DES with scores of the Phillips Dissociation Scale (PDS), a 20-item instrument derived from the MMPI-2. There is no item overlap between the H-DES and the PDS. A Spearman Correlation between the H-DES and the PDS scores for 284 patients $r = 0.59$ ($p < 0.0001$). Divergent validity was calculated by comparing the

scores of the H-DES and the Male/Female scale of the MMPI- 2. As expected, there was no correlation between dissociative experiences and scores on a scale measuring masculinity/femininity [$r = -.03$ ($p < 0.28$)] (Somer, Dolgin & Saadon, 2001).

Traumatic Experiences Questionnaire - Hebrew version (H-TEQ) The original instrument we used was developed by Nijenhuis, van der Hart and Vanderlinden (Nijenhuis, Spinhoven, Van Dyck, Van der Hart, & Vanderlinden, 1998) and later slightly modified and relabeled Traumatic Experiences Checklist (Nijenhuis, 1999). The TEQ is a self-report questionnaire inquiring about 25 types of interpersonal and non-interpersonal life events that could be potentially traumatic. When interpersonal violence was explored, subjects were asked to indicate whether immediate family members, relatives, or others had hurt them. TEQ items inquire whether respondents had suffered from the following stressors: parentification (a child needing to act in a parental role), major loss, such as a death of a loved one, lifethreats, traumatic life events, emotional neglect, emotional abuse, physical abuse, sexual harassment, or sexual abuse. The TEQ specifically addresses the subjective impact of the event (i.e., how traumatic it was for the respondent) and also requests information about the number of perpetrators of emotional, physical, and sexual abuse. The questions contain short descriptions intended to define the events of concern. All items are preceded by the phrase: "Did this happen to you?" An example of sexual harassment is: "Sexual harassment (acts of a sexual nature that DO NOT involve physical contact) by your parents, brothers, or sisters." A sexual abuse item is: "Sexual abuse (unwanted sexual acts involving physical contact) by your parents, brothers, or sisters."

Moderate to strong associations of the TEQ total score and composite scores, in particular physical and sexual abuse, with current psychological and somatoform dissociation, supports the construct validity of the TEQ. These associations were found when studying psychiatric outpatients with dissociative disorders and other mental disorders and gynecology patients with chronic pelvic pain (Nijenhuis et al., 1999).

Among the key factors that determine what makes an event traumatic are: the perception of the event as having highly negative valence (e.g., Carlson, 1997), multiple perpetrators (e.g., Peters, 1988), duration and frequency of the abuse (e.g., Elliott & Briere, 1992), and abuse at an earlier age (e.g., Zivney, Nash, & Hulsey, 1988). The TEQ composite trauma score reflects these relevant traumatogenic factors. Each experience identified as a trauma item was given one point. Subjects could score 0-3 trauma points, depending on the number of perpetrating sources. Additional points were given to each personal trauma score if the subject was younger than age 10 when traumatized, if the trauma had lasted more than one year, and if the impact of the traumatic event was rated as 4 or 5

on a 5-point subjective severity scale. Personal trauma scores in each of the nine categories ranged from 0-7. Composite personal trauma scores could range from 0-63. The TEQ was translated into Hebrew by the first author (a native Hebrew speaker) and later was blindly backtranslated into English by a native English speaker. The backtranslation was compared to the original version and differences were reconciled. The final Hebrew version of the TEQ (H-TEQ) was used in this study.

Mental Health Inventory - Hebrew Version (H-MHI) The Mental Health Inventory was developed in the United States by Veit and Ware (1983) and was validated in Israel by Florian and Drori (1990). It consists of 38 items measuring different aspects of emotional distress and well-being. Respondents are required to mark on a 6-point Likert scale the extent to which they had experienced such occurrences as happiness and satisfaction, hopefulness, loneliness, or nervousness during the preceding month. Of the 38 items, 24 measure emotional distress, and 14 measure emotional well-being. Florian and Drori reported that all item clusters showed a high reliability with a one-year test-retest resulting in correlations ranging between .56-.64 for the various instruments' factors. Convergent validity tests were also reported to show convincing results, yielding correlations of .82-.84 between the inventory's anxiety and depression subscales and criteria such as the Beck Depression Inventory, Spielberger's state anxiety measure and Derogatis' SCL-90. Four H-MHI scores were calculated for each subject: Depression, Anxiety, Subjective Well-Being, and a total H-MHI score (with higher scores reflecting increased distress). Cronbach's alphas of the H-MHI in the current study was .97 for the total score with similar results achieved for the instrument's subscales.

The Multi-dimensional Inventory of Introspection (MII) This instrument was developed by Ben-Artzi (1994). She extracted a pool of themes from a series of pilot studies involving the identification of content themes appearing in reports of university students and faculty concerning their daily foci of self-awareness. The original instrument included 71 items. Subjects are asked to rate on a 7-point scale the degree to which they are thinking/aware of issues on the provided list. Factor analysis identified 14 themes (presented in their loading order): Life Changes and Distressful Feelings, Social Relations, Parenthood, Sexuality and Partner Relations, Economic Concerns, Mortality, The Future, Faith, Tasks, Family, Intellectual Issues, Other People's Perspectives, Personal Motives, Missed Opportunities. Ben-Artzi reported that test-retest reliability for the factors ranged between .68-.98, and that Cronbach's alphas were higher than .80 for most factors on both administrations. A validity test performed on her newly developed instrument yielded a Canonical correlation of $R^2=.59$ ($p<.001$) with other introspection-related criteria. We decided to omit items belonging to Parenthood and Economic Concerns because of their reportedly weak associa-

tion with private self-consciousness and distress scales used as validity criteria. The final version of our research instrument included 63 items that showed good convergent validity with a private self-consciousness questionnaire (Fenigstein, Scheier, & Buss, 1975). Cronbach's alpha of the final version of the MII used in this study was .97.

PROCEDURE

Subjects who agreed to participate signed an informed consent form. To reassure concerned participants that their responses remained completely confidential, coded self-addressed and stamped envelopes were given to those who agreed to participate but who preferred to enjoy an additional form of identity protection. Every questionnaire package included a brief illustrated explanation on social desirability, how it is detected, and how to avoid it (e.g., an endorsement of the item: "I never told a lie"). Questionnaires were stapled in random order to reduce response sets and ordering bias.

RESULTS

Our data show a significant relationship between the past trauma (H-TEQ) and introspective tendencies (H-MII) ($r=.33, p<.001$). Negative emotional and sexual experiences were the trauma variables that contributed most to this relationship, while a tendency to be aware of feelings towards family and about mortality were the dimensions of introspection that added most. This finding supports our first research hypothesis.

We next examined the relationship among prior trauma history (total H-TEQ), dissociation (H-DES), introspectiveness (MII), and emotional distress (H-MHI). The variables were significantly interrelated, as can be seen in Table 1. This confirmed our second research hypothesis.

TABLE 1
CORRELATIONS AMONG TRAUMA, DISSOCIATION, INTROSPECTIVENESS, AND EMOTIONAL DISTRESS

Variables	1	2	3	4
1. Trauma	1.00			
2. Dissociation	.39***	1.00		
3. Introspectiveness	.33**	.50***	1.00	
4. Distress	.52***	.51***	.48***	1.00

** $p<.01$, *** $p<.001$

Figure 1 shows an output path diagram representing the results of a statistical analysis of which path coefficients are standardized regression coefficients (beta

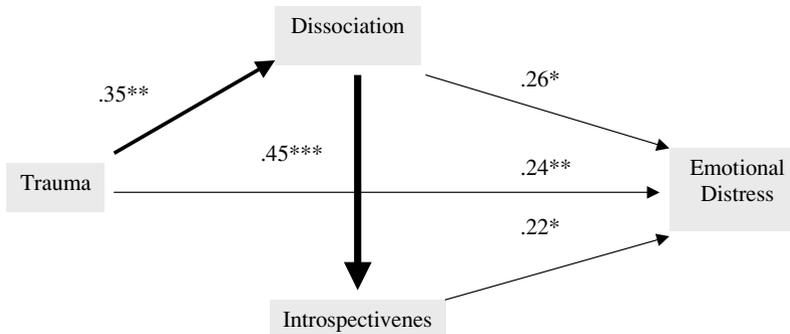


Figure 1. Output diagram of causal relationships between trauma, dissociation, and introspectiveness; and emotional distress

* $p < .05$, ** $p < .01$, *** $p < .001$

weights). Although Table 1 shows that trauma appears to have a strong impact on emotional distress, a closer examination of the magnitude of the causal connections between this study's variables reveals a different picture.

The indirect effect of trauma on emotional distress is substantial, whereas the direct effect is considerably smaller. This is because only 50% of the connection between trauma and distress is direct, 16% is indirect and mediated by dissociation, and 6% is indirectly mediated by introspectiveness. Forty-six percent of the relationship between dissociation and emotional distress is direct, 19% is indirect and mediated by introspectiveness, and 18% is artificially enhanced by the external influence of past traumatization that influences both variables. Forty-four percent of the relationship between introspectiveness and emotional distress is direct, 22% is artificial because both variables are influenced by dissociation, and 8% of the relationship is artificially magnified by the external influence of past traumatization on both variables.

DISCUSSION

While the current preference in personality research is to move away from studies based solely on self-reports, some intrapsychic processes (i.e., introspection) are very difficult to validate independently by peer descriptions, or behavioral observations. In addition to this inherent difficulty, any attempt to gather further information on an important segment of our sample (survivors of violence and sexual trauma) was met with the strict prohibitive policies of the Israeli agencies that provided access to these respondents. This limitation of the present research calls for further external validation of the pathway presented and derivative theoretical implications suggested by this study. In the current article we

showed that traumatic experiences, primarily harmful emotional and sexual experiences, were related to various dimensions of introspectiveness, particularly to the tendency to be aware of feelings towards family and about mortality. This result is in line with previous findings that showed that individuals with high introspectiveness scores were more likely to report psychological distress than were others (Hansell & Mechanic, 1986; Mechanic, 1979, 1980; Mechanic & Cleary, 1980). The methodological design of past research prohibited any inferences about potential pathways, consequently little has been known about factors potentially involved in the development of introspectiveness. This report suggests that past trauma and dissociation add to the understanding of this phenomenon because they were closely related to both introspectiveness and emotional distress. Introspectiveness, argued Mechanic (1983), may be associated with, or perhaps caused by, developmental discontinuities. In a later publication *discontinuities* were defined as *any events that are problematic, that require reappraisal of the self, or that significantly alter relationships to the environment or other people* (Hansell, Mechanic, & Brondolo, 1986, p.117). It is believed that such events stimulate mental activity involving self-focus. To the extent that self-attention serves an adaptive, self-regulatory function, as suggested by Duval and Wicklund (1972) and by Carver and Scheier (1981), it follows that the response to discontinuities and disruptions to core assumptions about others and the self that are associated with exposure to trauma would augment one's level of self-attention. Although a simple correlation does show that introspectiveness is related to trauma, a path analysis reveals that introspectiveness, in our sample, is probably not directly related to trauma, but rather is mediated by dissociation. Our data do not render strong support to the alternative hypothesis that it is emotional distress that is the main cause for higher levels of self-attention. Reciprocal causal relationships among these variables are, of course, likely but the dynamics of introspectiveness development in our sample seems to be better explained by the independent effect of dissociation rather than directly by trauma or by emotional distress.

How exactly posttraumatic dissociation contributes to the development of introspectiveness remains a subject of some speculation. The literature shows that a history of trauma is an important causal factor both in high levels of dissociative experiences and in disruptions in basic attentional strategies and mechanisms (Freyd, Martorello, Alvarado, Hayes, & Christman, 1998; Rossini, Schwartz, & Braun, 1996). With disturbed access to quality narrative memory that may provide a good explanatory framework for their pain, high-dissociating survivors may turn their attention inward in an attempt to gain further knowledge about the sources of their pain.

We propose that posttraumatic dissociation may disrupt the self-regulatory feedback cycle described in Carver and Scheier's (1981) self-focus model, leav-

ing the survivor's attention absorbed in a constant internal "test" mode. Attention resources are drawn inward in an attempt to address the intense pain that perpetuates the dissociation, but because of its disintegrative and compartmentalizing qualities the dissociative process itself sabotages this self-regulatory process, leaving survivors in a state of constant ineffective internal search for the sources and internal alleviation of their pain. This chronic and ineffective self-focus may itself also be present as the forgetfulness and absentmindedness often seen in highly dissociative persons. Dissociation is known to be associated with self-absorption and imaginative processes. Segal and Lynn, (1992) showed that dissociation inventories were moderately associated with daydreaming and with poor attentional control. Neuropsychological research on PTSD patients and adult survivors of childhood trauma reveal a wide range of attention (to external stimuli) deficits (Bremner, Scott et al., 1993; Bremner, Steinberg, et al., 1993; Goldstein, van Kammen, Shelly, Miller, & van Kamen, 1987; Sutker, Winstead, Galina, & Allain, 1991) that could be associated with the dissociation-introspectiveness connection revealed in this study. The relationship between dissociation and characterological innerfocus may also help explain previous observations linking dissociation with creativity (Schultz, Braun, & Kluft, 1985). Fuhrman (1993) claimed that many people who have pathologically high levels of dissociation use creative artistic modes as their main forms of personal expression.

The powerful linkage between dissociation and introspectiveness, and the independent contribution of introspectiveness to emotional distress call for further consideration of introspectiveness-promoting psychotherapy with high-dissociating patients, particularly when they initially present for therapy with initial low levels of emotional distress (e.g., high functioning individuals who are interested in recovering lost childhood memories or in exploring the veracity of old faint notions that they had been sexually abused during childhood). Further research is needed to help clinicians make informed decisions about the choice between patient referrals to insight/inward-oriented treatment versus referrals to externally oriented, coping-enhancing treatments that are less likely to impede psychological defenses.

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