

Depersonalization, Mindfulness, and Childhood Trauma

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Abstract: Depersonalization (DP), i.e., feelings of being detached from one's own mental processes or body, can be considered as a form of mental escape from the full experience of reality. This mental escape is thought to be etiologically linked with maltreatment during childhood. The detached state of consciousness in DP contrasts with certain aspects of mindfulness, a state of consciousness characterized by being in touch with the present moment. Against this background, the present article investigates potential connections between DP severity, mindfulness, and childhood trauma in a mixed sample of nonpatients and chronic nonmalignant pain patients. We found a strong inverse correlation between DP severity and mindfulness in both samples, which persisted after partialing out general psychological distress. In the nonpatient sample, we additionally found significant correlations between emotional maltreatment on the one hand and DP severity (positive) and mindfulness (negative) on the other. We conclude that the results first argue for an antithetical relationship between DP and certain aspects of mindfulness and thus encourage future studies on mindfulness-based interventions for DP and second throw light on potential developmental factors contributing to mindfulness.

Key Words: Depersonalization, childhood trauma, dissociative disorder, mindfulness.

(*J Nerv Ment Dis* 2007;195: 693–696)

Depersonalization (DP) is characterized by subjective experiences of unreality and detachment in one's sense of self. These experiences occur on a continuum spanning from transient episodes that are frequently reported in healthy individuals under certain situational conditions, to a chronic psychiatric disorder that causes considerable distress (ICD-10: DP-derealization syndrome [World Health Organization, 1992] or Diagnostic and Statistical Manual of Mental Disorders [DSM-IV]: DP disorder [American Psychiatric Association, 1994]). DP is a very common phenomenon with a

lifetime prevalence of 74% for mild experiences and 1% to 2% for pathological DP in the general population (Hunter et al., 2004; Sierra et al., 2006). In the context of attempts to understand DP, a variety of neurobiological and psychological theories have emerged (Simeon, 2004). One of the pioneers of DP research, Paul Schilder (1886–1940) captured the self-protective function of DP, portraying it as an escape from the full experience of reality (Schilder, 1914). This mental escape is effected by the withdrawal of interest from the body and the outside world (Schilder, 1950). According to Schilder (1953, p 304), the complaints of depersonalized patients that they feel as though they were existing “mechanically; that they no longer felt joy or sorrow, hatred or love; that they are as though dead, not alive, not real; that they cannot image their body, it is feelingless . . .” are the result of this mental escape. Overwhelming affects have been postulated to constitute the etiological basis for the formation of DP (Michal et al., 2006; Schilder, 1914). This detached state of consciousness in DP contrasts with mindfulness—a state of consciousness characterized by a sense of being truly in touch with the present moment and aware of mental and bodily sensations, a vividness of current experience, and a feeling of vitality (Brown and Ryan, 2003; Kabat-Zinn, 2005). A mindful state of consciousness can be cultivated through mindfulness exercises, i.e., training in “paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally” (Kabat-Zinn, 1994, p 4). Again, in contrast with the nonjudgmental stance of mindfulness, Schilder (1914, 1953, p 305) conceptualized DP as the consequence of a refusal to accept present experiences: “It becomes clear that such patients (with DP) fight, defend themselves, against their perceptions; they negate internally their entire experience, and prevent themselves from experiencing anything fully.” The role of attention represents a further aspect common to both DP and mindfulness. Mindfulness training enhances the ability to sustain one's attention, an ability that patients with DP typically complain of as being impaired (Guralnik et al., 2000; Hunter et al., 2003). Furthermore, the role of attentional manipulation in inducing DP or related dissociative phenomena has been unearthed in a series of experiments and clinical observations (Michal et al., 2007; Renik, 1978; Steinberg, 1991). Relaxation techniques (Steinberg, 1991) or certain kinds of concentrative meditation, e.g., transcendental mediation, have been found to potentially induce DP (Castillo, 1990). Sensory deprivation is assumed to be responsible for these dissociative effects (Castillo, 1990; Michal et al., 2007).

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ISSN: 0022-3018/07/19508-0693

DOI: 10.1097/NMD.0b013e31811f4492

Despite these conceptual overlaps and the evident polarity of “being detached” in the depersonalized state versus “being in touch” in the mindful state (Allen, 2005; Kabat-Zinn, 1994, 2005), we are not aware of studies that explicitly investigate this relationship. One of the reasons for this lack of empirical work can be seen to lie in the fact that psychometrically reliable and valid instruments for the assessment of mindfulness were only recently developed (Brown and Ryan, 2003). In our investigation of the literature on DP and mindfulness, we found only 2 studies reporting incidental correlations between different instruments assessing mindfulness and the broad spectrum of dissociative experiences. In a study using the Kentucky Inventory of Mindfulness Skills (Baer et al., 2004), a negative correlation of $r = -.28$ was found between the “Act With Awareness” subscale of the Kentucky Inventory of Mindfulness Skills and the Dissociative Experiences Scale (DES; Bernstein and Putnam, 1986) in a sample of 130 undergraduate students (mean age, 19.6 years). A very similar correlation was found in a mixed sample of 112 adults using the “Freiburg Mindfulness Inventory” (Walach et al., 2006)—another operationalization of mindfulness—and a German version of the DES. However, the significance of these studies with respect to the hypothesized connection between DP and mindfulness is rather limited: first, because both studies applied the DES, which covers a wide range of dissociative experiences (amnesia, identity alterations, absorption, derealization) and second that they failed to control for general psychological distress, although both the DES and the mindfulness scales are highly correlated with this variable (Carlson and Brown, 2005; Michal et al., 2006). It is against this background that we first aim to explore the hypothesized inverse relation between DP severity and mindfulness. Second, we will look to examine the correlates of childhood trauma with DP and mindfulness. This is of particular relevance given that a relationship between DP and emotional maltreatment has already been established (Simeon et al., 2001), whereas developmental aspects of mindfulness have to date not been highlighted. To avoid sample bias, we investigated 2 different samples using correlative and regression analyses.

METHODS

Participants

The sample consisted of 163 subjects, 102 consecutive pain patients of the pain-outpatient clinic of the J.W. Goethe University, Frankfurt, and 61 nonpatients (medical students). All participants provided informed consent. The mean age of the total sample was 45.0 years (SD , 19.0; range, 22–84 years). Majority of the subjects (71.2%) were women. The 102 pain patients had a mean age of 56.9 years (SD , 13.8; range, 23–84 years) and 69 (67.6%) were women. Of the pain patients, 46.1% had 9 years of school education, 37.3% 10 years, and 16.7% 13 years. The pain patients had suffered from chronic nonmalignant pain for an average of 11.2 years (SD , 11.2 years) with a mean pain intensity of 6.1 (SD , 2.0) on a visual analog scale (0 = no pain to 10 = unbearable pain) during the previous week. The 61 nonpatients had a mean age of 25.1 (SD , 4.0, range, 21–49 years) and 47 (77%)

subjects were women. There was no systematic exploration for mental disorders of the nonpatients or pain patients.

Measures and Procedures

The German version of the Cambridge DP Scale (CDS) (Michal et al., 2004) was used to assess DP severity. Both reliability and validity of the German version of the CDS prove comparable to that of the English original version (Sierra and Berrios, 2000). The CDS covers the complex phenomenology of DP in 29 items. A short version of the CDS comprises 9 items (CDS-9; sum of items 1, 2, 11, 13, 14, 16, 23, 24, and 27 of the CDS) and measures DP as accurately as the complete scale. For the detection of DP, a cutoff of 65 for the CDS (77.7% sensitivity, 87.5% specificity) and of 19 for the CDS-9 (sensitivity 90.7%, specificity 87.5%) has been established (Michal et al., 2004). In the sample of nonpatients, only the CDS-9 was administered. For the assessment of mindfulness, all subjects completed the German version of the Mindful Attention and Awareness Scale (MAAS) (Brown and Ryan, 2003). The MAAS is a 15-item instrument measuring attention to and awareness of present-moment experience in daily life. Empirical research has shown that MAAS demonstrates exceptionally good psychometric properties, most notably, both high internal consistency and test-retest reliability as well as convergent and divergent validity. Respondents rate how often they have the experience of acting on autopilot, are preoccupied with thoughts, and do not pay attention to the present moment. On the basis of a mean of all items, MAAS scores can range from 1 to 6, with higher scores indicating greater mindfulness. In addition, the Symptom Checklist-27 (Hardt and Gerbershagen, 2001), a validated short version of the Symptom Checklist-90-R (Derogatis, 1992), was used to evaluate overall current psychopathology and global severity of distress [Global Severity Index (GSI)]. The Childhood Trauma Questionnaire (CTQ) (Bernstein and Fink, 1998; Bernstein et al., 1997) was used as a measure of the extent of emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect suffered during childhood. For the purposes of our study, a German translation of the 28-item short version of the questionnaire was used, which has been described elsewhere (Gast et al., 2001). All data were analyzed by means of SPSS 11.5 (SPSS, Chicago, IL) for Windows using an α -level of 5% and 2-tailed tests of significance.

RESULTS

Table 1 provides an overview of the sample characteristics. The pain patients and the nonpatients differed significantly in age ($T = 21.8$, $df = 126.9$, $p < .001$), GSI of the Symptom Checklist-27 ($T = 5.1$, $df = 5.1$, $p < .001$), DP severity measured by the CDS-9 ($T = 5.6$, $df = 156$, $p < .001$), physical abuse ($T = 3.4$, $df = 120.7$, $p = .001$), emotional neglect ($T = 4.8$, $df = 151.8$, $p < .001$), physical neglect ($T = 5.6$, $df = 147.9$, $p < .001$), and the total score of the CTQ ($T = 4.2$, $df = 150.3$, $p < .001$). In the pain patient sample, 22 (21.6%) yielded a CDS-9 score above the cutoff score of 19, whereas only 5 of 61 (8.2%) nonpatients exceeded the cutoff ($\chi^2 = 5.810$, $df = 1$, $p = .016$).

TABLE 1. Sample Characteristics

	Nonpatient (<i>n</i> = 61), Mean (<i>SD</i>)	Pain Patient (<i>n</i> = 102), Mean (<i>SD</i>)	Total Sample (<i>n</i> = 163), Mean (<i>SD</i>)
Age	25.1 (4.0)	56.9 (13.8)	45.0 (19.0)
GSI (SCL-27)	0.5 (0.4)	1.0 (0.7)	0.8 (0.6)
CDS	—	49.8 (22.2)	49.8 (22.2)
CDS-9	7.4 (7.6)	14.2 (7.5)	11.6 (8.2)
MAAS	4.4 (0.7)	4.6 (1.0)	4.5 (0.9)
CTQ-total	6.1 (1.3)	7.4 (2.7)	6.9 (2.4)
Emotional abuse	7.8 (2.8)	8.7 (5.1)	8.3 (4.4)
Physical abuse	5.6 (1.4)	7.2 (4.3)	6.6 (3.5)
Sexual abuse	5.2 (1.2)	5.7 (2.8)	5.5 (2.3)
Emotional neglect	8.5 (4.0)	12.3 (5.9)	10.8 (5.6)
Physical neglect	10.0 (1.6)	12.0 (2.9)	11.2 (2.6)

TABLE 2. Total Sample Pearson Correlations for MAAS and CDS-9

	MAAS		CDS-9	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
MAAS	—	—	-.56	.000
CDS-9	-.56	.000	—	—
Age	.13	.107	.30	.000
SCL-27: GSI	-.48	.000	.62	.000
Emotional abuse	-.25	.002	.26	.001
Physical abuse	-.08	.339	.20	.015
Sexual abuse	.09	.247	.05	.561
Emotional neglect	-.15	.076	.31	.000
Physical neglect	-.12	.135	.32	.000
CTQ-total	-.14	.078	.29	.000

Table 2 lists Pearson bivariate correlations between CDS-9, MAAS, CTQ, and GSI. As hypothesized, we found a high inverse correlation between MAAS and CDS-9. We additionally found moderate correlations between scales of the CTQ (CTQ-total, emotional abuse, physical abuse, emotional neglect, and physical neglect) and CDS-9 as well as between the MAAS and emotional abuse.

Because both MAAS and CDS-9 showed high correlations with the GSI (and CDS-9 also with age), we also calculated partial correlations controlling for age and GSI for the total sample as well as separately for the subsamples. In the total sample, partialing out GSI and age still resulted in a strong correlation between CDS-9 and MAAS ($r_{\text{GSI\&Age}} = -.46, p < .0001$), though with exception of a slight correlation between CDS-9 and emotional abuse ($r_{\text{GSI\&Age}} = .16, p = .045$); all other correlations of both MAAS and CDS-9 with CTQ disappeared when age and GSI were controlled for. In the sample of pain patients, a strong correlation also remained between CDS-9 and MAAS ($r_{\text{GSI\&Age}} = -.56, p < .0001$) when partialing out age and GSI, whereas no other correlations persisted. More significant correlations remained, however, in the nonpatient sample: CDS-9 with MAAS ($r_{\text{GSI\&Age}} = -.47, p = .0002$), CDS-9 with emotional abuse ($r_{\text{GSI\&Age}} = .43, p = .0007$), CDS-9 with CTQ-total ($r_{\text{GSI\&Age}} = .41, p = .001$), MAAS with

emotional abuse ($r_{\text{GSI\&Age}} = -.38, p = .004$), MAAS with emotional neglect ($r_{\text{GSI\&Age}} = -.36, p = .005$), and MAAS with the CTQ-total ($r_{\text{GSI\&Age}} = -.38, p = .003$).

For further exploratory analysis of the experiences of mindfulness/mindlessness showing the strongest association with DP severity, we applied a linear stepwise regression analysis with CDS-9 as dependent variable and the 15 items of MAAS as independent variables. Variables were entered into the regression equation if they contributed a significant amount ($p < .05$) of explained variance. Item 7 of the MAAS (“It seems I am ‘running on automatic’ without much awareness of what I’m doing”) explained 33.4% of the variance of CDS-9 ($\beta = -.429, T = -5.240, p < .001$), whereas item 14 (“I find myself doing things without paying attention”) explained an additional 4.3% ($\beta = -.257, T = -3.138, p < .001$). To test whether the correlation of MAAS with CDS-9 was explained solely by these 2 items, we calculated partial correlations between CDS-9 and a shortened MAAS scale excluding items 7 and 14 controlling for age and GSI. This partial correlation in the total sample further resulted in a strong correlation coefficient of $r_{\text{GSI\&Age}} = -.44 (p < .001)$, which was comparable to that found for the complete MAAS scale ($r_{\text{GSI\&Age}} = -.46, p < .001$).

DISCUSSION

In confirmation of our hypothesis, we found a strong negative relationship between DP severity and mindfulness. This pronounced connection between CDS-9 and MAAS is explained significantly by strong correlations with MAAS items concerning being on “autopilot,” which account for almost 40% of the variance of DP severity. Because the items of the CDS-9 and MAAS do not semantically overlap and in light of the finding that the correlation coefficient remains stable even when the 2 “autopilot items” (MAAS 7 and 14) are excluded, we consider this strong negative correlation to be reflective of an antithetical relationship between certain facets of mindfulness and DP. With regard to a continuum model of consciousness and self-awareness, Allen (2005, pp 190, 234) delineated this aspect of an antithetical relationship between mindfulness and DP on a scale spanning from the extreme of alert consciousness (“being highly aware of real-

ity, not spaced out, but tuned in”) to absorption (being highly engaged in 1 activity at the cost of lowered self-awareness), DP, and finally “unresponsiveness” at the opposite end of the spectrum. It should be noted, however, that mindfulness is a multifaceted and complex construct (Kabat-Zinn, 2005) that is only partially captured by the MAAS and that must be recognized as constituting significantly more than simply the negative pole of DP. A further, less extensive interpretation of the strong inverse correlation observed between MAAS and DP severity would be that this reflects the pronounced subjective deficits in concentration and attention found in individuals suffering from DP (Hunter et al., 2003). Because of the exclusively questionnaire-based design of the current study, it cannot be ruled out that the strong correlation between MAAS and DP severity was confounded by DP patients redescribing their DP experience by endorsing close enough sounding items on the MAAS. It is, however, unlikely that such response behavior could significantly account for the observed strength of the inverse correlation, given that this correlation did not significantly change after exclusion of the autopilot items.

With respect to the relevance of childhood adversities, we found a significant association between DP severity and emotional abuse and neglect in the nonpatients. This result is in line with findings from a mixed sample of patients with DP disorder and healthy controls, where emotional abuse was found to be specifically related to DP severity (Simeon et al., 2001). In this context, it is interesting that we also found a strong inverse correlation between emotional abuse/neglect during childhood and mindfulness in the nonpatient sample. This finding could point to the possible role of developmental factors in contributing to the ability of mindfulness. This is an aspect of mindfulness, which, to date, has not been investigated. Importantly, however, this interpretation is limited by the fact that we were not able to replicate this correlation in the sample of pain patients. The reasons for this difference remain unclear. Moreover, although there are obviously considerable differences between our 2 samples regarding age and psychological distress, no significant differences were found with respect to the MAAS scale. This finding was unexpected, as it has already been shown that psychological distress and the MAAS are inversely correlated (Carlson and Brown, 2005).

A number of limitations of the current study, including the exclusive use of questionnaire-based data, the lack of clinical diagnostic interviews, and the failure to assess whether participants had any training in mindfulness, should be noted. Despite these limitations, it is concluded that the findings might be of potential clinical interest. The results warrant more sophisticated studies on the relationship between DP and mindfulness in addition to their developmental factors and encourage further empirical studies on mindfulness-based interventions in the treatment of DP disorder.

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