Short Communication

Fantasy proneness and cognitive failures as correlates of dissociative experiences

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Abstract

The Dissociative Experiences Scale (DES) is a widely used instrument for screening dissociative psychopathology. Yet, some authors have argued that dissociation is a poorly defined concept and that the experiences tapped by the DES may well be related to everyday cognitive failures and/or fantasy proneness. To examine this issue, two independent studies were conducted. In study 1, a sample of 77 undergraduate students completed the DES, the Cognitive Failures Questionnaire (CFQ) and a fantasy proneness scale (i.e. the Creative Experiences Questionnaire; CEQ). Positive and significant correlations were found between DES, on the one hand, and CFQ and CEQ, on the other hand. Partial correlations showed that both CFQ and CEQ make an unique contribution in predicting DES scores. These findings were replicated in study 2 that also relied on a nonclinical sample (N = 51). Taken together, the findings of study 1 and 2 underline the idea that relatively benign phenomena such as cognitive lapses and fantasy proneness drive the dissociative experiences sampled by the DES. This suggests that there are limitations to the DES's utility as a screening tool for dissociative pathology. © 1999 Elsevier Science Ltd. All rights reserved.

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1. Introduction

The concept of dissociation refers to “the lack of normal integration of thoughts, feelings and experiences into the stream of consciousness and memory” (Bernstein & Putnam, 1986, p. 727). A number of authors have argued that dissociative experiences are the product of severe
or chronic traumatization (see, for a review, Ross, 1997). According to these authors, dissociation involves automatic (i.e. involuntary) avoidance strategies that serve the function of defending consciousness from traumatic memories (e.g. Spiegel, Hunt, & Dondershine, 1988). High levels of dissociative avoidance strategies would characterize dissociative disorders (e.g. Dissociative Identity Disorder, fugues) that are thought to have a traumatic etiology (Ross, 1997).

The Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986) is a widely used self-report instrument that measures the frequency of dissociative experiences such as autobiographical amnesia, derealization, depersonalization, absorption and identity alteration. It has been recommended as a screening instrument for dissociative psychopathology (Ross, 1997). The DES has good overall psychometric properties (see, for a review, Carlson & Putnam, 1993) and it is a well established finding that certain diagnostic groups (e.g. Dissociative Identity Disorder, Borderline Personality Disorder) have elevated DES scores (e.g. Putnam et al., 1996). To the extent that one is willing to accept a traumatic etiology of these disorders, this finding can be taken as evidence for the validity of the DES.

Meanwhile, some authors (e.g. Frankel, 1990, 1996; Hacking, 1995) have pointed out that dissociation is a vague and ill-defined concept. For example, Frankel (1990, p. 827) noted that closer examination of the DES items “reveals that about two thirds of the items can be readily explained by the manner in which subjects recall memories, apply or redistribute attention, use their imagination, or direct or monitor control”. A similar comment was made by Hacking (1995). What these authors suggest, then, is that DES scores are closely related to cognitive control. By this view, a lack of cognitive control (e.g. absent-mindedness), which is not necessarily a sign of severe psychopathology (Reason, 1993), would predict high DES scores.

Other critics of the DES have pointed out that one of its major components assesses absorption in imaginative activities (e.g. Spanos, 1996; see also Kihlstrom, Glisky, & Angiulo, 1994). If true, one would expect that there is a strong connection between DES and fantasy proneness. There is, indeed, some evidence to suggest that fantasizers have substantially higher DES scores than control individuals (Rauschenberg & Lynn, 1995). Again, however, it should be noted that a feature such as fantasy proneness is not necessarily associated with markedly high levels of psychopathology (e.g. Lynn & Rhue, 1988).

Some authors (e.g. Ross, 1997) who advocate the use of the DES as a screening instrument for dissociative psychopathology have emphasized that the DES contains three separate factors. One factor would tap relatively normal experiences that reflect absorption–imaginative involvement (e.g. missing part of a conversation). The two other factors, termed activities of dissociated states (e.g. finding unfamiliar things among one's belongings) and depersonalization–derealization (e.g. hearing voices inside one's head) would be “powerful predictors (...) of dissociative disorders” (Ross, Joshi, & Currie, 1991, p. 297).

The present studies examined the connections between DES, cognitive control failures and fantasy proneness in two nonclinical samples. If the DES contains two factors that are primarily sensitive to pathological dissociation, one would expect that these factors are not associated with nonpathological characteristics such as the tendency to make cognitive control failures and fantasy proneness.
2. Study 1: method and results

The DES (Bernstein & Putnam, 1986), Cognitive Failures Questionnaire (CFQ; Broadbent, Cooper, Fitzgerald, & Parkes, 1982) and the Creative Experiences Questionnaire (CEQ; Merckelbach, Muris, Schmidt, Rassin, & Horselenberg, 1998) were administered to 77 undergraduate students (10 men). Mean age of the students was 20.1 years (range: 17–43). Ss completed the questionnaires in small groups of approximately 5 persons.

The DES (α = 0.92) is a self-report instrument containing 28 items that describe dissociative experiences such as feelings of derealization, depersonalization, disturbances in identity, memory, awareness and cognition. Ss indicate on 100 mm visual analogue scales the degree to which the experiences listed apply to them (anchors: 0 = not at all; 100 = very much). Scores on the individual items are averaged to obtain a total DES score.

The CFQ (α = 0.85) comprises 25 items and measures self-reported frequency of failures in perception/attention (e.g. “do you fail to notice signposts on the road?”), memory (e.g. “do you bump into people?”) and action (e.g. “do you forget appointments?”). Ss are asked to indicate on a 5-point scale (anchors: 0 = never; 5 = very often) how often they have experienced each cognitive failure in the past months. Thus, higher total CFQ scores reflect a higher frequency of self-reported cognitive failures. Broadbent et al. (1982) summarized evidence that the CFQ is a stable trait-like measure (i.e. high test–retest correlation) with adequate internal consistency (i.e. high Cronbach’s α). Merckelbach, Muris, Nijman and de Jong (1996) found similar results for the Dutch translation of the CFQ. The relationship between everyday slips and lapses as measured by the CFQ and psychopathology is a complex one (e.g. Merckelbach et al., 1996). While high CFQ scores are not a marker of psychopathology, there are reasons to believe that under severe stress conditions, high CFQ persons are more at risk of developing neurotic complaints because they have less successful coping strategies (Broadbent et al., 1982; Reason, 1993).

The CEQ (α = 0.78) is a 25 item true/false index of fantasy proneness (Merckelbach et al., submitted for publication). CEQ items were derived from the extensive case descriptions of fantasy proneness provided by Wilson and Barber (1983). Typical examples are: “in general, I spend fantasizing or daydreaming more than half of my (waking) day”; “my fantasies are so vivid that they are like a good movie”; and “I tend to confuse my fantasies with memories of real events”. The number of yes-answers are summed to yield a total CEQ score. Test–retest stability and internal consistency of the CEQ are good (0.95 and 0.72, respectively) and the scale correlates strongly with measures that are known to tap important components of fantasy proneness. For example, the correlation between the Tellegen Absorption Scale (TAS; Kihlstrom et al., 1994) and the CEQ is 0.76 (Merckelbach et al., 1998).

Mean DES, CFQ and CEQ scores were 24.2 (S.D. = 12.1), 42.3 (S.D. = 10.3) and 8.1 (S.D. = 3.6), respectively. Table 1 shows Pearson product–moment correlations between DES and separate DES factors, on the one hand, and CFQ and CEQ, on the other hand. As can be seen, dissociative experiences were strongly correlated with both self-reported cognitive failures and fantasy proneness: the higher the dissociation scores, the more everyday lapses Ss reported and the more fantasy prone they were. This association was not only evident for the total DES score, but also for the separate DES factors. That is, even the two DES factors that are thought to be predictors of severe psychopathology (i.e. dissociated states and
depersonalization–derealization; Ross et al., 1991) were positively correlated with everyday cognitive failures and fantasy proneness.

The correlation between CFQ and CEQ did not attain significance ($r = 0.15$), suggesting that cognitive failures and fantasy proneness make unique contributions to DES. To examine this issue in more detail, partial correlations were computed. With CFQ held constant, CEQ was still correlated with DES (partial $r = 0.58$, $P < 0.01$). With CEQ held constant, CFQ was significantly associated with DES (partial $r = 0.44$, $P < 0.01$). Thus, both variables accounted for a unique proportion of the variance of the DES. In total, 45.8% of the DES variance was explained by the combined measures of fantasy proneness and cognitive failures.

3. Study 2: method and results

Study 2 tried to replicate the correlational pattern found in study 1. This time, the sample consisted of 51 female undergraduate students (mean age: 18.6 years; range: 17–22) who volunteered to complete the DES, the CEQ and an alternative measure of everyday cognitive lapses, namely the Short Inventory of Minor Lapses (SIML; Reason, 1993). Ss completed the questionnaires individually. The DES ($\alpha = 0.89$) and CEQ ($\alpha = 0.73$) versions administered to this sample were identical to those used in study 1. The SIML ($\alpha = 0.85$) consists of 15 items that describe the most prevalent action and memory lapses. A typical item is: “how often do you forget to say something you were going to mention?” Respondents are asked to rate on a 5-point scale (anchors: 1 = hardly ever; 5 = nearly all the time) how often each type of cognitive failure has been experienced over the past year. Scores on the individual items are summed to give a total score. The SIML possesses adequate psychometric properties and correlations between SIML and CFQ range between 0.60 and 0.70 (Reason, 1993).

Mean DES, SIML and CEQ scores for this sample were 21.6 (S.D. = 10.9), 34.8 (S.D. = 7.9) and 9.0 (S.D. = 4.0). Table 2 shows the Pearson product–moment correlations between the three measures. Again, total DES scores were found to be significantly correlated to both fantasy proneness and everyday cognitive failures. In addition, everyday cognitive failures were related to each of the three DES factors (absorption–imaginative involvement, dissociated

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* $P < 0.01$; DES factor 1 is absorption–imaginative involvement; DES factor 2 dissociated states and DES factor 3 depersonalization–derealization.
states and depersonalization–derealization), while fantasy proneness was linked to two of the three DES factors (i.e. absorption–imaginative involvement and depersonalization–derealization).

The relationship between cognitive failures as measured by the SIML and fantasy proneness indexed by CEQ did not attain significance ($r = 0.16$). Partial correlations closely followed the pattern found in study 1. That is, when CEQ was partialled out, SIML correlated significantly with DES (partial $r = 0.52$, $P < 0.01$). Likewise, when SIML was held constant, CEQ and DES were significantly associated (partial $r = 0.46$, $P < 0.01$). Thus, again, CEQ and SIML accounted for unique proportions of DES and together explained 43% of its variance.

4. Discussion

The results of the present studies can be summarized as follows. To begin with, in line with the suggestions made by Frankel (1990, 1996), Spanos (1996) and Hacking (1995), relatively robust associations were found between dissociative experiences, on the one hand, and everyday cognitive failures and fantasy proneness, on the other hand. Second, these correlations were not carried by the absorption–imaginative involvement factor of the DES, a factor that is composed of relatively normal, benign experiences (Ross et al., 1991). By and large, the two additional DES factors that are thought to be predictors of severe psychopathology (i.e. dissociative states and depersonalization–derealization) were also found to be related to everyday cognitive failures and fantasy proneness. Third, cognitive failures and fantasy proneness were not related to each other and partial correlations demonstrated that both measures make unique contributions to DES scores.

The current findings fit well with those of Rauschenberg and Lynn (1995) who found that students selected on the basis of their fantasy prone profile are also characterized by elevated DES scores. However, to the present authors’ knowledge, no previous study has examined the connections between everyday cognitive failures and DES. While it is intuitively plausible to argue that the connection between DES and everyday cognitive lapses will be mediated by
fantasy proneness, the present results indicate that fantasy proneness and self-reported cognitive failures are unrelated to each other, while both measures are powerful predictors of DES.

Although the DES is recommended as a screening instrument for dissociative psychopathology, at least one published study demonstrated that only a small minority of high-DES individuals meet the criteria for a dissociative disorder (Sandberg & Lynn, 1992). Our finding that two independent, but relatively normal characteristics drive DES scores may explain why this is the case. That is, the present studies suggest that there is a subgroup of nonpsychiatric individuals, in whom high DES-scores are related to fantasy proneness and cognitive failures. If the DES is used as a screening tool for dissociative disorders in nonclinical samples, these individuals are the potential false positives for such disorders.

The present findings also bear relevance to theories about the causal connection between trauma and dissociation (Spiegel et al., 1988; Ross, 1997). Studies that found a close link between self-reported exposure to trauma and heightened DES scores have been taken as evidence for the trauma-dissociation model, i.e. the idea that dissociative experiences are automatic defense responses to cope with traumatic memories (e.g. Ross, 1997; but see Muris & Merckelbach, 1997). Yet, the finding that DES is associated with fantasy proneness underscores the possibility that individuals with heightened DES-scores adopt liberal standards for reporting traumatic experiences (see also Rauschenberg & Lynn, 1995). germane to this issue is a study by Johnson, Edman and Danko (1995) who found that persons with dissociative experiences tend to report a variety of negative life experiences, some of which have little to do with trauma in the strict sense of the word.

Some comments as to the methodological limitations of the present studies are in order. The current studies were correlational in nature and relied on undergraduate samples. Thus, the current data do not allow for testing a causal model of the links between DES, fantasy proneness and cognitive failures. Clearly, longitudinal designs are required to test such models. One could also argue that it remains to be seen whether the associations between DES, fantasy proneness and cognitive failures are evident in clinical samples involving high-DES patients. In this context, it is worthy of note that several studies have recommended a cut-off DES score of 30 to detect dissociative psychopathology in such samples (Ross et al., 1991; Putnam et al., 1996). For example, Ross et al. (1991, p. 299) claimed that “overall DES scores above 30 rarely occur in clinical subjects who do not have a dissociative disorder or posttraumatic stress disorder”. However, in line with Hacking’s (1995, p. 104) remark that he would “dread the thought of teaching a class with an average score on the DES of less than 15”, we found in the undergraduate sample of study 1 that 23 Ss (30%) had a DES score higher than 30, while in study 2, 11 out of 51 Ss (22%) had a DES score exceeding 30. Apparently, a substantial proportion of nonclinical individuals have DES scores that come close to the DES values found in clinical literature. This suggests that the robust associations between DES, fantasy proneness and cognitive failures found in our undergraduate samples might also apply to clinical samples. Keeping in mind that fantasy proneness and cognitive failures were also linked with the two DES factors that are thought to be predictors of psychopathology, this suggests that there are limitations to the DES’s utility as a screening tool for dissociative psychopathology.
References


