

THE IMPORTANCE OF FANTASY-PRONENESS IN DISSOCIATION: A REPLICATION

Ronald J. Pekala,¹ Frank Angelini² and V.K. Kumar³

¹Coatesville VA Medical Center, Coatesville, Pennsylvania, USA, ²Federal Correctional Institute, Fort Dix, New Jersey, USA and ³West Chester University of Pennsylvania, West Chester, USA

Abstract

Previous research (Pekala, Kumar, Ainslie, Elliott, Mullen, Salinger and Masten, 1999/2000) found that dissociation, as measured by the 'Dissociative Experiences Scale' (DES) (Bernstein and Putnam, 1986), was predicted as much by fantasy-proneness (Wilson and Barber, 1983a) as by child abuse (Sanders and Becker-Lausen, 1995) in a substance abuse population. Although fantasy-proneness is a variable mentioned in the literature (Wilson and Barber, 1983a; Lynn and Rhue, 1988; Lynn, Rhue and Green, 1988) as possibly related to dissociative disorders, child abuse is the variable most highlighted (Kluft, 1985; Courtois, 1988; Putnam, 1991; Herman, 1992) as aetiological to dissociative disorders. The results of Pekala et al. (1999/2000) suggested that fantasy-proneness may be as important as child abuse in the development of the dissociative disorders. The present study, attempting to replicate those results, assessed dissociation (by use of the DES), child abuse (by use of the 'Child Abuse and Trauma' (CAT) scale) and fantasy-proneness (by use of the 'Inventory of Childhood Memories and Imaginings' (ICMI)) in 77 male patients at substance abuse units. The ICMI correlated 0.48 (23% of the variance) with the DES, and the CAT total score correlated 0.25 (6.25% of the variance) with the DES. A regression analysis was used to predict dissociation using the five CAT sub-scales alone, as well as those sub-scales with fantasy-proneness. Whereas the CAT sub-scales alone accounted for 10% of the variance, the ICMI and the CAT sub-scales together accounted for 35% of the variance. These results replicate the findings of the previous study (Pekala et al., 1999/2000) and support the inclusion of fantasy-proneness as an important variable related to dissociation; possibly as important as child abuse in the development of such disorders.

Key words: aetiology, dissociation, fantasy-proneness, replication

Introduction

Many researchers and clinicians have hypothesized various factors associated with the aetiology of dissociation and dissociative disorders, including child abuse, high hypnotizability and fantasy-proneness.

Dissociation and child abuse

Courtois (1988) suggested that although there may be a variety of aetiological factors 'associated with major dissociative disorders, there is increasing evidence that children who have suffered severe, repeated, and often bizarre physical, sexual, or emotional abuse, most often administered by parents and unpredictably interspersed with affection, are at high risk for their development' (p. 155).

Kluft (1985) suggested that 'the raison d'être of multiple personality disorder is to provide a structured dissociative defense against overwhelming traumata and the possible repetition of the same or analogous traumata' (p. 231). According to Kluft's (1987) four-factor theory, multiple personality disorder (MPD; now dissociative identity disorder (DID); American Psychiatric Association, 1994) develops when: (a) children with the capacity to dissociate; (b) become severely traumatized; and (c) dissociated contents become linked with one of many possible substrates and shape personality organization; that (d) without restorative experiences to mitigate the abuse, results in DID. Kluft (1987) suggested that the high hypnotizability usually found in multiples is either due to (or caused by) the abuse, fostered by it, or is a necessary, but not, sufficient condition, for MPD. That is, 'only individuals with a biologically based high degree of hypnotizability develop multiple personality disorder' (Kluft, 1987, p. 366).

Putnam (1985) has observed that multiple personality disorder is associated with a childhood history of severe sexual and/or physical abuse. He theorized that 'repeated childhood trauma enhances normative dissociative capacities, which, in turn, provide the basis for the creation and elaboration of alter personalities states over time' (Putnam, 1991, p. 45). For Putnam (1991), it is repeated and severe trauma, in interaction with normal dissociative abilities, that lead to the genesis of the severe dissociation seen in MPD/DID. Putnam (1991) also suggested that 'the capacity of children for fantasy' (p. 52) and the 'ability to project "personality" into objects and situations in particular' (p. 52), such as evinced in imaginary companionship, may play an aetiological role in DID.

Herman (1992) suggested that dissociation may be a function of child abuse in interaction with the ability to enter trance states:

Under the most extreme conditions of early, severe, and prolonged abuse, some children, *perhaps those already endowed with strong capacities for trance states* [emphasis added], begin to form separated personality fragments with their own names, psychological functions, and sequestered memories. Dissociation thus becomes not merely a defensive adaptation but the fundamental principle of personality organization. (Herman, 1992, p. 102)

In a meta-analytic review of dissociation studies which utilized the DES, Ijzendoorn and Schuengel (1996) found a significant relationship of moderate effect size between sexual or physical abuse and the DES. Twenty-six studies, whether using self-report or interview data, found a 'combined effect size of $d = 0.52$, which was highly significant' (Ijzendoorn and Schuengel, 1996, p. 371).

Dissociation and hypnotizability

Kluft (1987) has suggested that a 'high degree of hypnotizability' is a necessary (but not sufficient) condition for the development of dissociative disorders. Bliss (1986), in

his autohypnosis model of dissociation, has also posited that individuals use innate or fostered (via abuse) hypnotic abilities to distance themselves from the traumatic instance. However, Ijzendoorn and Schuengel (1996) suggest that the autohypnotic model is problematic since the relationship between hypnotizability and dissociation is 'quite modest' with an effect size (d) of 0.27.

Carlson and Putnam (1989) suggested that hypnotizability and dissociativity (as measured by the DES) are only modestly related. Whereas hypnotizability scales tap 'alterations in motor, sensory, and cognitive functions', the DES measures aspects of 'memory, awareness, identity, cognitions, and perceptions' (Carlson, 1994, p. 47). Furthermore, while the DES measures everyday experiences that are 'spontaneous and involuntary', hypnotizability scales measure a person's capacity to experience suggested phenomena in a clinical or experimental context, rather than a person's capacity to experience 'spontaneous alterations in consciousness' in everyday life (Carlson, 1994, p. 47). Hence, Carlson and Putnam (1989) suggest that hypnotizability and dissociativity tap rather different domains of behaviour and experience.

Similarly, Kumar, Pekala and Marcano (1996) found that the correlation between hypnotizability (assessed by the Harvard scale), and dissociativity (assessed by the DES) to be significant but low (Pearson's $r = 0.23$; $n = 403$; $p < 0.001$). Although hypnotizability may be an important factor in the high dissociativity associated with DID, Kumar et al. (1996) concluded their article by suggesting that 'the capacity for hypnotizability and the capacity to dissociate in everyday life are related but distinct concepts' (p. 151).

Dissociation, hypnotizability and fantasy-proneness

'Fantasy-proneness', a construct related to hypnotizability, may be an important variable in understanding dissociation. Lynn, Rhue and Green (1988) suggested that a history of fantasy-proneness may increase the likelihood that individuals will be later diagnosed with DID. According to Wilson and Barber (1983a), fantasy-prone individuals live much of their lives in a world of imagery, imagination and fantasy. The fantasy-prone person tends to mix fact and fiction or fantasy, including experiencing false pregnancies or generating memories and imaginings of hallucinatory intensity. Wilson and Barber (1983a) reported that 65% of their fantasy-prone subjects were able to 'experience fantasies of hallucinatory intensity in all sense modalities' (pp 352–3). They also found out that '85% of the fantasizers (as contrasted to 24% of the subjects in the comparison group) stated that they tend to confuse their *memories* of their fantasies with their *memories* of actual events' (Wilson and Barber, 1983a, p. 353). Barber (2000) has recently expanded on this model of fantasy-proneness, looking at three different avenues for generating high hypnotic responsiveness, one of which includes the highly fantasy-prone individual.

Whereas Wilson and Barber (1983a) believed that fantasy-proneness and hypnotizability were highly related, Lynn and Rhue (1991) reported five studies examining the relationship between hypnotizability and fantasy-proneness, and found that hypnotizability and fantasy-proneness were only modestly correlated (Pearson's $r = 0.25$). They concluded by suggesting that 'although the majority of high-hypnotizable subjects could not appropriately be described as fantasy-prone, the highly hypnotizable subjects were found to have higher fantasy-proneness scores than low-hypnotizable subjects' (p. 429).

Although fantasy-proneness may not be highly related to hypnotizability, Lynn and Rhue (1988) drew a number of parallels between the characteristics of individuals with multiple personality disorder (who usually are highly hypnotizable) and those who are fantasy prone, including a history of child abuse and the ability to generate memories and believed-in imaginings with hallucinatory intensity. Lynn, Rhue and Green (1988) suggested that *dissociation* may be conceptualized as an *imagination-based cognitive strategy*:

This strategy involves the use of imagination and attentional strategies (e.g., amnesia, distraction, 'motivated' forgetting) to create a credible feeling of distance or separation from aversive events outside the realm of personal control. (Lynn et al., 1988, p. 140)

Although Lynn et al. (1988) were unsure as to whether fantasy-proneness develops before an episode of abuse or trauma or after a traumatic incident, they suggested 'that a harsh childhood environment, combined with fantasy-proneness, increases the likelihood that the individual will be diagnosed as a multiple personality' (p. 141). Following a somewhat similar line of reasoning, Bowers (1991) noted that 'fantasized alternatives to reality ... can become increasingly complex and differentiated with minimal involvement of executive level initiative and control. When the seriously disturbed individual is also fantasy-prone, multiple personality may well be the result' (p. 168).

Bryant (1995) investigated the relationship between fantasy-proneness and the age at which reported childhood sexual abuse occurred. Individuals who reported experiencing sexual abuse before the age of seven scored significantly higher on fantasy-proneness than those who reported experiencing abuse after age seven. Although Bryant (1995) concluded that 'fantasy-proneness and recall of the age of reported abuse are strongly associated' (p. 191), he cautioned that it is unknown whether this was due to abuse at an earlier age leading to increased fantasy-proneness, or increased fantasy-proneness leading to increased memory distortion, and, in turn, increased, but unreliable, reports of sexual abuse.

Child abuse and fantasy-proneness in predicting dissociation

In a recently published study (Pekala et al., 1999/2000) male substance abuse patients were assessed for dissociation (as measured by the DES), child abuse (as measured by the CAT scale) and fantasy-proneness (as measured by the ICMI). A regression analysis was used to predict dissociation with the five CAT sub-scales and fantasy-proneness. The five CAT sub-scales accounted for 12% of the variance when predicting the DES from only the five CAT sub-scales. However, 22% of the variance was accounted for when using both the ICMI and the CAT sub-scales. Within-study cross-validation regression analysis yielded very similar results. These regression analyses suggested that fantasy-proneness is as important as child abuse in predicting dissociation.

The present investigation

The present study sought to replicate the aforementioned results. Patients admitted to substance abuse treatment units at a VA Medical Center were given questionnaires to assess dissociation, child abuse and fantasy-proneness. Given the prior

review, it was predicted that fantasy-proneness would be as important as child abuse in predicting dissociation.

Method

Subjects and instruments

The study subjects were 77 male admissions to substance abuse units at a VA Medical Center. All subjects were given the DES (Bernstein and Putnam, 1986; Carlson and Putnam, 1992), the CAT (Sanders and Becker-Lausen, 1995) and the ICMI (Wilson and Barber, 1983b).

The DES (Bernstein and Putnam, 1986; Carlson and Putnam, 1992) is a standard, self-report screening device for the assessment of dissociative symptoms. It consists of 28 statements and respondents indicate the percentage of time the statements apply to them (when they are not under the influence of drugs or alcohol). The DES score is the average score across all 28 items. The DES has been shown to be a reliable and valid measure of dissociative experiences (Carlson and Putnam, 1992) across a variety of diagnostic groups, and has impressive reliability and validity (Frischholz, Braun, Sachs, Hopkins, Schaeffer, Lewis, Leavitt, Pasquotto and Schwartz, 1990; Frischholz, Braun, Sachs, Schwartz, Lewis, Schaeffer, Westergaard and Pasquotto, 1991; Frischholz, Braun, Sachs, Schwartz, Lewis, Schaeffer, Westergaard and Pasquotto, 1992; Ijzendoorn and Schuengel, 1996).

The ICMI (Wilson and Barber, 1983b) is a 52-item self-report inventory that measures fantasy-proneness. An item concerning false pregnancy was dropped from the inventory (since the population was male). This led to a 51-item inventory that participants completed by answering 'True' or 'False' to the various items. A subject's score is simply the sum of all the 'True' responses.

The CAT, developed by Sanders and Becker-Lausen (1995), is a 38-item self-report measure (using a five-point scale of 0 = 'Never' to 4 = 'Always'). It was developed to assess the frequency and extent of various types of negative experiences in childhood and adolescence. The five sub-scales of the CAT include (number of items in parentheses): parental dysfunctioning (6); sexual abuse (8); inappropriate punishment/lack of safety (6); physical/verbal abuse (11); and neglect (8). In prior research with the CAT (Pekala, Ainslie, Elliott, Mullen, Salinger, Masten and Kumar, 2000) the five sub-scales of the CAT had an average Cronbach alpha of 0.82.

Results

The ICMI correlated highest with the DES (Pearson's $r = 0.48$; $p < 0.001$), followed by the CAT sub-scales of inappropriate punishment (Pearson's $r = 0.32$; $p < 0.01$) and verbal and physical abuse (Pearson's $r = 0.24$; $p < 0.04$) The overall CAT scale correlated 0.25 with the DES (Table 1).

A regression analysis was used to predict dissociation using the five CAT sub-scales, and also the five CAT sub-scales and the ICMI. When using only the five CAT sub-scales, the regression equation accounted for 10% of the variance. Only the CAT sub-scale of inappropriate punishment remained in the regression equation for an R of 0.314 (Table 2).

However, 35% of the variance was accounted for when using both the ICMI and the CAT sub-scales in the regression equation (Table 3) in predicting the DES from

Table 1. Correlations* between the DES (and its sub-scales), the ICMI and the CAT (and its sub-scales)

(Sub)Scale	DES (AMN) (AMN)	DES (ABS) (ABS)	DES (DEP) (DEP)	ICMI	CAT (SEX) (SEX)	CAT (IPS) (IPS)	CAT (PD) (PD)	CAT (NG) (NG)	CAT (VPAB) (VPAB)
DES	1.00**	0.95	0.91	0.48	0.21	0.32	0.17	0.14	0.24
DES — amnesic dissociation (AMN)		1.00	0.85	0.39	0.08	0.33	0.08	0.21	0.25
DES — absorption (ABS)			1.00	0.52	0.06	0.25	0.07	0.16	0.18
DES — depersonalization (DEP)/ derealization				1.00	0.09	0.27	0.02	0.14	0.19
ICMI				1.00	0.30	0.01	0.12	0.37	0.23
CAT					1.00	0.40	0.73	0.91	0.89
CAT — sexual abuse (SEX)					1.00	0.17	0.15	0.34	0.21
CAT — inappropriate punishment/ lack of safety (IPS)						1.00	0.37	0.52	0.51
CAT — parental dysfunctioning (PD)							1.00	0.59	0.56
CAT — neglect (NG)								1.00	0.75
CAT — verbal/physical abuse (VPAB)									1.00

*n = 75

**Correlations greater than 0.31 are significant at the 0.01 level, correlations greater than 0.23 are significant at the 0.05 level.

Table 2. Regression analyses predicting dissociation from the CAT sub-scales

(Sub)Scale	<i>R</i>	<i>R</i> ²	Standard Coefficient	<i>F</i> Value	<i>P</i> Value
In regression equation:					
CAT — inappropriate punishment	0.314	0.099	4.67	7.99	0.01
Out of regression equation					
CAT — sexual abuse				0.04	0.84
CAT — parental dysfunctioning				0.21	0.65
CAT — neglect				0.19	0.67
CAT — physical/verbal abuse				0.69	0.41

Table 3. Regression analyses predicting dissociation from the ICMI and the CAT sub-scales

(Sub)Scale	<i>R</i>	<i>R</i> ²	Standard Coefficient	<i>F</i> Value*	<i>P</i> Value
In regression equation:					
ICMI — fantasy proneness	0.476	0.226	0.56	27.73	0.00
CAT — inappropriate punishment	0.569	0.323	0.43	13.87	0.00
CAT — neglect	0.595	0.353	-0.23	3.32	0.07
Out of regression equation					
CAT — sexual abuse				1.04	0.31
CAT — parental dysfunctioning				0.08	0.78
CAT — physical/verbal abuse				0.12	0.29

* *F* and *P* values refer to final *F* and *P* values using all independent variables in the regression equation.

these (sub-)scales. The unstandardized regression coefficient results, which partial out the effects of other variables, suggested that fantasy-proneness was somewhat more important than the CAT sub-scales of inappropriate punishment and neglect in predicting dissociation.

Discussion

The correlational analyses suggested that the ICMI accounted for approximately three to four times the variance (Pearson's $r = 0.48$) than did the total CAT score (Pearson's $r = 0.25$). Similarly, the regression analysis found that 35% of the variance was accounted for in DES scores by the ICMI and the CAT sub-scales of inappropriate punishment and neglect, but only 10% when using only the CAT sub-scales (specifically, inappropriate punishment). Prior research (Pekala et al., 1999/2000) found that fantasy-proneness also accounted for slightly more of the variance in predicting dissociation, as measured by the DES, than did the CAT sub-scales.

In that earlier study, parental dysfunctioning was found to have a negative standardized regression coefficient in the multiple regression with the ICMI and the CAT sub-scales. In the present study neglect was found to also have a negative standard coefficient (-0.23) with the DES. As with the earlier study, it is believed that neglect was functioning as a suppressor variable, that is 'a variable that is highly correlated with other predictors but has a small correlation with the criterion' (Grimm and Yarnold, 1995, p. 63). This interpretation is consistent with the results shown in Table 1. Neglect was found to correlate only 0.14 with the DES, but had correlations between 0.34 and 0.75 with the other CAT sub-scales.

An interesting difference emerged between the two studies. In the earlier research, the sexual abuse sub-scale of the CAT was the biggest predictor of dissociation besides fantasy-proneness. The correlation between sexual abuse and the DES was not significant in the present study (Pearson's $r = 0.21$; $p < 0.05$), although it was in the earlier study (Pearson's $r = 0.32$; $p < 0.001$). This difference may relate to the much smaller numbers of the present study (77), than the previous study ($n = c.1220$). It is believed that the smaller numbers resulted in fewer subjects in the present study reporting sexual abuse, with resulting decreased variance, which would tend to deflate the correlation coefficient due to restriction of range.

The standardized regression coefficients, which partial out the variance related to the other independent variables, suggest that when looking at only these two sets of variables (fantasy-proneness versus child abuse), fantasy-proneness accounts for at least as much, if not more, of the variance than do the child abuse sub-scales. This is interesting, given the amount of attention given to child abuse in the literature on the aetiology of dissociation *vis-à-vis* other variables. However, many authors have posited the importance of fantasy-proneness, hypnotizability or 'trance states' in the aetiology of dissociation (Kluft, 1985, 1987; Putnam, 1985, 1989; Lynn and Rhue, 1988; Bowers, 1991; Herman, 1992). This variable, however, has usually been given secondary status, in comparison to child abuse, in conceptualizing the development of the dissociative disorders.

In conclusion, the data suggest the importance of *both* fantasy-proneness and child abuse in the possible aetiology of dissociative disorders. Although causality cannot be determined from this correlational study design, the data suggests that dissociation, as assessed by the DES, may be as much a function of fantasy-prone-

ness, as of reported child abuse, at least for male substance abuse patients. Future research should assess for fantasy-proneness, in addition to child abuse, when trying to understand the development, nature, and aetiology of the dissociative disorders.

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Address correspondence to:

Ronald J Pekala, PhD,
Biofeedback Clinic (116B),
Coatesville VA Medical Center,
Coatesville,
PA 19320,
USA

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