

CONSTRUCT VALIDITY
OF THE DISSOCIATIVE
EXPERIENCES SCALE (DES):I.
THE RELATIONSHIP BETWEEN
THE DES AND OTHER SELF-REPORT
MEASURES OF DES

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ABSTRACT

The present study attempted to expand the construct validity of the Dissociative Experiences Scale (DES) by comparing it to: (a) other self-report measures of dissociation (e.g., the Tellegen Absorption Scale [TAS] and the Perceptual Alteration Scale [PAS]); (b) the construct of "ambiguity intolerance" (assessed by the Yellen Ambiguity Intolerance Scale [YAIS]); and (c) the Jenkins Activity Schedule (JAS: which measures the degree of Type A behavior). Three hundred and eleven undergraduates participated in an experiment on "Hypnotizability and Personality," and filled out the DES, TAS, PAS, YAIS, and JAS. The DES total score (and three DES factor scores) correlated with the TAS and PAS in the range of .24 - .52 (all correlations were significant at the .001 level, two-tailed). Furthermore, the DES total score (and the three DES factor scores) correlated significantly with the YAIS overall score (r 's ranged from .22 - .24, all p 's < .001), but did not correlate significantly with the JAS (r 's ranged from -.03 - .04, ns). The findings suggest that DES scores (i.e., total scores and each of the three DES factor scores) show good levels of convergent validity as they correlate significantly with other self-report measures of dissociation. However, the intercorrelations were not high enough to consider the different dissociation measures as interchangeable. Furthermore, subjects reporting high levels of dissociative experiences also reported higher levels of ambiguity intolerance. However, no significant association was observed between DES scores and the Type A behavior pattern.

INTRODUCTION

The Dissociative Experiences Scale (DES: Bernstein & Putnam, 1986) has now become the most widely used self-report measure of dissociation in clinical studies of dissociative disorders. For example, several studies have reported that DES overall averaged scores have very high levels of internal consistency, temporal stability, and inter-rater reliability (e.g., Bernstein & Putnam, 1986; Frischholz, Braun, Sachs, Hopkins, Shaeffer, Lewis, Leavitt, Pasquotto, & Schwartz, 1990; Ross, Joshi, & Currie, 1991). Furthermore, additional studies have clearly documented that DES overall averaged scores significantly discriminate between normals, patients with other types of psychopathology, and patients with dissociative psychopathology (Bernstein & Putnam, 1986; Ensink & van Otterloo, 1989; Frischholz, et al., 1990; Ross, Norton, & Anderson, 1988).

More recently, a number of investigators have begun examining the underlying psychometric structure of the DES using factor analytic methods. In this regard, Frischholz, Schwartz, Braun, and Sachs (1991) identified three DES factor scales which represent two pathological types of dissociative experiences (e.g., amnesic experiences and depersonalization-derealization experiences), and one normal type dissociative-like experiences (e.g., absorption). These factor scales were developed from all previous factor analytic studies of the DES (Carlson & Putnam, 1988; Fischer & Elnitsky, 1990; Frischholz, et al., 1991; Ross, Joshi, & Currie, 1991; Schwartz, Frischholz, Braun, & Sachs, 1991) where the item loadings were invariant across four to six samples. Scores on these scales were found to have high levels of internal consistency (with alpha coefficients in excess of .80) and also significantly discriminated between students and patients suffering from different types of dissociative psychopathology.

Most of the empirical research on normal dissociative-like experiences has been conducted in the field of hypnosis. For example, the Tellegen Absorption Scale (or TAS) appeared in 1974 (e.g., Tellegen & Atkinson, 1974). It is a 37-item, self-report questionnaire (requiring the subject to respond true or false to each of the items). The TAS items measure an overall tendency for one to become "absorbed" by external stimuli to the point that focal attention is increased and peripheral awareness is significantly diminished (Roche & McConkey, 1990). The overall score on the TAS also exhibited high levels of internal consistency (with KR-20 coefficient in the range of .70 - .90) and has since been found to be significantly correlated with various mea-

asures of hypnotic responsivity on the magnitude of .20 - .30 (Frischholz, Spiegel, Trentalange, & Spiegel, 1987; Glisky, Tataryn, Tobias, Kihlstrom, & McConkey, 1991). Hence, the TAS appears to be measuring one form of normal dissociative-like experiences which is mildly correlated with individual differences in responsivity to hypnosis.

Another measure of dissociative-like experiences, the Perceptual Alteration Scale (e.g., Sanders, 1986). Although the PAS purported to measure both normal and abnormal types of dissociative-like experiences, it was standardized on a student population, and no data have since appeared which demonstrate that scores on the PAS significantly discriminate between normals, patients with non-dissociative psychopathology, and patients with dissociative psychopathology. No information on the internal consistency or temporal stability of PAS overall scores was reported in the original article. However, one recent study has found that PAS overall scores do significantly correlate with hypnotic responsivity on the magnitude of .10 - .20 and significantly correlate with the TAS on the magnitude of .61 (Nadon, Hoyt, Register, & Kihlstrom, 1991). Thus, PAS scores, at the very least, also seem to be related to normal dissociative-like experiences and are also mildly correlated with hypnotizability.

One recent study by Nadon and his colleagues (Nadon et al., 1991) assessed the correlations between the DES, TAS, and PAS in which items from each instrument were rated on a 1-4 point scale. In the Nadon et al., 1991 study (Experiment 1), the DES total score correlated .82 with the PAS overall score and .70 with the TAS overall score. This is surprising since these correlations are almost as high as the internal consistency coefficients for each of these individual scales. In other words, the data reported by Nadon et al. (1991: Experiment 1) suggest that the TAS, PAS, and DES may be interchangeable measures. However, the TAS only purports to measure normal dissociative-like experiences. While the PAS claims to measure both normal and pathological experiences, it has never been shown to be correlated with pathological dissociative experiences in a clinical population. Hence, it could be argued that while DES total scores might be significantly correlated with TAS and PAS overall scores, the magnitude of the observed correlations may be moderated by whether the DES items are picked to reflect normal or pathological dissociative-like experiences.

The purpose of the present study was to expand the nomological network of the DES by comparing it to other measures of dissociative-like experiences (i.e., the TAS and the PAS). It was hypothesized that the DES overall averaged score would significantly correlate with summary TAS and PAS scores, but at a level much lower than that observed by Nadon, et al. (1991) because the original scoring methods for each instrument were used, and the TAS only taps normal dissociative experiences. Furthermore, it was hypothesized that the two DES factor scores which reflect pathological dissociative-like experiences would correlate at lower levels with TAS and PAS summary scores than the correlation between the DES absorption factor score and TAS and PAS summary scores.

Another study hypothesis was to compare the construct of "intolerance of ambiguity" (Yellen, 1989; 1990; 1991) with

dissociative-like experiences. For example, it has been clinically observed that patients suffering from dissociative psychopathology are more likely to view things as being either black or white (i.e., good or bad). They do not like ambiguity and prefer polarized perceptions of the world. Among normal people, there appears to be a range of individual differences in ambiguity intolerance, and Yellen (1989; 1990) developed a scale for measuring individual differences along this dimension. Internal consistency coefficients for this measure were in the .90s. It was predicted that normal people who evidence high levels of dissociative experiences would have higher levels of ambiguity intolerance. In other words, it was hypothesized that scores on the Yellen Ambiguity Intolerance Scale (YAIS) would be significantly correlated with overall scores on the DES, PAS, and TAS. Likewise, YAIS scores should also be significantly correlated with the three DES factor scale scores.

Finally, because it was expected that each of the three measures included in the study so far would demonstrate significant levels of convergent validity (i.e., they should all intercorrelate significantly with one another), a measure was included to demonstrate divergent validity as well. That is, a measure was included in the study which was not expected to significantly correlate with the DES, TAS, PAS, or YAIS. This measure was the Jenkins Activity Schedule (JAS), which has been shown to be a reliable and valid measure of Type A behavior (Yarnold, Mueser, Grau, & Grimm, 1986). Thus, this correlational study was carried out to demonstrate the convergent and discriminant validity of the DES overall averaged score and the three DES factor scores.

Subjects

Subjects in this study were 311 college undergraduates who volunteered to participate in a study entitled "Hypnotizability and Personality." All subjects were given course credit for their participation.

Method

Subjects were run in groups of ten to fifteen. When subjects reported to the study, they were asked to fill out the DES, PAS, YAIS, TAS, and JAS, which were administered in the original formats. All subjects filled out the tests in the same order. Afterwards, all subjects were administered the Harvard Group Scale of Hypnotic Susceptibility. Scores on all these measures were then obtained and entered into a computer. There were some missing item data for approximately twenty-five subjects. The mean item score was substituted for the missing values which appeared randomly throughout the data set. Pearson correlations were then computed between scores on the DES, three DES factor scores, PAS, TAS, YAIS, and JAS for all 311 subjects, using two-tailed significance tests.

Results

The results of the correlational analysis are reported in Table 1. The first study hypothesis was supported as the DES total score correlated significantly with overall TAS and PAS scores. The correlation between the DES overall averaged score and PAS was .52 ($p < .001$). Although this correlation

is statistically significant, it is significantly lower than the correlation of .82 previously reported by Nadon and his colleagues (Nadon, et al., 1991) between these two measures. Likewise, the correlation between the DES overall averaged score and the TAS summary score was .39 ($p < .001$). Again, while this correlation is statistically significant, it is significantly lower than the correlation of .70 previously reported by Nadon, et al., (1991) between these two measures. Finally, it can be seen from the bottom row of the Table 1 that the correlations between the DES absorption factor score and the PAS and TAS summary scores (i.e., .52 & .46, p 's $< .001$) were higher than the correlations between the DES amnesia factor score, the DES depersonalization-derealization factor score, and the summary PAS and TAS scores (ranging between .24 and .41, p 's $< .001$). While not all of these correlations are significantly higher for the DES absorption score, they are in the predicted direction.

The DES overall averaged score and each of the three DES factor scores significantly correlated with the Yellen Ambiguity Intolerance Scale (correlations ranging from .22 - .24). While these correlations are modest at best, they indicate that, on the average, people who tend to report having many dissociative-like experiences also tend to have high ambiguity intolerance. Not reported in Table 1 is the correlation of .26 ($p < .001$) between the TAS and the PAS, also indicating only a modest relationship between two scales which purport to measure the same thing. Also not reported in Table 1 is the marginally significant correlation of .10 ($p < .07$) between the TAS and the YAIS, and the significant correlation of .37 ($p < .001$) between the PAS and the YAIS. This further supports the notion that the PAS and the TAS are not necessarily measuring the same things, since TAS scores are not highly related to YAIS scores, while PAS scores are moderately related.

Finally, the last study hypothesis was supported as JAS scores did not significantly correlate with any of the disso-

ciation measures (range of r 's = -.03 - .04). Hence, it is unlikely that Type A behavior patterns are related to dissociative-like experiences.

DISCUSSION

The results of the present study suggest that the DES overall averaged score and each of the three DES factor scores are moderately related to other measures of dissociative-like experiences, such as the TAS and PAS. Furthermore, the DES absorption factor score correlates more highly with the PAS and TAS than the two other DES factor scores. This was expected, since the DES absorption factor score measures normal dissociative-like experiences, while the other two DES factor scores measure pathological dissociative-like experiences. It is unclear why the DES overall averaged score correlated so highly with the TAS and PAS in the Nadon, et al. (1991) study. Perhaps this is due to a sampling problem or to the fact that the subjects in the Nadon, et al. (1991) study were administered the TAS, PAS, and DES using a 1 to 4 rating scale, instead of their original item response formats.

Interestingly, DES total scores and each of the three DES factor scores all show an equal magnitude of correlation with the Yellen Ambiguity Intolerance Scale. This is a new finding and is consistent with the clinical observation that patients suffering from dissociative psychopathology tend to view the world as black and white. The findings suggest that, among student subjects, those reporting high intolerance for ambiguity are also those who report having more dissociative experiences.

The PAS and TAS were only moderately correlated in the present study even though they both purported to measure dissociative-like experiences. This finding was further supported by the very low correlation between the YAIS and the TAS (i.e., $r = .10$) and the moderate correlation between the YAIS and the PAS ($r = .37$). This suggests that these two

TABLE 1
Correlations Between DES Scores and Other Personality Tests (n=311)

DES Scores*	Perceptual Alteration Scale	Tellegen Absorption Scale	Ambiguity Intolerance Scale	Jenkins Activity Schedule
DES Total Score (Nadon et al., 1991)	.52* (.82)*	.39* (.70)*	.24*	.04
Amnesia Factor	.41*	.24*	.22*	-.03
Depersonalization/ Derealization Factor	.41*	.31*	.22*	.03
Absorption Factor	.52*	.46*	.22*	.03

*Significant at the .001 level (two-tailed)

scales may also be measuring different, rather than similar, things.

Finally, none of the dissociation measures appear to correlate significantly with the Type A behavior pattern which is measured by the Jenkins Activity Schedule. This finding was predicted and there is no theoretical notion as to why dissociation and Type A behavior should be related.

Future studies should attempt to replicate these findings in a patient population. Perhaps the correlation between the DES and YAIS is higher in a population where one would expect to find very high levels of ambiguity intolerance, as well as high levels of dissociative psychopathology. For now, it appears as though the DES is a valid measure of both normal and pathological dissociative-like experiences in normal (i.e., student) populations. ■

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