

## CONVERGENT VALIDITY OF THE NEW FORM OF THE DES

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### ABSTRACT

*The line and circle forms of the Dissociative Experiences Scale (DES I and DES II) were administered to 65 subjects in the general population, 87 subjects with a clinical diagnosis of dissociative identity disorder, and 26 subjects with a diagnosis of chemical dependency. In all three samples the DES II showed excellent validity when compared to the original line form of the DES.*

The original line/slash mark form of the Dissociative Experiences Scale (DES I) has been well established as a reliable and valid measure of dissociative disorders (Bernstein & Putnam, 1986; Ross, Norton, & Anderson, 1988; Coons, Bowman, & Milstein, 1988; Ensink & van Otterloo, 1989; Frischholz, et al., 1990). It has demonstrated good internal consistency (Ross, Joshi, & Currie, 1991) and good construct validity (Norton, Ross, & Novotny, 1990; Frischholz, et al., 1991, 1992).

The DES I has effectively screened for dissociative disorders in a wide range of geographically different populations including North American patients (Ross, Norton, & Wozney, 1989; Carlson, et al., 1993), subjects in the Netherlands (Boon & Draijer, 1993) and Japan (Tanabe & Ogawa, 1992), as well as Cambodian refugees (Carlson & Rosser-Hogan, 1991, 1993). It has been successfully used to determine the level of dissociative symptomatology in the general population (Ross, Josh, & Currie, 1990) and in various types of clinical groups such as female survivors of sexual abuse (Anderson, Yassenik, & Ross, 1993), and patients with post-traumatic stress disorder (Branscomb, 1991; Bremner, et al., 1992), eating disorder (Demitrack, Putnam, Brewerton, Brandt, & Gold, 1990; Goldner, Cockhill, Bakan,

Birmingham, 1991), obsessive-compulsive disorder (Ross & Anderson, 1988; Golf, Olin, Jenike, Baer, & Buttolph, 1992), chemical dependency (Dunn, Paolo, Ryan, & Fleet, 1993; Ross, Kronson, Koensgen, Barkman, Clark, & Rockman, 1992), borderline personality disorder (Herman, Perry, & van der Kolk, 1989; Goodwin, Cheeves, & Connell, 1990), and other general psychiatric disorders (Ross, Anderson, Fleisher, & Norton, 1991, 1992; Saxe, et al., 1993). Although intended for adult subjects, it has also been used to measure dissociative disorders in adolescent and college-age groups (Ross, Ryan, Anderson, Ross, & Hardy, 1989; Sanders, McRoberts, & Tollefson, 1989; Ross, Ryan, Voigt, & Eide, 1991; Sandberg & Lynn, 1992).

The purpose of this study is to examine the convergent validity of the new form of the Dissociative Experiences Scale (DES II) by observing the rate of agreement between the DES I and the DES II in three different samples. Since the original form of the DES has well established reliability and validity, a parallel form that correlates well with it can also be regarded as valid and appropriate.

### METHOD

#### Subjects

Participants consisted of 65 college students, 87 inpatients with dissociative identity disorder, and 26 inpatients with a diagnosis of chemical dependency. All subjects were adults ranging in age from 18 to approximately 50 years of age.

Permission was obtained for the college sample from the Human Subjects Review Committee and for the inpatient groups from the Internal Review Board, followed by signed consent from each individual participant. Hospital subjects were from Charter Behavioral Health System of Dallas, and college students from Texas Women's University.

#### Instruments

The DES I is a 28-item test in which the respondent answers each question by placing a slash-mark on the dotted line under each item to indicate the percentage of time that the symptom is experienced. It is scored by using a ruler to measure the distance in millimeters from the zero point to the slash mark. The average of the 28 items is then obtained (Bernstein & Putnam, 1986). The DES II consists of 28 identical questions. However, the subject responds by circling a number representing increments of ten percentage points for each item. These 28 numbers endorsed are then also

TABLE 1  
Rate of Agreement Between the DES I and DES II

Group	s	DES I X	DES II X	r	I & II p
Dissociative Identity Disorder	87	46.4	46.5	.95	.0001
Chemical Dependency	26	16.5	14.5	.85	.0001
General Population	65	12.1	10.9	.90	.0001
All Groups Combined	178	29.5	28.8	.96	.0001

averaged for a total score. The text of the DES II is available in a recent paper (Carlson & Putnam, 1993). The order of administration was held constant. The DES I was consistently administered first, followed by a minimum interval of two days before completion of the DES II.

## RESULTS

As shown in Table 1, the mean scores for the DES I and the DES II in the MPD group ( $X = 46.4$  and  $46.5$ , respectively;  $t = 0.141$ , NS) was higher than in the other two groups. There was no significant difference between the mean scores for the DES I and DES II within any of the three groups.

Convergent validity for the DES II was demonstrated among all 178 subjects combined ( $r = .96$ ,  $p = .0001$ ) and correlation coefficients for each of the three separate groups ranged from .85 ( $p = .0001$ ) in the chemical dependency sample to .95 ( $p = .0001$ ) in the dissociative identity group. The dissociative group also showed the most stability among the three groups.

## DISCUSSION

There are a number of benefits of incorporating the new form of the DES into research and clinical work. One primary advantage of using the DES II is its ease of scoring. Another possible benefit involves the clarity of response choices available to the subject. Validity of the DES II is supported by the fact that the mean scores between the two instruments did not differ by more than two points in any of the three groups. This finding should minimize any concern regarding the possibility of patient over- or under-representation of symptom level on the DES II.

These data suggest that the new form of the DES is a valid measure for investigation of dissociative disorders and can be used interchangeably with the original form of the

DES. The study, however, has a number of methodological limitations. The time-interval between administration of the two forms of the DES was too short to rule out carryover effects, and demand characteristics were not controlled for. Thus, one cannot reach a final conclusion regarding interchangeability of these two forms based on our data. Nevertheless, the two instruments showed a high rate of agreement in three different clinical samples. The higher scores of the dissociative identity subjects compared to the other two groups also provide further supportive evidence for the reliability of the diagnosis. ■

## REFERENCES

- Anderson, G., Yassenik, L., & Ross, C.A. (1993). Dissociative experiences and disorders among women who identify themselves as sexual abuse survivors. *Child Abuse and Neglect*, 17, 677-686.
- Bernstein, E.M., & Putnam, F.W. (1986). Development, reliability, and validity of a dissociation scale. *Journal of Nervous and Mental Disease*, 174, 727-735.
- Boon, S., & Draijer, N. (1993). Multiple personality disorder in the Netherlands: A clinical investigation of 71 patients. *American Journal of Psychiatry*, 150(3), 489-494.
- Branscomb, L. (1991). Dissociation in combat-related post-traumatic stress disorder. *DISSOCIATION*, 4(1), 13-20.
- Bremner, J.D., Southwick, S., Brett, E., Fontana, A., Rosenheck, R., & Charney, D.S. (1992). Dissociation and post-traumatic stress disorder in Vietnam combat veterans. *American Journal of Psychiatry*, 149, 328-332.
- Carlson, E.B., & Putnam, F.W. (1993). An update on the Dissociative Experiences Scale. *DISSOCIATION*, 6(1), 16-27.

- Carlson, E.B., Putnam, F.W., Ross, C.A., Torem, M., Coons, P., Dill, D.L., Loewenstein, R.J., & Braun, B.G. (1993). Validity of the Dissociative Experiences Scale in screening for multiple personality disorder: A multicenter study. *American Journal of Psychiatry*, 150(7), 1030-1036.
- Carlson, E.B., & Rosser-Hogan, R. (1991). Trauma experiences, post-traumatic stress, dissociation, and depression in Cambodian refugees. *American Journal of Psychiatry*, 148, 1548-1551.
- Carlson, E.B., & Rosser-Hogan, R. (1993). Mental health status of Cambodian refugees ten years after leaving home. *American Journal of Orthopsychiatry*, 63, 223-231.
- Coons, P., Bowman, E., & Milstein, V. (1988). Multiple personality disorder: A clinical investigation of 50 cases. *Journal of Nervous and Mental Disease*, 176, 519-527.
- Demitrack, M.A., Putnam, F.W., Brewerton, T.D., Brandt, H.A., & Gold, P.W. (1990). Relation of clinical variables to dissociative phenomena in eating disorders. *American Journal of Psychiatry*, 147, 1184-1188.
- Dunn, G.E., Paolo, A.M., Ryan, J.J., & Fleet, J.V. (1993). Dissociative symptoms in a substance abuse population. *American Journal of Psychiatry*, 150 (7), 1043-1047.
- Ensink, B.J., & van Otterloo, D. (1989). A validation of the Dissociative Experiences Scale in the Netherlands. *DISSOCIATION*, 2(4), 221-223.
- Frischholz, E.J., Braun, B.G., Sachs, R.G., Hopkins, L., Shaeffer, D., Lewis, J., Leavitt, F., Pasquotto, M.A., & Schwartz, D.R. (1990). The Dissociative Experiences Scale: Further replication and validation. *DISSOCIATION*, 3(3), 151-153.
- Frischholz, E.J., Braun, B.G., Sachs, R.G., Schwartz, D.R., Lewis, J., Shaeffer, D., Westergaard, C., & Pasquotto, J. (1992). Construct validity of the Dissociative Experiences Scale (DES): I. The relationship between the DES and other self-report measures of dissociation. *DISSOCIATION*, 4(4), 185-188.
- Frischholz, E.J., Braun, B.G., Lewis, J., Shaeffer, D., Sachs, R.G., Schwartz, D.R., Westergaard, C., & Pasquotto, J. (1992). Construct validity of the Dissociative Experiences Scale (DES): II. Its relationship to hypnotizability. *American Journal of Clinical Hypnosis*, 35, 145-152.
- Goff, D.C., Olin, J.A., Jenike, M.A., Baer, L., & Buttolph, M.L. (1992). Dissociative symptoms in patients with obsessive-compulsive disorder. *Journal of Nervous and Mental Disease*, 180(5), 332-337.
- Goldner, E.M., Cockhill, L.A., Bakan, E., & Birmingham, C.L. (1991). Dissociation experiences and eating disorders. *American Journal of Psychiatry*, 148, 1274-1275.
- Goodwin, J.M., Cheeves, K., & Connell, V. (1990). Borderline and other symptoms in adult survivors of incestuous abuse. *Psychiatric Annals*, 20, 22-32.
- Herman, J.L., Perry, J.C., & van der Kolk, B.A. (1989). Childhood trauma in borderline personality disorder. *American Journal of Psychiatry*, 146, 490-495.
- Norton, G.R., Ross, C.A., & Novotny, M.F. (1990). Factors that predict scores on the Dissociative Experiences Scale. *Journal of Clinical Psychology*, 46, 273-277.
- Ross, C.A., & Anderson, G. (1988). Phenomenological overlap of multiple personality disorder and obsessive-compulsive disorder. *Journal of Nervous and Mental Disease*, 176, 295-299.
- Ross, C.A., Anderson, G., Fleisher, W.P., & Norton, G.R. (1991). The frequency of multiple personality disorder among psychiatric inpatients. *American Journal of Psychiatry*, 148, 1717-1720.
- Ross, C.A., Anderson, G., Fleisher, W., & Norton, G.R. (1992). Dissociative experiences among psychiatric inpatients. *General Hospital Psychiatry*, 14, 350-354.
- Ross, C.A., Kronson, J., Koenagen, S., Barkman, K., Clark, P., & Rockman, G. (1992). Dissociative co-morbidity in 100 chemically dependent patients. *Hospital and Community Psychiatry*, 43(8), 840-842.
- Ross, C.A., Joshi, S., & Currie, R. (1990). Dissociative experiences in the general population. *American Journal of Psychiatry*, 147, 1547-1552.
- Ross, C.A., Joshi, S., & Currie, R. (1991). Dissociative experiences in the general population: A factor analysis. *Hospital and Community Psychiatry*, 42, 297-301.
- Ross, C.A., Norton, G.R., & Anderson, G. (1988). The Dissociative Experiences Scale: A replication study. *DISSOCIATION*, 1(3), 21-22.
- Ross, C.A., Norton, G.R., & Wozney, K. (1989). Multiple personality disorder: An analysis of 236 cases. *Canadian Journal of Psychiatry*, 34, 413-418.
- Ross, C.A., Ryan, L., Voigt, H., & Eide. (1991). High and low dissociators in a college student-population. *DISSOCIATION*, 4(3), 147-151.
- Sandberg, D.A., & Lynn, S.J. (1992). Dissociative experiences psychopathology, and adjustment, and child and adolescent maltreatment in female college students. *Journal of Abnormal Psychology*, 101, 717-723.
- Sanders, B., McRoberts, G., & Tollefson, C. (1989). Childhood stress and dissociation in a college population. *DISSOCIATION*, 2(1), 17-23.
- Saxe, G.N., van der Kolk, B.A., Berkowitz, R., Chinman, G., Hall, K., Lieberg, G., & Schwartz, J. (1993). Dissociative disorders in psychiatric inpatients. *American Journal of Psychiatry*, 150(7), 1037-1042.
- Tanabe, H., & Ogawa, T. (1992). On the measurement of dissociative experiences: Development of the Dissociative Experiences Scale with a population of Japanese university students. *Tsukuba Psychological Research*, 14, 171-178.