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Dissociation and child abuse histories in an eating disorder cohort in Japan

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Dissociation and childhood abuse were studied in female eating disorder outpatients in Japan. A self-report version of the Dissociative Disorders Interview Schedule (DDIS), which includes data on physical and sexual abuse, and the Dissociative Experiences Scale (DES) were used. Nine of 41 subjects who completed the DDIS reported symptoms suggesting DSM-III-R multiple personality, and 6 of the 39 subjects who completed the DES scored over 30 (reflecting a high likelihood of posttraumatic stress or multiple personality). Subjects' sexual abuse history rates were considerably greater then those in the Japanese general population. Though physical abuse history was associated with high dissociation, no difference was seen between the high and low dissociators in sexual abuse histories.

D. Berger [1,2], S. Saito [4], Y. Ono [3], I. Tezuka [4], J. Shirahase [3], T. Kuboki [1], H. Suematsu [1]

[1] Department of Psychosomatic Medicine, Tokyo University, Japan, [2] Department of Psychiatry, Albert Einstein College of Medicine, Bronx, New York, USA, [3] Department of Psychiatry, Keio University, Tokyo, [4] Tokyo Institute of Psychiatry, Japan

Douglas Berger, Department of Psychopathology, Tokyo Institute of Psychiatry, 2-1-8, Kamikitazawa, Setagayaku, Tokyo, Japan 156

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Outside of North America there is considerable skepticism about the validity of the dissociative disorders, especially multiple personality disorder (MPD), whose existence is felt to be strongly influenced by culture (1, 2). As defined by DSM-III-R (3), dissociative disorders are those in which there is a disturbance or alteration in the integrative functions of identity, memory, or consciousness. These include psychogenic fugue, psychogenic amnesia, depersonalization disorder and MPD. The distinctive feature of MPD is the existence of 2 or more personalities or personality states within the individual (3).

The large majority of the literature on dissociation comes from North America (3–9) where the APA created a new diagnostic category, the dissociative disorders, in 1980 (MPD is slated to be called dissociative identity disorder in the DSM-IV) (10). Additionally, the literature has suggested that MPD may be culturally specific to North America (11). Although recent reports have found evidence of MPD in the Netherlands (5, 12) as well as in Switzerland (13), a study by Takahashi looking at the diagnosis given over a 5-year period in 489 Japanese psychiatric inpatients did not find one case of MPD and only 7 cases of dissociative disorder (5 with psychogenic fugue and 2 with psychogenic amnesia) (1). This compares with data in North America that suggests 20% of psychiatric inpatients may have a dissociative disorder, 5% of that group having MPD (14).

Takahashi's study noted the infrequency of the diagnosis of MPD in India (15) and concluded that the strong family bond in Japan (divorce rate about one third that of the United States), the high value put on children and the low incidence of child abuse there (about 6.6 per 100,000 children under the age of 12) might explain the lack of MPD diagnosed in the sample. This study was criticized for its failure to use structured diagnostic instruments, the inability to control for skeptical bias and the failure to report the incidence of childhood abuse in the sample (2, 16, 17). Very few prior case reports of MPD had been in the Japanese literature (18, 19), and these were met with much skepticism in Japan.

The present study was a preliminary attempt to more systematically study the occurance of dissociative and MPD symptoms in Japan. This study used structured instruments already well studied in North America, employed a bicultural team of research psychiatrists, and included an analysis of the relationship with child abuse.

Because of the difficulty studying groups of child abuse victims in Japan (they are often secretive and unwilling to participate in research), we looked at a group of eating disorders (ED) who might be likely to exhibit dissociation. Both ED and MPD have been shown to have an association with childhood

physical or sexual abuse (4–6, 12, 20–23), dissociation has been correlated with eating disorders (8, 12, 24–28), and both ED and MPD are much more frequent in females (3, 6, 7).

Material and methods

Subjects

Forty-four Japanese female patients attending an eating disorder outpatient group at the Tokyo Institute of Psychiatry Research Center participated in this study. Participation was voluntary and no renumeration was given. Thirty-five of the patients had bulimia nervosa (18 of these had prior histories of anorexia nervosa), 1 anorexia nervosa, and 8 both anorexia and bulimia. None of the patients had evidence of psychosis, active mood disorder, organic brain syndrome or mental retardation, and none had a history of substance abuse.

The mean age of the patients was 24 years (range = 17–37). Eleven of the patients were married or living with a mate, 1 divorced and 32 single. Fifteen were students, 15 were employed and 14 were unemployed. The average number of school years completed was 13.6 years.

Instruments

The Dissociative Experiences Scale (DES) is a 28-item visual-analog (possible scores of 0–100) self-report rating scale that has a test-retest reliability of 0.84 and good clinical validity (29). It is a screening instrument for dissociative disorders, does not make diagnoses, and takes about 1–10 min to complete. Scores above 30 are correlated with a high likelihood of MPD or posttraumatic stress (30). The DES is able to discriminate patients with MPD from other diagnostic groups and normal controls (29, 31).

Tanabe et al. (32) recently administered this scale to 445 Japanese university students and found that 28% of the subjects scored over 30, with an overall mean of 19.5. A North American study of the general population found mean scores of 15.2 (men) and 15.6 (women) for the 18–29 age group, with declining scores as the subjects age, 5% scoring over 30 over all age groups (30). While both studies concluded that dissociative symptoms are common, it should be noted that the Japanese study only included college students whose young age may have contributed to the 28% of DES scores over 30. Based on the North American data, this percentage would be expected to drop as the cohort ages. What proportion of this group actually represents those with dissociative disorder *vs* normative "adolescent" data was not investigated, and the North American data did not report what percentage scored over 30 in an 18- to 22-year-old group, so this can not be compared.

Though the DES has not been validated with a clinical sample of dissociative disorders in Japan, Tanabe reported that DES scores were significantly different in a subgroup of students ($n = 12$) whose frequent dissociative episodes were confirmed by interview compared with another group ($n = 23$) without dissociative episodes and concluded that this supports the validity of the DES in a normal Japanese population (32).

The Dissociative Disorders Interview Schedule (DDIS) is a 131-item structured interview that makes DSM-III-R diagnoses of all the dissociative disorders, somatization disorder, major depression and borderline personality (9). It also inquires about a history of substance abuse, child physical and sexual abuse, trance states, schizophrenic symptoms and secondary features of MPD. The DDIS has an overall interrater reliability of 0.68 for the diagnosis of MPD, with a specificity of 100% and a sensitivity of 90%. There is no overall score; results are compared with norms established for MPD in North America. We are not aware of any prior use of the DDIS in Japan.

The DDIS used in this study was modified into a self-report questionnaire because Japanese subjects often do not respond directly about sensitive issues in interviews. Additionally, somatic symptoms, psychiatric and substance abuse history and depressive symptoms were omitted, as these areas were covered by clinical reports. The DES was used in its intended form. Both scales were translated into Japanese; these translations were checked by bilingual psychiatrists. The DES version was translated anew and may differ slightly from the version used by Tanabe et al.

We had previously reported on a Japanese case with MPD symptoms who was given the DES and modified DDIS (33). Because the dissociative symptoms in this case as well as other cases in our experience in Japan were accurately reflected by these instruments, and because of the need to avoid direct questioning about sensitive issues in this population, we feel the preliminary use of the modified self-report DDIS is appropriate.

Procedure

Subjects signed informed consent and were given the questionnaires to take home for completion. The primary treating clinicians both handed out and collected completed questionnaires. Subjects were informed that this was a study of looking at various psychologic experiences as well as histories of child abuse. Physical and sexual abuse data was collected via section VII of the DDIS (9). No mention of a

purpose to study multiple personality was made. Confidentially was ensured. Any subject who filled the 3 DSM-III-R MPD criteria were interviewed to confirm that the subject understood the questions and answered correctly.

Data analysis

Subjects' demographic and clinical data were reported as means. Group comparisons were done by two-tail *t*-testing or chi-square. Because of the preliminary nature of this study, associations were reported when $P < 0.05$ to deliniate possible trends that deserve further investigation. A number for an item reported less than the total number of 44 for the study group as a whole reflected a failure of the subject to record an answer, or (as in the case of 5 subjects on the DES) the subject declined to cooperate due to fatigue, or inability to concentrate.

Results

Forty-one subjects completed the DDIS section for MPD diagnostic criteria. Nine (22%) filled the 93 criteria necessary to make a DSM-III-R diagnosis of MPD. Only 1 subject filled all 5 NIMH criteria. Twenty-six (63.4) recorded a score of 0 in this category.

The subjects who filled 3 or more MPD diagnostic criteria (DDIS MPD + group), $n = 9$, m = 3.33, SD = 0.71, were compared with those filling less than 3 (non-MPD group), $n = 32$, m = 0.25, SD = 0.57, on multiple variables. Associated with the DDIS MPD + group (Table 1) included an earlier age of onset of anorexia, increased Schneiderian symptoms, more MPD-associated features (includes amnesia-related experiences, flashbacks, voices, derealization, fugue, etc.) and higher DES scores, and more subjects were positive for psychogenic amnesia, and fugue.

Table 1. Variables in eating disorder subjects associatied with those meeting DSM-III-R criteria for MPD versus those who do not

	DDIS MPD+group			Non-MPD group			DDIS MPD+group *vs* non-MPD group		
Item	*n*	M	SD	*n*	M	SD	*t*	df	*P*<
Anorexia age onset	6*	14.0	2.7	20*	17.1	3.8	−2.23	11.8	0.05
Schneiderian symptoms	9	6.6	1.5	32	3.2	2.9	4.7	26.4	0.001
MPD-associated features	9	7.2	3.1	32	4.1	3.1	2.63	13.0	0.05
DES scores	9	26.8	19.9	27	10.1	16.6	2.41	9.6	0.05

* The numbers include patients with a current diagnosis of bulimia who had a history of anorexia.

Other possible associations with the DDIS MPD + group, though statistically nonsignificant due to a low number, include psychogenic amnesia (4 of 9 for the DDIS MPD + group, and 3 of 32 for the non-MPD group) depersonalization (4 of 9 for the DDIS MPD + group, and 2 of 32 for the non-MPD group). There was a weaker trend for the DDIS MPD + group to be positive on items in the sleepwalking, trances and imaginary playmates section, and to score higher on borderline symptoms.

The DDIS MPD + group versus the non-MPD group did not differ on any of the areas of: age, eating disorder diagnosis, age of onset of bulimia, height, weight, educational level, social class (34), parental loss, marital status, history of school absenteeism, kleptomania, antisocial features, suicidal ideas and attempts, self-mutilation, drug or alcohol abuse, use of psychiatric or medical services, physical and/or sexual abuse histories, domestic violence, supernatural, possession, ESP or cult experiences (supernatal experiences include questions about ghosts, spirits, telekinesis, clairvoyance, telepathy, *déjà vu*, etc.).

Thirty-nine subjects completed the DES (m = 13.56, SD = 14.68, range = 0–61.1). Because it has been reported that scores above 30 indicate a high likelihood of MPD or posttraumatic stress (30), we compared the subjects who scored above 30 ($n = 6$, m = 43.6, SD = 10.4) to those below 30 ($n = 33$, m = 8.1, SD = 6.3) on multiple variables. Variables associated with the greater than 30 group compared to the less than 30 group (Table 2) included: greater Schneiderian symptoms, more MPD-associated features, higher scores on borderline pathology, greater total NIMH MPD criteria, histories of physical abuse, more psychogenic fugue, more depersonalization, and higher scores on the supernatural, possession, ESP and cult experiences section.

Other possible associations with high DES scores,

Table 2. Variables in eating disorder subjects associated with those scoring greater than 30 on the DES versus those scoring less than 30

	Greater than 30 group			Less than 30 group			Greater than 30 group *vs* less than 30 group		
Item	*n*	M	SD	*n*	M	SD	*t*	df	*P*<
Schneiderian symptoms	6	7.0	1.7	33	3.1	2.8	4.67	10.84	0.001
MPD-associated features	6	8.8	2.1	33	4.3	3.1	4.46	9.21	0.001
ESP*	6	3.0	1.1	33	1.4	1.6	2.97	9.86	0.05
Borderline symptoms	6	5.8	2.1	33	2.9	2.0	3.1	6.7	0.05
NIMH MPD criteria	6	2.5	1.6	30	0.8	1.3	2.44	6.27	0.05

* Includes supernatural experiences, ESP experiences, feeling possessed or cult involvement.

though statistically nonsignificant due to a low number, include physical abuse (4 of 6) for DES > 30, and 6 of 33 for DES < 30), fugue (2 of 6 for DES > 30, and 2 of 31 for DES < 30) and depersonalization (4 of 6 for DES > 30, and 2 of 33 for DES < 30). Weaker trends were seen for alcohol use and younger age in the greater than 30 DES score group.

The greater than 30 and less than 30 DES score groups did not differ in any of the areas of: height, weight, eating disorder diagnosis, age of onset of anorexia or bulimia, educational level, social class, parental loss, marital status, domestic violence, school absenteeism, kleptomania, antisocial features, suicidal ideas or attempts, self-mutilation, use of psychiatric or medical services, sleepwalking, trances, imaginary playmates, psychogenic amnesia, or histories of sexual abuse.

For the eating disorder sample as a whole ($n = 44$), the combined physical and sexual abuse rate was 45%, for physical abuse alone 25%, and for sexual abuse alone 36%.

As can be seen from Tables 1 and 2, while the DDIS MPD + group had greater DES scores than the non-MPD group, and the greater than 30 DES scorers had more MPD criteria than the less than 30 DES scorers, there were overlap, in that not all of the DDIS MPD + group scored greater than 30 on the DES, and not all the greater than 30 DES scores filled the 3 necessary criteria for MPD. Only 3 subjects (of 36) scored both over 30 DES and fulfilled MPD criteria.

Of the 44 subjects, 13 (29%, m = 6.2, SD = 1.1) filled the 5 DSM-III-R necessary criteria for borderline personality disorder (BPD), and 31 did not (70%, m = 2.0, SD = 1.4). Neither physical nor sexual abuse differed in our BPD *vs* non-BPD group. The BPD group differed from the non-BPD group (Table 3) in having greater Schneiderian symptoms, more MPD-associated features, more MPD NIMH criteria (though the BPD group mean of 1.8 was well below the 3 necessary for the diagnosis of MPD) and greater DES scores. There was a trend for more of the BPD patients to have more MPD associated features though this did not reach significance. There were no differences in any of the other variables tested.

Table 3. Variables in eating disorder subjects associated with those meeting DSM III-R criteria for BPD versus those who do not*

	BPD group			Non-BPD group			BPD group *vs* non-BPD group		
Item	*n*	M	SD	*n*	M	SD	*t*	df	*P*<
Schneiderian symptoms	13	6.1	2.8	31	2.8	2.6	3.7	21.3	0.001
MPD NIMH criteria	13	1.8	1.7	28	0.5	1.1	2.36	16.4	0.05
DES scores	12	24.4	19.5	27	8.7	8.7	2.6	13.0	0.05

Discussion

These findings provide the first data on evidence for significant dissociative symptoms and the existence of MPD-like symptoms in a psychiatric population in Japan. The limitations of this study included a small number, cultural considerations in the interpretations of questions and possibly self-reporting. Even though the self-reporting format was a modification, this may have actually strengthened the reliability of our data due to the privacy afforded, though this preliminary study was not designed to answer this question.

Additionally, because the patients were attending an eating disorders clinic and not a dissociative disorders center, it is unlikely that dissociation was the result of suggestion or malingering for attention. Any possible suggestion afforded to the patients was by the nature of the questions on the questionnaires themselves. The treating clinicians had no special interest in MPD and there was never any discussion of MPD in the treatment itself, or in the testing. Also, the vast majority of the subjects scored low on overall dissociative symptoms.

Data were gathered by reliable instruments, and the patients who fulfilled DSM-III-R MPD criteria reflected the pattern of data obtained by Ross et al. (9) from MPD subjects in North America. Although the patient populations differed (ours were attending a eating disorders clinic, while those in the study by Ross et al. a dissociative disorders clinic), in both studies the patients had high scores in (our study DDIS MPD + $n = 9$ *vs* mean of 102 North American MPD cases): Schneiderian first-rank symptoms, 6.6 *vs* 6.4; MPD-associated features, 7.2 *vs* 10.2; and BPD criteria, 4.4 *vs* 5.2. This pattern distinguished MPD from other diagnostic groups in North America (35). Additionally, psychogenic amnesia and high DES scores were found in our DDIS MPD + cases, consistent with the North American data.

Our DDIS MPD + patients also had an earlier age of onset of anorexia, which may reflect a subset of patients in whom dissociation and anorexia are related. While 9 of our eating disorder patients fulfilled the 3 DSM-III-R diagnostic criteria for MPD, we suspect (though did not verify) that this number may be high for actual MPD and probably reflects significant dissociative pathology, or atypical MPD (i.e., transient symptoms), rather than the strict diagnosis of MPD in many of our cases. While the effects of a relatively young age of our cohort should also be considered as a possible contributing factor to increased dissociation (30), good construct validity for the dissociative disorders has been demonstrated in children and adolescents (36).

The DDIS findings were also confirmed by the DES scale scores of our cohort. Our DDIS MPD +

patients' mean DES score of 26.8 reflects the high scores obtained in North American MPD and posttraumatic stress disorder patients compared with other diagnostic groups (9, 29, 31). Our eating disorder overall mean DES score of 13.56 was similar to the score of 19.5 in 445 Japanese college students (32), as well as the score of 15.6 found in 609 women in the 18–29 age range in the general population (30).

Although the DES data suggest that dissociative symptoms are not specific to eating disorders, our 9 patients (22%) who were DDIS MPD + indicate that a subset of eating disorder patients have a relationship with high levels of dissociation and that this group requires special attention concerning the effects of dissociation on psychopathology and treatment. This is consistent with studies in America and Europe, which had found a relationship between eating disorders and dissociation (8, 12, 24–28).

The DES data in Japan support the idea that dissociation is a continuous process ranging from normal phenomena to serious pathology (28) and help to validate the use of the DES in clinical samples in Japan. At what point do dissociative experiences become pathological? This question was posed by Ross et al. (30), who posited that while a definitive study requires coadministration of the DES and a diagnostic interview to a random sample of the general population, clinical studies using the DES (14) suggest that dissociative disorders may be relatively common, in the range of 5–10% of the general population.

The fact that only 3 subjects had scores > 30 on the DES and were also DDIS MPD + can be interpreted in different ways. Our DDIS MPD + subjects may not necessarily meet strict DSM-III-R MPD criteria if they only have transient symptoms, and thus their DES scores could be lower. Some with high DES scores may have other dissociative disorders not in the MPD spectrum (i.e., psychogenic fugue or amnesia). While there could be other explanations, for example, problems with the validity of these instruments, cultural or language difficulties with the instruments, etc., the fact that 3 of 6 (50%) of the > 30 DES scorers were DDIS MPD + and that the 26.8 mean DES score of the DDIS MPD + group was significantly greater than the 10.1 mean DES score of the non-MPD group supports the validity of these assessment procedures consistent with the North American studies. The DES score of 30 as a cut-off point, however, may need to be reconsidered depending on the population studied.

The other variables listed in Table 2 that were associated with the over 30 DES scores are also consistent with the North American data. We noted that, while physical abuse had an association with high DES scores, sexual abuse did not, and neither physical nor sexual abuse was associated with our DDIS MPD + subjects. While these results will have to be replicated in a larger group of Japanese subjects with dissociative disorders, this seems at odds with the western data. Four large western studies all found between 75% and 90% of MPD subjects positive for either sexual or physical abuse (12, 37–39). False-negative results due to small sample size could have been responsible for this as well as for the lack of association of abuse with BPD in our study. The association of physical abuse and high DES scores in our study, however, supports the hypothesis of childhood trauma leading to dissociation.

The 36% of sexual abuse reported in our eating disorder subjects indicates that an overall lack of reported sexual abuse was not responsible for our finding of no relationship of sexual abuse and dissociation. This value is considerably greater than the official Japanese statistic of 0.0066% for child abuse, including sexual abuse, in the general population (1), and may reflect an association between eating disorders and sexual abuse in Japan and/or an underreporting bias in the Japanese general population statistics. It could be that the Japanese subjects' interpretations of these questions (sexual abuse has not become as widely discussed in Japanese society as in the west) led more of our subjects to consider past minor sexual encounters as "abuse", obscuring any relationship with sexual abuse that the high dissociators may have had and making our data difficult to compare with official statistics. Another potential problem is that of recall bias, i.e., the questionable reliability of adult reports of childhood abuse without corroboration (40).

As in other studies (12, 35, 39), we found a high prevalence of Schneiderian first-rank symptoms in both our DDIS MPD + group and in our over 30 DES scorers. It is possible that our patients misinterpreted the questions and answered yes if they only had transient symptoms as we used a self-report format, though the overall data pattern fits in with the western data. The diagnosis of schizophrenia needs to be considered in any patient with Schneiderian symptoms.

We also found a considerable overlap of the diagnosis of BPD with dissociation (Tables 2, 3), consistent with western research (5, 9, 12, 39). Although amnesia was more often reported in our DDIS MPD + group *vs* non-MPD group, there was no difference in this variable between the group who fulfilled the DSM-III-R criteria for borderline personality and those who did not, consistent with western studies (5, 12, 41) that showed that amnesia distinguished MPD from BPD.

Although our data is based on only 9 DDIS MPD + subjects, it is an addition to the already significant literature. Table 3 shows that, although

BPD is associated with considerable dissociative experiences, the mean DES score of 24.4 for the BPD group (*vs* 8.7 for the non-BPD group) is still considerably lower than the mean score of 41.4 in a North American sample of 82 patients with MPD (37). Patients with MPD symptoms exhibit significant borderline pathology, and vice versa, and this may relate to similarly disruptive childhood experiences and the use of the maladaptive defenses. Dissociative experiences seem to occur in a wide range of psychiatric pathology, just as depression and anxiety may occur in various disorders (30).

An additional finding was the lack of any association in our patients with dissociation and suicide attempts or ideation, as had been found in the western research (12, 42, 43).

This preliminary study is the first to find systematic evidence of considerable dissociative symptoms and child abuse in a Japanese psychiatric population and is an addition to the literature that dissociation and MPD-related symptoms are world-wide phenomena. There was also a considerable amount of physical and sexual abuse in our eating disorder subjects' histories, although we did not ascertain the exact severity of abuse. If the lack of association of sexual abuse histories with dissociation in Japan it replicated in larger samples, it will be important to look into the aspects of Japanese society that make this a divergent finding from western studies.

This study suggests that it will be important for Japanese clinicians to become more acquainted with dissociative symptoms and the psychological effects of child abuse so that improved detection and treatment for these problems can be instituted. Future studies need to further clarify the relationships between sexual abuse, dissociation and eating disorders in Japan.

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