Philip M. Coons, M.D., is Associate Professor of Psychiatry at Indiana University School of Medicine and Staff Psychiatrist at Larue D. Carter Memorial Hospital in Indianapolis, Indiana. Victor Milstein, Ph.D., is Professor of Psychiatry at Indiana University School of Medicine and Psychophysiologicalist at Larue D. Carter Memorial Hospital in Indianapolis, Indiana.

For reprints write Philip M. Coons, M.D., Larue D. Carter Memorial Hospital, 1315 West 10th Street, Indianapolis, Indiana 46202.

 Portions of this paper were presented at the Sixth International Conference on Multiple Personality/Dissociative States, October 13, 1989, Chicago, Illinois.

ABSTRACT

Although there have been eight descriptive studies on patients with psychogenic amnesia between 1935 and 1962, this is the first such study in thirty years. Using an extensive clinical history, mental status examination, collateral interviews, neurological examination, electroencephalogram (EEG), intelligence testing, Minnesota Multiphasic Personality Inventory (MMPI), and the Dissociative Experiences Scale (DES), the authors examined twenty-five consecutive psychogenic amnesia patients diagnosed with modified DSM-III-R criteria. In most cases the amnesia was selective, chronic, and not of sudden onset. A few cases were repetitive. There were multiple stressful psychological precipitants. There were many similarities to patients with multiple personality disorder; providing further proof that dissociative disorders occur along a dissociative spectrum. Psychogenic amnesia is probably the most common dissociative disorder diagnosis. It is frequently overlooked because the symptoms are subtle, and other primary diagnoses are often present.

INTRODUCTION

With the exception of several case reports (Daniel & Crovitz, 1986; Feldman, 1967; MacHovec, 1981) and an excellent review (Loewenstein, 1991), very little has appeared in the literature on psychogenic amnesia since the early 1960s. At least six recent case reports have confused psychogenic amnesia and fugue (Akhtar, Lindsey, & Khan, 1981; Gudjonsson & Howard, 1982; Lyon, 1985; Kaszniaik, Berren, & Santiago, 1988; Takahashi, 1988; Eisen, 1989). Since all of the individuals described in these case reports were discovered far from their usual place of work or residence, they really met the DSM-III (American Psychiatric Association, 1980), and DSM-III-R (American Psychiatric Association, 1987), criteria for psychogenic fugue, atypical dissociative disorder, or dissociative disorder not otherwise specified (DDNOS).

Although psychogenic amnesia did not become an official diagnosis until the publication of DSM-III (American Psychiatric Association, 1980), it was listed as a symptom under dissociative reaction in the DSM-I and under hysterical neurosis, dissociative type, in the DSM-II (American Psychiatric Association, 1968).

Between 1935 and 1962, there appeared eight descriptive studies on large series of patients with amnesia (Abeles & Schilder, 1935; Leavitt, 1935; Kanzer, 1939-1940; Sargent & Slater, 1941; Parfitt & Gall, 1944; Wilson & Rupp, 1950; Kennedy & Neville, 1957; Kiersch, 1962). Numbers of patients ranged from 30 to 144. Diagnoses for these amnestic patients included what is now known as psychogenic amnesia (American Psychiatric Association, 1987), plus sizeable numbers of patients with psychogenic fugue, epilepsy, various types of organic brain disorders, and malingering. Selected findings from studies are summarized in Table 1.

These earlier studies, excluding those done with armed forces subjects, showed an approximately equal sex incidence. Although psychogenic amnesia could occur at almost any age (range 15 - 66), the peak incidence of cases occurred in the third and fourth decades. Although most studies did not comment on the possibility of recurrence, 15 of 63 (24%) patients in the Abeles & Schilder study (1935) had two or more episodes. The only studies which mentioned incidence reported widely varying figures (range 26 to 14.4%). The length of an episode lasted anywhere from a few hours to three weeks or longer, but the majority lasted from just under twenty-four hours (43%) to between one and five days (33%), and 75% recovered spontaneously (Abeles & Schilder, 1935). In the majority of studies, malingering was felt to have been present in some patients. In two more recent studies (MacHovec, 1981; Schachter, Wang, Tulving, & Freedman, 1982; and Kopelman, 1987), memory loss was found to be autobiographical in nature.

The present study is part of a larger investigation of dissociative disorders including multiple personality disorder (MPD), psychogenic fugue, and DDNOS (Coons, Bowman, & Milstein, 1988) conducted over a five-year period from 1984 to 1989. The patients reported herein were the first 25 consecutive psychogenic amnesia patients who presented to a dissociative disorders clinic in a tertiary care hospital and outpatient clinic which was affiliated with a major medical
center and school. The purpose of the study was to describe and characterize patients with psychogenic amnesia and compare them to patients with multiple personality disorder.

SUBJECTS AND METHODS

Subjects
The subjects in this study were the first 25 consecutive patients with amnesia who presented to the dissociative disorders clinic for treatment or consultation. There were 17 inpatients and eight outpatients. All but seven were patients at our facility. All patients who were administered experimental assessment instruments gave their voluntary informed consent.

Methods
Psychogenic amnesia was defined according to DSM-III and DSM-III-R criteria with the exception that the amnesic episode was not required to be of "sudden" and presumably recent onset. This particular convention was adopted because of the relatively large numbers of patients presenting to the dissociative disorders clinic with chronic amnesia for large portions of childhood.

On intake patients were assessed by a comprehensive history including psychiatric, medical, family, and social portions in addition to a mental status examination. Previous psychiatric records were requested and the referring clinician was consulted. In most cases a collateral history was taken from a family member.

Because previous reports of psychogenic amnesia frequently mentioned the presence of organic factors such as head injury, the patients were given a complete physical examination including a neurological examination and EEG. Intelligence was measured by use of the Shipley-Hartford Vocabulary Test (Zachary, 1986) or WAIS-R (Wechsler, 1981). The MMPI (Hathaway & McKinley, 1967) was administered to measure personality functioning. Other rating instruments including the Global Assessment Scale or GAS (Endicott, Spitzer, & Fleiss, 1976), Hamilton Depression Scale or Ham-D (Hamilton, 1967), and the Brief Psychiatric Rating Scale or BPRS (Overall & Gorham, 1962). When the Dissociative Experiences Scale or DES (Bernstein & Putnam, 1986) was developed, it was added to the assessment package.

The data were analyzed using t-tests where continuous variables were present and chi square for categorical variables unless cell frequencies were less than 5 when the Fisher Exact Test was used. A probability level of .05 was used as determining significant differences.

RESULTS

Demographic Characteristics
The patients included 23 women and two men ranging in age from 17 to 51 years (mean, 32 years). Only seven (28%) were currently married. The remainder were either single (40%) or separated or divorced (32%). Mean educational level was 12.7 years (range, 9-18 years). All were Caucasian except for one Hispanic woman. The majority (64%) were employed. One was a student, and two were homemakers.
Onset of Illness
These patients reported that their amnesia began between the ages of 2 and 37 (mean, 19 years). Five were unable to give a specific age of onset, other than early childhood. Seventeen patients required psychiatric hospitalization and their first hospitalization occurred at a mean age of 27 years (range, 14-41 years). For all 25 patients, the mean age of first contact with mental health professionals was also 27 years (range, 5-57 years).

Presenting Psychiatric Symptoms
These patients presented with a wide variety of symptoms (Table 2), many of which were interrelated. Although all of the patients had amnesia, few actually complained of memory loss. Depression was the most common symptom. Conversion symptoms were infrequent; there were two cases of anaesthesia and one case each of blindness, deafness, aphonia, and paralysis. A minority of the patients (36%) had a history of legal difficulties. Two patients were involved with each of the following offenses: driving while intoxicated, prostitution, and writing bad checks. One patient was involved with theft, one with embezzlement, one with selling drugs, and one with child abuse. The most common type of sexual dysfunction was inhibited sexual desire, found in 40%. Other somatic complaints, which ranged from 20 to 37%, included nausea, abdominal pain, dysmenorrhea, palpitations, dizziness, and dyspnea. While headaches were the third most frequent complaint, they tended to be of the tension variety (N=10), although four patients had migraine headaches and two had both varieties. Occurrence of other dissociative symptoms characteristic of MPD, such as auditory hallucinations, fugues, or alter ego states, were notably absent or greatly diminished.

The most common presenting personality traits and symptoms were borderline, dependent, and histrionic. These included the following: affective instability (84%), dependency or helplessness (64%), unstable, intense interpersonal relationships (60%), physically self-damaging acts (60%), impulsivity or unpredictability (56%), identity disturbance (48%), inability to work consistently (48%), self-dramatization (44%), school grades below expected IQ level (44%), irrational angry outbursts (40%), shallow or lacking genuine-

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Psychogenic Amnesia (n = 25) N (%)</th>
<th>Multiple Personality (N = 50) N (%)</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amnesia</td>
<td>25 (100)</td>
<td>50 (100)</td>
<td>ns</td>
</tr>
<tr>
<td>Depression</td>
<td>21 (84)</td>
<td>44 (88)</td>
<td>ns</td>
</tr>
<tr>
<td>Headaches</td>
<td>16 (64)</td>
<td>18 (56)</td>
<td>ns</td>
</tr>
<tr>
<td>Sexual Dysfunction</td>
<td>15 (60)</td>
<td>42 (84)</td>
<td>.05</td>
</tr>
<tr>
<td>Somatization</td>
<td>11 (44)</td>
<td>18 (36)</td>
<td>ns</td>
</tr>
<tr>
<td>Depersonalization</td>
<td>10 (40)</td>
<td>19 (38)</td>
<td>ns</td>
</tr>
<tr>
<td>Auditory Hallucinations</td>
<td>6 (24)</td>
<td>36 (72)</td>
<td>.005</td>
</tr>
<tr>
<td>Alcohol Abuse</td>
<td>6 (24)</td>
<td>21 (42)</td>
<td>ns</td>
</tr>
<tr>
<td>Conversion</td>
<td>6 (24)</td>
<td>20 (40)</td>
<td>ns</td>
</tr>
<tr>
<td>Drug Abuse</td>
<td>5 (20)</td>
<td>23 (46)</td>
<td>.05</td>
</tr>
<tr>
<td>Self-Mutilation</td>
<td>5 (20)</td>
<td>17 (34)</td>
<td>.005</td>
</tr>
<tr>
<td>Binge Eating</td>
<td>5 (20)</td>
<td>1 (2)</td>
<td>ns</td>
</tr>
<tr>
<td>Delusions</td>
<td>3 (12)</td>
<td>3 (6)</td>
<td>ns</td>
</tr>
<tr>
<td>Visual Hallucinations</td>
<td>3 (12)</td>
<td>8 (16)</td>
<td>ns</td>
</tr>
<tr>
<td>Fugue</td>
<td>1 (4)</td>
<td>24 (48)</td>
<td>.005</td>
</tr>
<tr>
<td>Anorexia</td>
<td>1 (4)</td>
<td>2 (4)</td>
<td>ns</td>
</tr>
<tr>
<td>Pseudoseizures</td>
<td>0</td>
<td>7 (14)</td>
<td>ns</td>
</tr>
</tbody>
</table>
ness (40%), inability to relax (40%), and intolerance of being alone (40%).

**Previous Psychiatric Diagnoses**

The mean number of previous psychiatric diagnoses was 2.6 (range, 0-8). The most common diagnoses included major depression (60%), substance abuse or dependence (40%), eating disorder (28%), borderline personality disorder (24%), alcohol abuse or dependence (24%), dysthymia (20%), adjustment disorder (12%), generalized anxiety disorder (12%), and conversion disorder (8%). The patients averaged four years between their first mental health contact and being diagnosed with psychogenic amnesia.

**Amnesia**

The character of the amnesia was quite variable. Few actually complained of memory loss. Four (46%) had amnesia for recent events, 15 (60%), had amnesia for remote events, and six (24%) had both recent and remote memory loss. The majority (60%) had only one episode of amnesia, but eight (32%) had two episodes, and two (8%) had four episodes. The duration of an episode of recent amnesia ranged from 15 minutes to four hours (mean, 1.2 hours). The duration of a remote episode of amnesia ranged from one month to 20 years (mean, 7.7 years). Typical descriptions of amnesia would include, “I can’t remember anything before the age of 12,” or “I can’t remember the third and fourth grades.” Most patients (76%) experienced the selective type of amnesia, but two reported the generalized type, and four (16%) experienced both types. No cases of continuous or generalized amnesia were observed.

**Precipitants of Amnesia**

The previous literature on psychogenic amnesia was examined for different types of precipitants to an amnestic episode (See Table 1). Nine categories were selected, and the patients were rated on whether or not a specific precipitant was present. The results are displayed in Table 3. The psychogenic amnesia may have had more than one precipitant. Although child abuse occurred most frequently, disavowed behaviors (sexual promiscuity, suicide attempt, self-mutilation, crime, or running away) were present in many others. Thus, multiple interrelational as well as dependent precipitants of psychogenic amnesia are suggested by the frequency and variety of factors reported by the patients.

Childhood trauma was very common in this group of patients. Sexual abuse was reported by 52% and physical abuse by 40%. Neglect (16%) and abandonment (12%) were also present. Only 28% reported no childhood trauma. Perpetrators of child abuse were usually fathers (36%) or stepfathers (12%), but also involved mothers, uncles, siblings, and neighbors.

**Family History of Psychiatric Disorder**

Alcohol abuse or dependency was the most common psychiatric illness reported in first degree relatives. It was reported in 16% of fathers, 12% of mothers, and 8% of siblings. Major depression was present equally in mothers and siblings (12%), while drug abuse or dependence was reported four times as frequently in siblings as compared to mothers (16% vs. 4%). Personality disorders were reported more often in fathers (8%) than in mothers or siblings (4% each). No dissociative disorders were reported in first degree relatives.

**Medical and Neurological Problems**

Obesity was the most common Axis III diagnosis, followed by migraine headaches and spastic colitis (16% each). Only one patient showed neurological findings, an unrelated Bell’s palsy. None had seizure histories, and only three had positive EEG findings. These included occasional generalized spike and wave discharges, diffuse sharp and slow wave discharges, and bilateral temporal lobe spikes, respectively.

**Psychological Testing**

The MMPI profile and mean T scores for the 19 female patients with psychogenic amnesia are shown in Figure 1. These scores are contrasted with scores from 38 females with MPD. The curves for both groups are quite similar, and both show a number of scales with T scores of 70 or greater. For both groups, the highest score occurred on the schizotypy scale, but depression, psychopathic deviance, paranoia,

![TABLE 3 Possible Precipitants of Amnesia of Psychogenic Amnesia](https://example.com/table3.png)

<table>
<thead>
<tr>
<th>Precipitant</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Abuse</td>
<td>15</td>
</tr>
<tr>
<td>Marital Trouble</td>
<td>6</td>
</tr>
<tr>
<td>Disavowed Sexual Behavior</td>
<td>4</td>
</tr>
<tr>
<td>Suicide Attempt</td>
<td>4</td>
</tr>
<tr>
<td>Criminal Behavior</td>
<td>3</td>
</tr>
<tr>
<td>Death of Relative</td>
<td>1</td>
</tr>
<tr>
<td>Psychotherapy</td>
<td>1</td>
</tr>
<tr>
<td>Runaway</td>
<td>1</td>
</tr>
<tr>
<td>Unknown</td>
<td>4</td>
</tr>
</tbody>
</table>

N is greater than 25 because of multiple precipitants present in each case.
FIGURE 1
MMPI in Psychogenic Amnesia and Multiple Personality

<table>
<thead>
<tr>
<th>T-Scores</th>
<th>Psychogenic Amnesia (19 Females)</th>
<th>Multiple Personality (38 Females)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dd</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mf</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sf</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

and psychasthenia were also high. The \( \Gamma \) validity scale was also quite high for both groups and, combined with the relatively low K score, suggest that all of these patients were open to admissions of pathology. This does not necessarily imply faking bad. Intelligence was in the average range for the 10 patients who were tested with the WAIS-R, with a mean Verbal IQ of 107, mean Performance IQ of 102, and mean Full Scale IQ of 102. The Shipley-Hartford Vocabulary Test yielded a mean IQ of 122 for another eight patients.

**Standardized Measures of Psychopathology**

On the Ham-D (possible scores 24-97), the 17 inpatients had a mean score of 46.9 (SD, 10.5), which, while suggesting a moderate degree of depression, was significantly higher (\( t = 2.449, p < .02 \)), than the score for the eight outpatients with MPD (mean = 59.9, SD = 9.8). Both inpatient and outpatient groups showed a similar level of psychopathology on the BPRS, but there was a significant difference in GAS scores with the psychogenic amnesia inpatients, indicating serious symptomatology or impairment (mean = 42.8), while the psychogenic amnesia outpatients (mean = 61.4) manifested only some mild symptoms (\( t = 7.206, p < .0001 \)). The DES scores from the 22 psychogenic amnesia patients yielded a mean of 39.5 (range, 26-56), suggesting somewhat less dissociation than would be expected from a group of patients with MPD.

**DSM-III-R Final Diagnoses**

Psychogenic amnesia was a principal diagnosis in only five patients. It was a secondary or tertiary diagnosis in all of the other patients. Overall, there were an additional 60 DSM-III-R Axis I or Axis II diagnoses (mean, 2.4; range 1-5). Personality disorders were the most common Axis II diagnoses (68%). In eight individuals (32%), personality disorder symptomatology was mixed, and six (24%) met criteria for borderline personality disorder. Affective disorders were the most common Axis I diagnosis (56%). Seven (28%) had dysthymia, three (21%) had major depression, and one (4%) had adjustment disorder with depression. Alcohol abuse/dependence was present in six (24%) and drug abuse/dependence in five (20%). Six (24%) had conversion disorder, and five (20%) had bulimia. Two patients had schizophrenia, and one had a brief psychosis.

**DISCUSSION**

Although there are many similarities between patients with psychogenic amnesia in this study and those in previous studies, there are also many differences. As in previous studies (Abeles & Schilder, 1935; Leavitt, 1935; Kanzer, 1939-1940; Parfitt & Gall, 1944), the peak incidence of psychogenic amnesia in our study occurs in the third and fourth decades. Similarly, we found a significant incidence of somatic complaints, including headaches (Kanzer, 1939-1940; Parfitt & Gall, 1944) and conversion (Abeles & Schilder, 1935), depression (Kanzer, 1939-1940; Sargant & Slater, 1941), and alcohol abuse (Kanzer, 1939-1940; Parfitt & Gall, 1944). We also found a small number of patients who experienced psychotic symptoms (Leavitt, 1935; Sargant & Slater, 1941; Wilson & Rupp, 1950; Kennedy & Neville, 1957).

However, unlike previous earlier studies, we found a much higher incidence of chronicity. Our patients were neither acute nor did their amnesia resolve spontaneously. Our
sample may be biased because our hospital is tertiary-care, and acute patients are selected out by their rapid recovery. Likewise, acute financial or marital crises tend to be resolved prior to admission to a tertiary-care facility. Since we were not engaged in a war at the time of the study and our facility is not a Veterans Administration facility, there were no combat-related cases of psychogenic amnesia. The DSM-III-R criteria for psychogenic amnesia effectively excluded any patients with amnesia secondary to organic causes such as head injury, alcoholism, etc.

The extremely high incidence of psychogenic amnesia in women in this study (92%) was an unexpected finding since previous studies, except those including veterans, found an approximately equal sex distribution. The reasons for the high proportion of women in this study is speculative, but may be because women are more often sexually abused than men in childhood. Or, it may be because men are under-represented among those seeking psychiatric treatment in general.

Another unexpected finding was that 40% of our sample had two or more episodes of psychogenic amnesia. Abeles & Schilder (1935) reported a 24% incidence of recurrence. The higher rate of recurrence may be explained by the increased chronicity of patients found in tertiary-care settings.

The incidence of psychogenic amnesia among our adult service patients is 1.8%; this is between the figures reported in the literature: from the low range of Abeles and Schilder (1935) and Leavitt (1935) for patients admitted to psychiatric units (.26 and .25, respectively) to the 14.4% rate reported by Sargent & Slater (1941) for patients admitted to neurological units. One might expect the incidence of amnesic syndromes to be higher on neurological units because memory dysfunction is a common neurological complaint.

Unlike previous studies (Kanzer, 1939-1940; Wilson & Rupp, 1950; Kennedy & Neville, 1957; Kirsch, 1962), we found no patients whom we thought were malingering. Most patients with severe legal problems who might have had reason to malingering were selected out of our sample by admission criteria prohibiting most admissions of the criminally disordered offender to our hospital. However, a significant proportion of our patients (30%) had amnesia based on disavowed behaviors such as sexual behavior, suicide attempts, and running away, and may have had some reason to at least minimize their behavior. The diagnosis of malingering is difficult (Resnick, 1984), and has only recently been added to the diagnostic criteria (American Psychiatric Association, 1980).

The similarities between patients with psychogenic amnesia in this study and patients with multiple personality disorder in other studies is striking (Bliss, 1984; Putnam, Guroff, Silberman, Barban & Post, 1986; Coons, Bowman, & Milstein, 1988). Like patients with MPD, there is a high incidence of amnesia, depression, headaches, somatization, conversion, and depersonalization. However, in this study (see Table 2), there was a significantly lower incidence of auditory hallucinations, sexual dysfunction, substance abuse, conversion, self-mutilation, and fugue. In our studies of patients with MPD and psychogenic amnesia, the occurrence of child abuse was more frequent in patients with MPD (p < .01) and was more apt to be repeated (p < .05). Comparing the mean MMPI profiles of women with psychogenic amnesia in this study to the mean MMPI profiles of women MPD patients in our previous study (Coons, Bowman, & Milstein, 1988), reveals striking similarities (see Figure 1). Only the F and Se scales were lower (p < .1) in the psychogenic amnesia group. These findings lend credence to the theory that dissociative disorders occur along a dissociative spectrum (Braun, 1988).

CONCLUSIONS

The findings in this study have implications for DSM-IV. Since psychogenic amnesia may be chronic (i.e., large blocks of amnesia may be present in the past lives of individuals), the term "sudden" should be removed from criterion A of the diagnosis. The chronic form of psychogenic amnesia appears to be more common than previously realized. The more acute forms of psychogenic amnesia are probably quite unusual, and this may explain why they achieve newspaper and television notoriety when they do occur.

It is difficult to diagnose psychogenic amnesia because patients rarely complain of amnesia. Thus, it will only be reliably diagnosed when clinicians become accustomed to taking detailed chronological life histories and making detailed inquiries about areas of memory loss. Merely asking patients about their knowledge of themselves, such as if they graduated from high school or what their grades were, will fail to elicit evidence of psychogenic amnesia (Loewenstein, 1991).

Although psychogenic amnesia usually consists of a single episode, it may recur on more than one occasion. In addition, dissociation exists on a spectrum from normal to increasingly abnormal. Psychogenic amnesia is perhaps the simplest form of dissociation since, unlike the other dissociative disorders, amnesia is present with neither identity change nor wandering.

Modern research about the phenomenology and etiology of psychogenic amnesia is in its infancy much like MPD research of 15 years ago. We now possess powerful tools such as the DES (Bernstein & Putnam, 1986) and the SCID-D (Steinberg, Rounsaville, & Cicchetti, 1990) to study dissociation, and future studies should make use of these tools. Hopefully, the future will bring a renaissance in the study of all dissociative disorders, not just MPD. Studies on at least two of the dissociative disorders, depersonalization disorder, and psychogenic fugue, will need to utilize a multicenter approach because of the rarity of these disorders.

REFERENCES


