

HUSBANDS AND WIVES ADMITTED TO MENTAL HOSPITAL

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THERE have been a few studies of the nature and frequency of mental disorder in the offspring of marriages in which both parents were known to have been mentally ill (Schulz, 1940; 1941, Elsaesser, 1952; Lewis, 1957). A number of psychoses affecting both husband and wife have also been described as examples of folie à deux. Gralnick (1942) reviewed the literature, and found altogether 118 cases of folie à deux, but Ascher (1949) has concluded that such cases are commoner than would appear. The majority of those reported have involved blood relatives, in whom the implications of a "psychosis of association" are questionable, because of similarities in their genetic endowment (Kallmann and Mickey, 1946). However, Gralnick recorded 26 cases of folie à deux involving husband and wife.

Mental disorders in husband and wife which do *not* involve shared delusions (as in the case of folie à deux) would appear to be much more common, but their nature and frequency have not been studied adequately. Such information, however, is of great interest in relation to the possibility of assortative mating in certain types of mental disorder. Now, it is known that there are significant degrees of likeness between husband and wife with respect to many physical characteristics, and also intelligence. The study of assortative mating is important in any disorder which may be at least partly genetically determined, and is essential in planning preventive measures (Price and Halperin, 1940).

The present author has found only one previous study comparing observed and expected frequencies of mental disorders in husband and wife, and this was conducted by Penrose (1944) at the same mental hospital as the present investigation.

MATERIALS, METHODS AND RESULTS

During a period of four years commencing in July, 1954, the present author was senior psychiatrist on the female service at the Ontario Hospital, London, Canada, and kept track of husbands and wives admitted to this hospital. Eleven such couples were discovered, and particulars concerning each of these patients are recorded in Table I. Both members of eight of these couples (Nos. 4 to 11) were *first* admitted during the four-year period 1954-1957.

During this time the Ontario Hospital at London was the only public provincial mental hospital accepting patients from eight counties of Western Ontario (the counties of Bruce, Dufferin, Grey, Huron, Middlesex, Perth, Waterloo and Wellington). Figures obtained from the Dominion Bureau of Statistics (1958) indicate that in 1951 the total numbers of married males and of married females living in these eight counties each slightly exceeded 138,500.

TABLE I
Husbands and Wives Admitted to the Ontario Hospital, London, Canada, 1954-1957

Sex	Year of Birth	Year of Marriage	Date(s) of Admission(s) to Ontario Hospital	Diagnosis	Treatment	Date(s) of Leaving Hospital
M	1918	1944	1. July, 1952 2. November, 1954 March, 1955	Paranoid schizophrenia Psychosis with C.N.S. disease Reactive depression	E.C.T. Surgery attempted Psychotherapy	December, 1952 Died May, 1956 April, 1955
F	1926					
M	1926	1949	1. August, 1952 2. April, 1954 August, 1957	Paranoid schizophrenia Paranoid schizophrenia Schizo-affective psychosis	E.C.T. E.C.T. and insulin coma Chlorpromazine and psychotherapy	November, 1952 June, 1954 November, 1957
F	1929					
M	1916	1945	1. December, 1952 2. March, 1954 December, 1954	Paranoid schizophrenia Paranoid schizophrenia Paranoid schizophrenia	E.C.T. E.C.T. and insulin coma E.C.T.	February, 1953 Still in hospital* May, 1955
F	1922					
M	1919	1945	1. June, 1954 2. August, 1954 July, 1956	Psychopathic personality Acute alcoholic psychosis Schizo-affective psychosis	Returned to court Detoxication E.C.T. and chlorpromazine	July, 1954 September, 1954 October, 1956
F	1928					
M	1894	1922	December, 1954	Reactive depression and duodenal ulcer	E.C.T. and gastrectomy	April, 1955
F	1899					
M	1880	1917	February, 1955 December, 1955	Manic depressive, depressed Psychosis with cerebral arteriosclerosis	E.C.T. Custodial	July, 1955 Died May, 1956
F	1892					
M	1888	1918	April, 1956 1. April, 1956 2. September, 1956 June, 1957	Psychoneurosis (mixed) and hypertension Chronic alcoholism Chronic alcoholism Reactive depression (and alcoholism)	E.C.T., drugs and psychotherapy Psychotherapy Custodial Psychotherapy	Still in hospital* May, 1956 Still in hospital* July, 1957
F	1899					
M	1896	1946	May, 1956	Schizophrenia (type unspecified)	Custodial	Still in hospital*
F	1907					
M	1898	1923	May, 1956 1. October, 1945 2. November, 1956 January, 1957	Paranoid schizophrenia Manic depressive, depressed Manic depressive, depressed Manic depressive, depressed	E.C.T. and ataractic drugs E.C.T. E.C.T. E.C.T.	Still in hospital* December, 1945 February, 1957 March, 1957
F	1901					
M	1902	1921	June, 1957 { 1. June, 1957 2. April, 1958	Without psychosis Without psychosis Paranoid state	Returned to court Returned to court E.C.T. and drugs	July, 1957 July, 1957 June, 1958
F	1905					
M	1887	1921	August, 1957	Senile psychosis	Custodial	Still in hospital*
F	1897					
			June, 1957	Reactive depression	E.C.T.	August, 1957

* Still in hospital, 30 June, 1958.

The total numbers of married couples living in this area during the period 1954-1957 is, therefore, estimated as about 135,000. Now annual reports of the Ontario Hospital, London, during these years showed an average annual intake of approximately 89 married male, and 86 married female, first admissions. *The random chance that both members of a married couple would be among the first admissions to the Hospital within the same calendar year is, therefore $89 \times 86 \div 135,000$, which is 0.057 (or approximately 1 in 18).* These figures are given in Table II, which also shows that the observed frequency was 0.5 or 0.75 per year, since during the four-year period, there were 2 mentally ill

TABLE II

Average Numbers of Husbands and Wives First Admitted to the Ontario Hospital, London, Canada, During Each Calendar Year, 1954-1957

	HUSBANDS	
	General Population	First Admitted to Hospital
General population	135,000	89
First admitted to hospital	86	0.75*

* If couple No. 10 is excluded on the grounds that both husband and wife were diagnosed "without psychosis" the observed average annual numbers of couples first admitted *during each calendar year* is 0.50. The expected number in either case is 0.057.

The observed number of couples first admitted *during the whole four year period 1954-1957* is 8, while the expected number in this case is 0.9.

couples who were each first admitted within the same year (Nos. 8 and 11), and a third couple both diagnosed "without psychosis" (No. 10). The observed frequency was, therefore, at least 9 times as great as that expected on the basis of chance. Now the *expected frequency with which both members of a married couple would be among the first admissions to the Hospital during the entire four-year period* is 16 times as great as the expected frequency that both would be admitted in a single calendar year. This means that approximately 1 couple would be expected during the period 1954-1957, whereas the observed frequency was 8 couples.

TABLE III

Frequency of Suicide or Admission to Mental Hospital Among Parents of 1,000 Patients Admitted to the Ontario Hospital, London, Canada, 1954-1958

	FATHERS		Total
	No History of Suicide or Admission to Mental Hospital	Committed Suicide or Admitted to Mental Hospital	
Mothers			
No history of suicide or admission to mental hospital	916	36	952
Committed suicide or admitted to mental hospital	46	2*	48
Total	962	38	1,000

* The expected number is 1.8.

The latter figures may be compared with those obtained by examining the recorded frequencies of suicide or admission to mental hospital, among the parents of 1,000 patients born during the four-year period, July, 1954 to June, 1958. This information was obtained as part of a more extensive study of familial data on these patients (Gregory, 1959). Among these 1,000 patients, 38 had a father, and 48 a mother, who was recorded as having either committed suicide or having been admitted to mental hospital. The number of patients expected to have had both parents thus affected is therefore $38 \times 48 \div 1,000$, which is approximately 1.8. These figures are given in Table III, which also shows that the observed number of patients with both parents thus affected was 2.

DISCUSSION

Penrose (1944) searched the files of the Ontario Hospital, London, and found 22 husbands and wives who had both been admitted since the beginning of 1910. Over the ten-year period immediately preceding his study, he found 4 couples first admitted to hospital within the same year (and a fifth couple who were both mentally defective), a frequency that was at least 9 times as high as random expectation. This corresponds very closely with the excess of observed over expected frequency of first admission of both partners within a given year (or over the entire four-year period) in the present study.

Penrose also recorded rates of mental illness found in parents of two large series of patients (1,280 patients with mental defect, and 1,000 patients with mental disease), and in each of these series found the observed frequency with which both parents were affected approximately 3 times as great as that expected on the basis of frequencies with which a single parent was affected. In the present study the observed frequency with which both parents were affected corresponded closely with the expected frequency. The numbers of affected parents in each of these three series is relatively small, and the discrepancy between these results, and those obtained by direct observation of husbands and wives both admitted to mental hospital, may possibly be due to chance, or to incomplete ascertainment of patients having both parents affected.

Re-examination of Table I shows that 7 of the couples here recorded had similar diagnoses—schizophrenia in Nos. 2, 3 and 8, depression in Nos. 5 and 9, alcoholism in No. 7, and “without psychosis” in No. 10. In at least certain of the remaining cases with dissimilar diagnoses, it appears that the wife’s admission to hospital was directly related to her husband’s illness (e.g. Nos. 1 and 11).

The difference in the ages of husband and wife at the time of their first admission to hospital was in all cases less than twelve years. In 9 of the couples, the wife was younger than the husband at the time of first admission, but in 8 cases the husband was admitted first (two couples arriving on the same day, and the wife being admitted first in only one instance).

In Gralnick’s (1942) reviewed cases of folie à deux affecting husband and wife, the latter was the dominant partner in 15 out of 26 cases, and Wolff (1957) noted 7 further cases reported, in 6 of which the wife was the dominant partner. In spite of similarities in diagnosis, age at first admission, and time of admission, however, none of the couples in the present study satisfied the criteria for a supplementary diagnosis of folie à deux, with the possible exception of No. 10. In this case the wife subsequently turned out to be paranoid, and the husband, although not certified at this time and denying acceptance of his wife’s delusions, impressed the wife’s psychiatrist as probably sharing the latter’s beliefs, at least to some extent.

The main findings of the present study appear to corroborate those of Penrose (1954) to the effect that both members of married couples are more likely to be admitted to hospital than would be expected, and that there is frequently a strong likeness in the type of disorder developing in husband and wife. He considered three possible explanations of these findings (*i*) that the husband and wife, living together, tended to influence one another and that one partner may "infect" the other with abnormal mental reactions, (*ii*) that similarity of environment, diet, economic state and common sources of anxiety, may contribute to common breakdown, or (*iii*) that there is a tendency for persons of like constitutions to marry one another. To these possibilities, the present author feels obliged to add (*iv*) that the mental illness leading to admission to mental hospital of one partner may precipitate a dissimilar mental disorder which leads to the admission of the second partner, (*v*) that if one partner comes to the attention of medical or social authorities and is admitted to mental hospital, pre-existing abnormality is more apt to be noticed in the other partner, who is therefore also more likely to be admitted to hospital within a short period of time. This last supposition is in keeping with observations that rates of admission to mental hospital do not simply reflect the frequency of mental disorders, but also a variety of complex socio-economic and administrative factors (e.g. Svendsen, quoted by Strömngren, 1950; Kramer *et al.*, 1955; Gregory, 1956).

Probably all these explanations are partly correct, and it may be impossible to assign them relative degrees of importance, even in individual cases. However, observed similarities in diagnosis of husband and wives admitted at widely different times, suggest that the first three factors listed are of some significance, and at least part of the undue frequency of mental disorder in husbands and wives may be attributable to assortative mating in certain of these disorders.

SUMMARY

The nature and frequency of mental disorders affecting both husband and wife are relevant to the possibility of assortative mating with respect to certain of these disorders.

Eleven couples admitted to the Ontario Hospital, London, Canada, during the past few years, have been studied, and the results compared with those of a similar investigation by Penrose (1944).

It is concluded that a variety of factors may be responsible for the unexpectedly high frequency of admission of both marital partners to mental hospital. Observed similarities in diagnosis of spouses admitted at different times, however, suggest a true increase in the frequency of similar disorders in the spouses of certain patients, which may be at least partly attributable to assortative mating among those predisposed to these disorders.

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