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Mental Illness in the Republic of Ireland— First Admissions

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EARLIER studies of mental illness in Ireland based on hospital data indicated an interesting pattern of geographical variation within the country. It was felt that these variations might indicate differences of incidence, and at least deserved further investigation (Walsh and Walsh, 1967; Walsh, 1968; and Walsh and Walsh, 1968). This earlier work was severely limited by the crudeness of available data, but since the introduction of an Irish individual reporting system in 1963 improved, though not extensive, social, demographic and medical data have been gathered on all admissions to psychiatric hospitals (including private hospitals, which were excluded from the earlier studies). In the light of this increased information it is important to pursue inquiry into our earlier findings.

More refined and reliable analysis of Irish psychiatric hospitalization will be feasible when the five-year returns of the new individual reporting system become available. Until then the present data provide the most detailed picture of Irish first admissions that can be compiled. Despite the limitations of data for a single year only, and the impracticality of obtaining all the cross-tabulations that are desirable (e.g. by age, sex, county, diagnosis), the analysis of the present data represents a substantial increase in our knowledge of Irish psychiatric hospitalization.

Findings and Results

The findings of this paper derive from the statistical returns on individual patient sheets, from all psychiatric in-patient facilities for the year 1964, kindly made available to the authors by the Department of Health and processed by the Central Statistics Office in Dublin.

There were 6,468 first admissions to psychiatric facilities in Ireland during 1964. Of these 2 males and 31 females were omitted from the present study because of incomplete information. The account

that follows is, therefore, of 6,443 patients—3,433 males and 3,010 females. Table I expresses these figures as crude and standardized rates per 100,000 of population aged 15 and over.

Table I
Ireland 1964
First admissions—all diagnoses

	Numbers	Crude rates per 100,000 population aged 15 and over.	Age stan- dardized rates per 100,000 population aged 15 and over.	Marital Status stan- dardized rates per 100,000 population aged 15 and over.
Male	3,433	341.1	353.8	304.7
Female	3,010	298.5	309.4	286.5

Standardized rates in this table were compiled by direct standardization on England and Wales population, 1965.

These national first admission rates show a substantial increase on those of 1959 (Walsh, 1968).

Age Distribution

Table II sets out the age distribution of the first admission population by sex, standardized for marital status.

Marital Status

First admission rates by marital status, age standardized, appear in Table III.

Diagnosis

The first admission population has been classified in five broad diagnostic categories which have been described in an earlier paper on mental illness in Dublin (Walsh, 1969a).

Table IV provides diagnostic information by age and sex.

Table II

First admissions—all diagnoses.

Age and Sex. Numbers and marital status standardized rates per 100,000 population.

	Under 15	15-19	20-24	25-34	35-44	45-54	55-59	60-64	65-69	70-74	75 & over	Totals
Male Numbers	43	200	291	592	647	620	255	254	178	165	188	3,433
Female	37	171	197	510	522	500	207	225	191	192	258	3,010
Male Rates	13.7	108.7	255.0	400.0	452.3	418.5	370.0	449.9	359.2	407.6	354.1	
Female	8.7	112.5	201.7	380.0	372.5	340.0	302.7	372.2	308.1	371.3	334.3	

Indirect standardization has been used extensively in this paper because data by sex and age cross-classified by marital status were not available. The 1966 Census of Population has been used throughout.

From Table II it can be seen that for both sexes rates rise steeply to age group 25-34 then maintain a plateau until age 75, when they fall again.

For almost all age groups male rates exceed female.

Table III

First admissions—all diagnoses.

Marital status and sex. Numbers and age standardized rates per 100,000 population aged 15 and over.

	Single	MALE Married	Widowed	Single	FEMALE Married	Widowed
Numbers	2,068	1,195	170	1,383	1,160	467
Rates	479.0	221.4	386.5	421.0	217.9	310.4

First admission rates are highest for single people, being twice those of the married, with widowed in intermediate position. It is noteworthy that male widowed rates are considerably higher than those of the female widowed.

Table IV

First Admissions.

Age, sex and diagnosis. Marital status standardized rates per 100,000 population.

		Under 15	15-19	20-24	25-34	35-44	45-54	55-59	60-64	65-69	70-74	75 & over
Neurosis	Males	0.9	15.7	32.2	49.7	82.1	89.6	70.6	104.3	67.7	42.8	9.0
	Females	1.1	26.5	59.8	95.8	88.1	86.2	98.1	104.7	74.7	52.0	27.2
Schizophrenia	Males	0.0	42.0	103.9	208.3	165.3	87.3	47.3	41.5	44.7	24.5	5.9
	Females	0.0	35.5	69.7	160.4	112.1	90.8	42.7	62.0	35.1	18.0	3.8
Manic Depressive Psychosis	Males	0.0	3.6	28.6	37.1	68.0	93.0	115.7	153.2	87.7	59.0	20.5
	Females	0.0	11.0	31.3	76.8	106.2	104.6	118.3	119.7	91.0	88.0	27.3
Organic Psychosis	Males	0.0	8.4	15.5	10.3	14.9	18.5	20.5	49.8	70.6	166.1	157.5
	Females	0.0	9.6	6.8	18.4	14.7	17.6	13.4	49.3	70.4	132.7	147.8
Personality Disorder	Males	0.0	19.5	27.7	70.6	110.1	101.3	91.4	69.1	49.0	25.7	13.7
	Female	0.0	10.5	5.8	12.6	25.0	18.9	15.2	16.1	11.9	2.1	1.6
Mental Subnormality	Males	6.3	4.1	19.1	24.4	20.6	14.2	13.8	10.9	4.0	5.4	4.7
	Females	6.1	3.6	10.8	11.1	17.5	21.4	14.7	9.8	10.3	0.0	0.0

The data presented in Table IV evoke the following comments. There are more female than male first admissions for neurosis at all ages, and these admissions are spread over a wide age range from 25-64 years of age. First admissions of males for schizophrenia exceed females in practically all age groups and for both sexes rates reach their maxima at age group 25-34 and then decline. Manic-depressive female rates exceed male rates at all age groups and rates for both sexes are highest in age group 60-64 years and then fall. Rates for organic psychosis rise directly with age. First admission rates for males for personality disorder are substantially higher than rates for females at all ages.

Table V

First admissions.
Marital status, sex and diagnosis.
Age standardized rates per 100,000 of population.

		Single	Married	Widowed
Neurosis	Male	79.9	39.1	94.1
	Female	92.8	61.9	78.1
Schizophrenia	Male	147.8	28.9	72.6
	Female	122.2	35.0	79.9
Manic Depressive Psychosis	Male	89.0	46.0	66.1
	Female	97.0	68.3	84.9
Organic Psychosis	Male	61.6	33.6	49.5
	Female	68.8	39.3	51.6
Personality Disorder	Male	74.7	65.3	84.7
	Female	16.4	12.5	21.0
Mental Subnormality	Male	14.5	0.6	0.0
	Female	11.9	0.6	1.9

Age standardized 1964 first admission rates by marital status are given in Table V. For all diagnoses rates for unmarried people are higher than those for the married and widowed. Widowed rates are generally lower than single rates. These differences are most marked in the case of schizophrenia where the male single rate is three times and the female twice as great as the married. As is to be expected, very few of the first admissions for mental subnormality have ever married.

Discussion

Our earlier inquiry dealing with the period 1957 to 1960 revealed the Irish first admission rate to be

high by international standards. Since then there has been an increase in the numbers of first admissions to Irish psychiatric hospitals. Thus in 1959 there was a total of 5,991 first admissions to all Irish psychiatric facilities. In 1964 this total had reached 6,468, giving a first admission rate of 333.2 per 100,000 of population aged 15 and over and of 229.5 per 100,000 of total population. Thus the earlier finding of a high incidence of hospitalized psychiatric illness in Ireland is confirmed.

There have been few reports in the literature of higher first admission rates than those recorded in this study. Where higher rates have been reported they have been regional rather than national rates and sometimes from selected, under-privileged groups. Helsinki, for example, had a first admission rate of 353 per 100,000 aged 15 and over in 1962 (Stenbach and Achte, 1964) and Malzberg (1956a) reported a rate of 239 per 100,000 of total population for Puerto Ricans in New York and of 303 per 100,000 of total population from migrant negroes in New York State (Malzberg, 1956b).

England and Wales in 1964 had a first admission rate of 178 for males and of 253 for females per 100,000 of population aged 15 and over.

It may be instructive to compare the first admission rates for Ireland and England and Wales in 1964 by age group and diagnostic category by means of a ratio relating Irish first admission rates for each diagnosis and age group to those of England and Wales assuming in all cases the English rate to be unity. These ratios are set out in Table VI. Figures for England and Wales were published by the Ministry of Health (1969).

In general except over age 75 Irish first admission rates are about twice those of England and Wales. This is the consequence of Irish first admission rates for schizophrenia which are higher than those of England and Wales at all ages but particularly so for ages 25-54. It also results from higher Irish first admission rates for personality disorders at most age groups and from higher rates for neurosis in older age groups.

In view of the very high first admission rates obtained in this study, it may be relevant to question whether there is not considerable over-reporting of first admissions in Ireland. Likewise it might be asked whether the first admission figures are not swollen by admissions to Irish hospitals of Irish persons normally resident outside of Ireland, who, on the inception of illness, return or are sent home by their friends or medical advisors.

The tendency to misclassify re-admissions as first admissions is a common phenomenon and at the moment there is no means of determining whether it is more prevalent in Ireland than elsewhere. In Ireland, in 1964, first admissions accounted for only

Table VI

First admission rates to psychiatric hospitals per 100,000 of population by age-group and diagnosis, 1964.

Then Ratio of Ireland to England and Wales.

Diagnosis	15-19		20-24		25-34		35-44	
	Male	Female	Male	Female	Male	Female	Male	Female
Neurosis	1.0	0.7	0.9	0.9	1.3	1.2	2.0	1.4
Schizophrenia	1.5	1.6	2.2	2.0	4.5	4.3	5.2	2.9
Maniac Depressive Psychosis	0.2	0.4	0.8	0.5	0.9	0.8	1.2	1.0
Personality Disorder	0.7	0.4	0.8	0.4	2.5	1.1	3.8	2.7
All Diagnoses	1.1	0.9	1.6	1.2	2.4	1.6	2.6	1.6

Diagnosis	45-54		55-64		65-75		75+	
	Male	Female	Male	Female	Male	Female	Male	Female
Neurosis	3.5	2.2	4.1	3.6	4.1	3.2	1.1	3.4
Schizophrenia	4.9	3.0	2.5	1.9	2.5	1.2	0.4	0.1
Manic Depressive Psychosis	1.4	0.9	1.8	1.1	1.0	1.0	0.5	0.6
Personality Disorder	4.2	2.3	6.9	2.6	10.2	2.6	4.5	0.5
All Diagnoses	2.8	1.7	2.4	1.6	1.5	1.5	0.7	0.7

42 per cent of total admissions—a percentage that is lower than that of other countries. For example, first admissions comprised 48 per cent of all admissions in England and Wales in 1964, which suggests that the Irish first admission figures are not unduly distorted by this tendency.

The second point can be readily examined because information on the 1964 first admissions included information on whether a patient, having lived outside the state for almost 12 months, had returned to Ireland within 6 months of admission. In 1964 only 4 per cent of all admissions had done so.

On the assumption that the 1964 first admission rates prevailed over a person's life, it is possible to construct 'hospitalization expectancy' data from the rates presented in this paper. Although subject to important qualifications (Walsh, 1969b), this exercise is of some use in summarizing the susceptibility of the Irish population to hospitalized mental illness. On this basis 18 (17.89) of every 100 males and 15 (15.1) of every 100 females surviving to age 65 would experience at least one admission to a psychiatric hospital. Of those surviving to age 85, 25 (25.0) males of every 100 and 23 (22.87) females of every 100 would enter a psychiatric facility at least once.

The data presented in this paper allow us to establish firmly for the first time the contribution made by Ireland's abnormal demographic situation to the level of hospitalized mental illness in the country. The relevant material has been presented in Table I. It may be seen from this table that Ireland's age structure actually tends to lower the overall admission rate below what would prevail if the English population age structure were found in Ireland; the increase in the age standardized rates over the crude

rates is, however, slight—3.7 per cent for both males and females. When the effect of the abnormally high percentage of single adults in Ireland is removed from the overall admission rate, (by standardization on the English population), it is seen that Ireland's low marriage levels tend to raise hospitalization rates somewhat for the population as a whole: the marital status standardized rates are 10.7 per cent and 4.0 per cent lower than the crude rates for males and females respectively. When the effect of demographic variables is allowed for, the overall incidence of hospitalization remains high.

Age Distribution. The age distribution of first admissions, both for the population as a whole and for individual diagnoses, conforms to general experience. It may, however, be worth noting that high first admission risk for neurosis persists well past middle age. For schizophrenia there is a substantially greater risk of first admission for males in younger age groups, either because schizophrenia occurs earlier in males or because it is symptomatologically more disruptive in its social effects in the male. At all ages, high rates are evident for male personality disorders. The majority of males given this diagnosis were suffering from alcoholism and have been the subject of a separate study (Walsh, 1969b).

The percentage of first admission rates in the various age groups in Ireland does not differ from the age distribution of first admission rates in England and Wales in 1964 (Ministry of Health, 1969).

Marital Status. The striking relationship between marital status and first admission rates may be summed up by saying that the single state strongly predisposes to admission; a single individual is twice

as likely to experience a first hospitalization as his married counterpart, with the widowed population in an intermediate position.

The high vulnerability of the single and widowed is seen quite clearly in both sexes for three different diagnoses, schizophrenia, manic-depressive psychosis and organic psychosis. In addition, the numerically smaller diagnostic category of mental subnormality shows the same marital status pattern. This single/married difference is greatest for schizophrenia where the ratio is 4.5/1, next highest for organic psychosis with a 2/1 ratio and lowest for manic-depressive psychosis. As the schizophrenic group is by far the largest numerically, the single/married differences in the overall first admission rates are in most part due to schizophrenia.

Widowed schizophrenics of both sexes show twice as great a susceptibility as their married counterparts, but the widowed rate is only half the single. It is thus clear that the spouseless show increased risk of hospitalization over the married but the risk increases when spouselessness is due to celibacy. This finding confirms the findings of an earlier study in Dublin (Walsh, 1969a).

The net contributions of social factors (isolation, loneliness etc.) and personality factors may be roughly estimated by a comparison of widowed and single rates. It is reasonable to assume that the widowed and married populations do not differ in personality structure and that, therefore, the increased hospitalization risk of the widowed is solely the consequence of social factors.¹ Our data show that these social factors increase the widowed admission rate by 77 per cent for males and 41 per cent for females over the married rates (all rates age-standardized).

The unmarried state increases first admission risk over the married by 120 per cent for males and 90 per cent for females. Assuming that the social factors of the spouseless state make their fullest impact among celibates,² we could attribute the excess of the single over the widowed rates entirely to personality factors and conclude that 43 per cent of the single male and 49 per cent of the single female excess first admission risk is due to personality factors. Thus the contribution of social factors to the increased first admission risk of the single male is almost twice that of personality factors whereas in the single female these contributions are approximately equal, and the increase in hospitalization attributable to personality

factors in the single population is roughly the same for males and females.

These findings substantially agree with those of Odegaard (1953) working with 23,115 first admissions to mental hospitals in Norway from 1931 to 1945. Single Norwegians had a first admission rate 153 per cent greater for males and 122 per cent greater for females than married Norwegians. In Norway the widowed/married excess was 57 per cent for males and 25 per cent for females. As in Ireland the greatest contribution to the single/married difference was made by schizophrenia followed by organic psychosis and mental subnormality.

Regional Variations. Our crude data had shown considerable variations in first admission and hospitalization rates between Irish counties; the Western counties comprising the province of Connaught recorded extremely high levels for both variables—twice those recorded in the counties of Leinster (Walsh and Walsh, 1969). With the present improved data, rates by province by marital status display greatly reduced variation between provinces. Connaught and Munster still display relatively high rates for schizophrenia but the regional disparity is no longer very great. The conclusion is therefore justified that the regional differences in unstandardized first admission rates are, in large measure, the consequence of the different marital status compositions of the regions and the increased susceptibility to hospitalization which accompanies spouselessness.

Connaught and western Munster differ demographically from the rest of the country: the highest emigration rates and lowest marriage levels are found in these areas. The population decline in the West, due to net emigration and low natural increase, has resulted in an unfavourable population structure characterized by an excess of single and elderly persons. The high percentage of single males in these regions is particularly important as these persons are more likely to suffer hospital admission, as we have documented above.

A complete exploration of the factors giving rise to the poor marriage record of the western areas (especially pronounced among the male population) is beyond the scope of the present paper. It is worth commenting, however, on some aspects of the evolution of the present population structure in the West of Ireland.

It may be claimed that the behaviour of Irish marriage rates has been primarily a reflection of the economic fortunes of the country. The need to reduce population pressure in nineteenth century Ireland led to high emigration and low marriage rates (cultural forces precluded reduced fertility of marriage). These responses were first observed in the

¹This assumption ignores the probability that bereavement itself is a traumatic event in the psychological sense and may increase the first admission rates of the widowed. It also ignores the possibility that those subject to early death may choose spouses particularly susceptible to mental illness.

²We obtain, therefore, a lower limit to the contribution of personality factors to the single first admission rate.

East of Ireland before 1820 but in the 1880's the West had far outstripped the rest of Ireland in its low marriage rates. Walsh (1969) believes that 'this change was to a large degree due to the major change in the economic situation that occurred at this time, whose adverse consequences were most severe in the West'. The demographic response that may be traced in the West of Ireland after 1880 was very similar to that seen in the East after 1820—namely, increased emigration, reduced marriage rates and relatively stable marriage fertility. At the same time it is clear that marriage rates fell more sharply among males than females, with the result that today (1966), the percentage of males (aged 15 and over) unmarried in, for example, Connaught is 51.9 compared with 35.4 for females. (The older median age at marriage among males accounts for only a small percentage of this discrepancy.) A major reason for the higher level of celibacy among the males of the West of Ireland is the excess of unmarried males in the population, for example, the ratio of unmarried males over 14 to unmarried females over 14 in 1966 was 126/100 (in contrast with 88/100 for Leinster).

Thus, the examination of low marriage rates in the West prompts the question—why is the sex ratio of the unmarried population so unbalanced in this area? The answer to this, of course, lies in the emigration history of the West. Women migrate away from rural areas more readily than men thereby increasing the supply of young, unmarried women in the high income, urban areas where males are more willing to marry than they are in the rural areas. This creates an excess of unmarried males in the low marriage rate areas.

It is of interest that the regional pattern of Irish first admission rates over time correlates highly with the regional differences in marriage rates. Thus up to 1900 there was little variation in the regional distribution of Irish first admission rates but thereafter, and roughly coinciding with the emergence of present regional marriage patterns, the pattern of high first admission rates in the West of Ireland and lower first admission rates in the East emerged. By 1960 it had reached the stage where the unstandardized first admission rates of Connaught were approximately twice those of Leinster. Thus the large number of single people in the West of Ireland reflect the influence of factors other than those of personality. We may regard many of the males in the West of Ireland as being unmarried as much for economic as well as for personality reasons. An improved Western economy would have increased the marriage rate so that large numbers of those presently single would be 'protected by marriage' either from illness itself or from hospital admission because of illness.

Conclusions

This study has confirmed the generally high Irish first admission rate to psychiatric hospitals in international comparison. Some general explanation in sociological or psychological terms is required for the high recourse to institutional care which is characteristic of the Irish whether in Ireland or in the United States (Malzberg, 1940) and whether for psychiatric or physical reasons (Murphy, 1963).

The factors raising rates in particular areas within Ireland emerge from this study as being largely demographic and having their greatest impact in schizophrenia and organic psychosis. These demographic variations, particularly in marital status, may to a substantial degree be the result of economic factors rather than the reflection of a high prevalence of those personality factors associated with mental illness. The increased susceptibility of the widowed suggests that social factors make a considerable contribution to the excess first admission rate of the single.

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