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Delusional Depressive In-Patients, 1892 to 1982

JOHN M. EAGLES

Summary: Three groups of 114 depressed patients admitted to hospital in Edinburgh, one in the year 1892, one in 1942–3 and one in 1981–2, were studied. The occurrence and content of depressive delusions were recorded. A significantly higher proportion of depressives had delusions in 1892 than in 1942–3, but there was no significant decline between 1942–3 and 1981–2. It is concluded that this decline in the proportion of depressives having delusions since 1892 probably does not reflect a genuine decline in the prevalence of depressive illness with delusions. The content of delusions differs between the years and between the sexes, and these differences are discussed.

Recently there has been a good deal of emphasis placed on the value of the distinction between delusional and non-delusional depression. This has not always been the case. Studies from the pre-ECT era (e.g. Lewis, 1936) found little difference between the two groups with regard to prognosis, and interest in making a clinical distinction between the groups remained low when delusions were found not to influence the outcome with ECT (Kantor and Glassman, 1977). Since the advent of tricyclic antidepressants, however, there has been growing evidence of important differences between the groups (Glassman and Roose, 1981). Delusional depressives respond less well to tricyclic antidepressants (Friedman *et al*, 1961; Glassman *et al*, 1975) and differ in several biochemical parameters from other depressives (Meltzer *et al*, 1976; Sweeney *et al*, 1978).

Kräupl Taylor (1979), on the basis of his clinical observations, has described delusional depressions as being less common than in past decades, and attributes this decline, at least in part, to the effectiveness of antidepressant drugs. This supposed decline has occurred against a background of an apparent increase in the prevalence of depression (Callan, 1979; Hagnell *et al*, 1982). Moreover, there seems to be no epidemiological evidence of such a decline.

Klaf and Hamilton (1961) have described changes in the content of *schizophrenic* delusions since the last century, but it is not known whether similar changes have occurred in the content of *depressive* delusions. Examination of the degree to which the symptoms of an illness may be culturally determined in time and place is, of course, important in understanding the nature of the illness and its symptoms.

This study thus undertook to investigate the questions: 'Has there been a decline in the number of delusional depressives?' and 'Has the content of depressive delusions changed?'

Method

A retrospective case-note study was undertaken at the Royal Edinburgh Hospital to establish the prevalence and nature of delusions in depressed patients admitted to the hospital, seeking changes which may have occurred between the late 19th century and the present day.

The first sample of 114 patients comprised all those patients admitted to the Royal Edinburgh Asylum (as the hospital was then entitled), and given a diagnosis of melancholia or depression, in the year 1892. At that time all admissions were recorded chronologically in a large 'Casebook', which gave a fairly detailed account of each patient's presentation. The year 1892 was selected partly on account of the good quality of the records kept by the psychiatric resident in that particular year.

For comparison I selected a second group of 114 patients admitted to hospital in 1942 and 1943 with diagnoses of depression, depressive state, manic depression (depressed), melancholia or involutional melancholia. Patients with diagnoses of mild depression, anxiety depression and reactive depression were excluded from this sample. Fifty-seven of the admissions were to the Jordanburn Nerve Hospital (which took special interest in the more 'neurotic' spectrum of disorders) and 57 to Craig House which had no such special interest. For each of these hospitals, an 'Admission Book' was kept which gives the patients'

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TABLE I

Frequency of delusions in male and female depressives in 1892, 1942–3 and 1981–2

Year	Total depressions studied	Number deluded	Male		Female	
			Total	Deluded	Total	Deluded
1892	114	75 (66%)	37	17 (46%)	77	58 (75%)
1942–3	114	41 (36%)	38	11 (29%)	76	30 (39%)
1981–2	114	32 (28%)	27	6 (22%)	87	26 (30%)
Total	342	148	102	34	240	114

TABLE II

Content of delusions: number of cases (male and female) of each type

Year	Sin	Disease	Poverty	Nihilism	Persecution	Reference	Miscellaneous or unspecified
1892	20 (6M,14F)	5 (0M,5F)	5 (2M,3F)	6 (2M,4F)	38 (6M,32F)	12 (0M,12F)	8 (2M,6F)
1942–3	19 (8M,11F)	12 (3M,9F)	2 (2M,0F)	5 (2M,3F)	15 (2M,13F)	9 (2M,7F)	1 (0M,1F)
1981–2	12 (4M,8F)	6 (0M,6F)	5 (2M,3F)	3 (1M,2F)	13 (3M,10F)	8 (1M,7F)	4 (0M,4F)
Total	51 (18M,33F)	23 (3M,20F)	12 (6M,6F)	14 (5M,9F)	66 (11M,55F)	29 (3M,26F)	13 (2M,11F)

names and diagnoses. The subjects constituted consecutive samples of patients with suitable diagnoses in each 'Admission Book'.

The third group comprised 114 admissions to the Royal Edinburgh Hospital in 1981 and 1982, who had been given a final diagnosis of manic depression (depressed), i.e. 296.1 in the International Classification of Diseases. Other categories of depression were not included. These patients were selected from a list of 'Unit numbers' (which gave no information other than the diagnosis), from which casenotes were then located.

The data recorded on each case were as follows: year of admission, diagnosis, age, sex, and nature of delusion (if present).

Results

Frequency of delusions

The frequency of delusions in depressives of both sexes and in each period is shown in Table I. The decrease in the proportion of depressives with delusions from 1892 to 1942 is sharp and statistically significant (χ^2 = 20.29, d.f 1, P <.001) There is a further fall from 1942 to 1982, but the difference is not statistically significant.

As regards differences between the sexes, it is apparent that there are many more female than male depressives, both delusional and non-delusional. Furthermore a higher proportion of the depressed females in each group have delusions, although only in 1892 does this difference reach statistical significance (χ^2 = 9.58, d.f. 1, P <.01). Taking all three groups together, there is no statistically significant difference between males and females in the proportion of depressives having delusions.

There is a significant decrease in the proportion of depressive females with delusions from 1892 to 1942 (χ^2 = 20.12, d.f. 1, P <.001) but no significant decrease from 1942 to 1982. While the same trend occurs in the males, the change from 1892 to 1982 just fails to reach statistical significance (χ^2 = 3.82, d.f. 1, P = .051).

Content of delusions

The content of the delusions is shown in Table II. Each patient can, of course, have delusions in more than one of the categories. Considering all three groups together, the rank order of frequency is as follows:

1. Delusions of persecution
2. Delusions of sinfulness
3. Delusions of reference
4. Delusions of disease
5. Delusions of nihilism
6. Delusions of poverty

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TABLE III

Content of delusions, expressed as percentages of the number of delusional depressives in each year. The three figures represent (i) the proportion of delusional patients in that year with that specific type of delusion (ii) the proportion of delusional males having that specific type of delusion (iii) the proportion of delusional females having that specific type of delusion

Year	Sin	Disease	Poverty	Nihilism	Persecution	Reference	Miscellaneous or unspecified
1892	27% (M35%,F24%)	7% (M0%,F9%)	7 (M12%,F5%)	8% (M12%,F7%)	51% (M35%,F55%)	16% (M0%,F21%)	11% (M12%,F10%)
1942–3	46% (M73%,F37%)	29% (M27%,F30%)	5% (M18%,F0%)	12% (M18%,F10%)	37% (M18%,F43%)	22% (M18%,F23%)	2% (M0%,F3%)
1981–2	38% (M67%,F31%)	19% (M0%,F23%)	16% (M33%,F12%)	9% (M17%,F8%)	41% (M50%,F39%)	25% (M17%,F27%)	13% (M0%,F15%)
Total	35% (M53%,F29%)	16% (M9%,F18%)	8% (M18%,F5%)	10% (M15%,F8%)	45% (M32%,F48%)	20% (M9%,F23%)	9% (M6%,F10%)

Comparing periods there were no significant changes in the content of the delusions between 1942 and 1982. Between 1892 and 1942, however, there were statistically significant increases in the frequency of delusions of disease ($\chi^2 = 10.82$, d.f. 1, $P < .005$) and of sinfulness ($\chi^2 = 4.59$, d.f. 1, $P < .05$).

Delusions might be recorded in more detail now than in the past. However, the differences in the mean number of delusions recorded per deluded patient (1.3 in 1892 1.5 in 1942–3 and 1.6 in 1981–2) do not reach statistical significance. It would thus seem that delusions were probably no less likely to be recorded in 1892 than they are now.

Table III shows the frequency of the different types of delusion as a percentage of the total number of delusional patients, plus the percentage of delusional males falling into each category of delusion, and likewise for the females. While a higher proportion of female delusional depressives have delusions of persecution, reference and disease compared with the males, these differences do not reach statistical significance. However, male delusional depressives are significantly more likely to have delusions of sinfulness ($\chi^2 = 6.68$, d.f. 1, $P < .01$) and poverty ($\chi^2 = 5.39$, d.f. 1, $P = .02$). The rank order of frequency of delusions is different in males and females, being as follows for each sex:

Males
Sinfulness
Persecution
Poverty
Nihilism
Disease and reference

Females
Persecution
Sinfulness
Reference
Disease
Nihilism
Poverty

Discussion

The results from this study demonstrate that depressed patients admitted to hospital in Edinburgh were less likely to have delusions in 1942 than in 1892 (36 per cent deluded compared with 66 per cent), but since 1942 there has been little apparent change. The reduction in the occurrence of delusions between 1892 and 1942 is very largely accounted for by the declining frequency of delusions in female depressives (from 75 per cent to 39 per cent). The same effect occurs in male depressives (46 per cent falling to 29 per cent) but does not reach statistical significance, partly due to the relatively low numbers of male depressives admitted to hospital (they are outnumbered by their female counterparts by a factor of 2 or 3 to 1).

There seem to be two main ways in which these data can be interpreted. Firstly, there may have been a fall in the overall period prevalence of delusional depression between 1892 and 1982, more marked in females than in males, the majority of the decline occurring between 1892 and 1942. Alternatively, the decline in the number of hospitalized delusional depressives as compared to non-delusional depressives may reflect changing policies and attitudes towards hospitalization of depressed patients.

Although firm conclusions cannot be drawn from these data, it is instructive to take account of the following considerations. Whereas in 1942 there were a relatively large number of local nursing homes in which psychiatric patients were treated, it is probable that in both 1892 and 1982 the great majority of patients with delusional depression were admitted to the Royal Edinburgh Hospital. The 1891 population of the present area of Edinburgh, calculated by Keir (1966), was 360,522, compared to the 1981 census population of 436,271. Over the same period, the geographical catchment area of the hospital has shrunk, since the opening of other hospitals near Edinburgh. Balancing the two factors—contracted

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catchment area and denser population—it seems probable that the total catchment population did not change greatly between 1892 and 1982. It is thus reasonable to make direct comparisons of the number of cases of delusional depression admitted in these years as an indication of change in *overall prevalence.* In 1892 the number of depressives admitted was 114, of whom 75 were delusional. The total number of depressives admitted in 1981 was 284 and, given the proportion of 28.1 per cent of our sample who had delusions, we may estimate the total of delusional depressives admitted to be about 80. While there are methodological difficulties in any such comparison, it would seem that no great change has occurred in the numbers of delusional depressives between 1892 and the present day. They do, of course, constitute a smaller proportion of hospitalized depressed patients and this dilution effect, coupled with the fact that they tend to recover more quickly than non-delusional depressives, may well account for the widespread belief that they have become less common.

The very small decrease between 1942 and 1982 in the proportion of depressives with delusions does not necessarily support the theory that antidepressant drugs had an effect in reducing the numbers of delusional depressives. It is possible that those same patients who are relatively refractory to tricyclic antidepressants when delusionally depressed (Friedmann *et al,* 1961; Glassman *et al,* 1975) are correspondingly refractory to drug treatment at earlier stages of their illness.

By 1942, admission of cases of depression without delusions had obviously become more common, A significant factor here may have been the advent of ECT, which came into widespread use in Edinburgh from the late 1930s. A high proportion of depressed patients were treated with it: Karagulla (1950) states that 16 out of 39 depressed patients admitted in 1942 received ECT. Diagnostic and admission practices may have been influenced by the efficacy of ECT, in much the same way as mania seemed to increase at the time of the advent of lithium prophylaxis (Kendell, 1975).

The predominance of delusionally depressed females over males (in a fairly consistent ratio, averaging out at 3.4 to 1), seems simply to mirror the increased prevalence of depression in women as compared with men. Epidemiological surveys of differences in the prevalence of depression between the sexes (Hagnell, 1966; Weissman and Klerman, 1977; Eaton and Kessler, 1981) have quite consistently shown a predominance of between two and three females to one male suffering from depression. It seems likely that the sexes share a similar likelihood of their depression developing into an illness with delusional symptoms.

Content of delusions

It has already been noted that the only statistically significant changes of delusional content over *time* occurred between 1892 and 1942, when delusions of disease and of sinfulness increased in frequency. The increase in medical services and the presumably concomitant increase in attention paid to health matters amongst the general public would seem likely to be responsible for the increase in delusions of disease. At the same time, one might have expected delusions of sinfulness to have *decreased* along with the declining power of the Church and a 'liberalization' of moral standards. However, examination of the data of Lewis (1936) shows that his delusional depressives admitted in the 1920s had an even higher proportion of 'sinful' delusions (26 out of 35). Murphy (1978) has suggested that guilt feelings in depression may change in conjunction with changes in child-rearing practices, so perhaps such practices were rather more guilt-inducing in the early years of this century than in the later years of the last century.

The high frequency with which delusions of persecution and reference occur is perhaps somewhat surprising, as neither would be considered classical depressive delusions. One might have considered this to be due to contamination of the 1892 sample with other diagnostic categories, especially schizophrenia, but interestingly enough delusions of persecution were again the most common type in 1982. However, examination of the number of patients presenting with a delusion of reference or persecution alone, rather than in conjunction with one or more classical depressive delusions, gives some idea of how many patients might more accurately be diagnosed as schizophrenic rather than melancholic. There are significantly more such patients in 1892 (36 out of 75 deluded melancholics) than in 1981–2 (8 out of 32) ($\chi^2 = 4.90$, d.f. 1, $P < .05$). It thus seems probable that a certain number of schizophrenics were diagnosed as melancholics in 1892, but it should be noted that there was no statistically significant difference between the proportions of deluded melancholics having delusions of reference or persecution in that year and in the two later periods.

Examination of the differences in content *between the sexes* revealed that delusions of persecution and reference are more common in women (although not to a level of statistical significance), while delusions of sinfulness and poverty are more common in men. The male preponderance of delusions of poverty seems explicable in terms of the male self-image as the main money-earner and provider, but the higher frequency of delusions of sinfulness among men is rather surprising. One could view the finding as suggesting that delusionally depressed men are more prone to

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guilt and to intro-punitive attitudes than depressed women, but this would contradict most of the existing evidence, which shows that both depressed females (Foulds *et al*, 1960) and non-depressed females (Saville, 1972) are more prone to guilt feelings than their male counterparts. In fact the lower levels of *externally* directed hostility in women have been hypothesized as having a bearing on their increased susceptibility to depression (Kendell, 1970). The present study, of course, describes depressive delusions, which may not follow a similar pattern to those observed in the non-depressed. There may also be culturally determined differences in the direction of hostility between Edinburgh subjects and other groups who have been studied—see Lyketsos *et al* (1978)—and of course the content of depressive delusions can differ between cultures (Jablensky *et al*, 1981).

Conclusions

This study shows that there has been no great change in the number of delusional depressives being admitted to hospital in Edinburgh between 1892 and the present day, and that this probably reflects the fact that these illnesses occur as frequently now as they did in the late 19th century. That they appear to be less common is probably explained by their dilution with large numbers of other patients and by the fact that they recover more quickly.

Changes in the content of depressive delusions have occurred since 1892, presumably concomitant with cultural changes. Differences occur between the sexes in delusional content: these are not readily explicable in terms of previous research.

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John M. Eagles, M.R.C.Psych., *Lecturer in Mental Health, University Medical Buildings, Foresterhill, Aberdeen AB9 2ZD; formerly Registrar, Royal Edinburgh Hospital*

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