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Suicide in Norwegian, Finnish, and Swedish Psychiatric Hospitals

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Summary. The numbers of suicides in Norwegian, Swedish, and Finnish psychiatric hospitals during the period 1930 to 1974 are analyzed. The suicide rate in the psychiatric hospitals of all three countries has risen markedly. The author's methods and results are compared with those of other authors. Explanations for the rise in suicide rate are discussed. According to the author: (1) With the expansion of psychiatric treatment facilities, an increasing number of all who commit suicide in a country have been admitted to psychiatric hospitals. (2) To be admitted to a psychiatric hospital represents more of a defeat and entails greater social pressure today than before. It is more difficult to readjust to work and family now than 20 years ago. (3) To some extent, the rise may be regarded as a side-effect of modern therapeutic methods, with the introduction of the open-door policy, milieu therapy, ataractic drugs, rehabilitation pressure, and democracy processes. That a greater number of all who commit suicide are now treated in psychiatric hospitals increases our possibilities of preventing suicide, particularly if we stake more on after-care measures. Priority should be given to suicide research, especially to the better prediction of high risk of suicide from demographic and clinical variables and to the improvement of prophylactic treatment, including network therapy and long-term psychotherapy.

Key words: Suicid – Mental hospitals – Norway/Finland/Sweden – Increasing suicide rate – Treatment and social factors.

Introduction

A number of studies show that the majority of those who commit suicide suffer from a psychiatric disorder. Pærregaard (1963) [16] who investigated 1470 suicides in the Copenhagen area found that 96% had a psychiatric diagnosis. According to an investigation by Robins et al. (1959) [18], 94% of 134 patients

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Table 1. Survey of the suicide rate in all psychiatric hospitals in certain countries

Investigator and country	Year of publication	Period of suicid rate	Suicides per 100 000 patients per year
Backlin [2] Sweden	1937	1901—1933	15—45
Clemmensen [5] Denmark	1933	1922—1931	54
Clausager-Madsen [4] Denmark	1943	1932—1941	83.5
Ödegaard [23] Norway	1951	1926—1941	91.7
Stengel [21] England and Wales	1958	1920—1922 1945—1947	48.7 51.4
Ödegaard [24] Norway	1967	1950—1962	67.6
Hessö [present paper] Sweden	1977	1955—1959	132
Finland (see Table 2)		1965—1969	200
Norway		1970—1974	277

who had committed suicide suffered from a psychiatric disorder. It is not unexpected, therefore, that there is a high suicide rate among patients in psychiatric hospitals. The problem of hospital suicide has drawn the attention of research workers for the past century, from Hasse (1885) [8] to Schwartz (1975) [19]. As a rule, every practicing clinician has met with the dramatic experience a hospital suicide represents for staff and relatives alike. However, years may pass between each such experience and the next, and this makes research difficult. Most studies in this field are based on investigation of all suicides in a particular hospital over a number of years [6, 10, 15, 17]. But there are investigations into conditions within a hospital system [7], within a specific area [11, 14, 19], or within all the psychiatric hospitals of a country [23, 24]. Table 1 summarizes information from a number of investigations of this last type.

Scope of the Present Study

Hessö and Retterstöl (1975) [9] demonstrated that the suicide rate in Norwegian psychiatric hospitals had risen markedly after 1955. The present study was designed to investigate whether a similar increase occurred in Sweden and Finland.

Another aim was to compare the suicide rate in psychiatric hospitals with the suicide rate for the populations of the respective countries.

Methods and Material

The frequency of suicide in Finnish psychiatric hospitals is based on scrutiny of all death certificates with the diagnosis of suicide and then checking whether the suicide was committed in a psychiatric hospital. The material belongs to the Central Statistical Office in Helsinki. The death rate is based on counting the number of deaths that occurred in the various psychiatric hospitals in the country. The material is in the possession of the Medical Board in Helsinki. The frequency of suicides in Norwegian psychiatric hospitals was calculated by checking all death certificates recording suicide against the Central Register for Psychoses, which has details of all patients admitted to psychiatric institutions in Norway. The remaining in the tables have been calculated from official statistics [3, 12, 20]. With reference to the numbers of suicides in Swedish psychiatric hospitals, distinction between suicide ans attempted suicide was discontinued from 1960. For financial reasons, only suicide rates pertaining to 1950 and onwards have been included for Finland.

Results

The results of the present study are summarized in Tables 2—5.

Table 2 a and b. a Mean suicide rate per 100 000 patients per year in Norwegian, Swedish, and Finnish mental hospitals, grouped in 5-year periods from 1930 to 1974

	1930 –1934	1935 –1939	1940 –1944	1945 –1949	1950 –1954	1955 –1959	1960 –1964	1965 –1969	1970 –1974
Norway	74	76	53	32	35	84	120	169	277
Sweden	72	86	67	69	79	132			
Finland					118	151	208	200	

b Mean suicide rate per 100 000 inhabitants per year in Norway, Sweden, and Finland, grouped in 5-year periods from 1930 to 1974

	1930 –1934	1935 –1939	1940 –1944	1945 –1949	1950 –1954	1955 –1959	1960 –1964	1965 –1969	1970 –1974
Norway	6.7	6.7	5.5	7.1	7.2	7.4	7.2	7.6	
Sweden	16.5	16	15.1	15.3	16.7	18.6			
Finland					17.1	21.1	20.5	21.1	

Table 3. Registered suicides (*n*) in Norwegian, Swedish, and Finnish psychiatric hospitals in 5-year periods from 1930 to 1974

	1930 –1934	1935 –1939	1940 –1944	1945 –1949	1950 –1954	1955 –1959	1960 –1964	1965 –1969	1970 –1974
Norway	24	26	19	12	14	35	50	71	108
Sweden	65	101	86	89	112	193			
Finland					53	89	174	185	186

Table 4. Suicides per thousand deaths in the psychiatric hospitals of Norway, Sweden, and Finland in 5-year periods from 1930 to 1974

	1930 –1934	1935 –1939	1940 –1944	1945 –1949	1950 –1954	1955 –1959	1960 –1964	1965 –1969	1970 –1974
Norway	15	16	9	7	10	21	22	27	41
Sweden	14	20	12	11	14	17			
Finland					17	27	27	25	28

Table 5 a and b. a Suicides in Norwegian psychiatric hospitals per 100 000 first admissions and total admissions, and suicides per thousand of all deaths in 5-year periods from 1930 to 1974

	1930 –1934	1935 –1939	1940 –1944	1945 –1949	1950 –1954	1955 –1959	1960 –1964	1965 –1969	1970 –1974
Suicide per 100 000 first admissions	399	369	261	147	186	394	389	519	647
Suicide per 100 000 total admissions	265	228	146	81	96	190	170	205	247
Suicides per thousand deaths	15%	16%	9	7	10	21	22	28	41

b All first admissions, total admissions, deaths, and suicides in Norwegian psychiatric hospitals

	1930 –1934	1935 –1939	1940 –1944	1945 –1949	1950 –1954	1955 –1959	1960 –1964	1965 –1969	1970 –1974
First admissions	6007	7042	7276	8183	7529	8883	12 854	13 689	16 711
Total admissions	9067	11 370	13 023	14 776	14 628	18 378	29 276	34 634	43 819
Total deaths	1580	1600	2072	1617	1353	1675	2285	2549	2650
Suicide	24	26	19	12	14	35	50	71	108

Discussion

The most striking finding is that the frequency of suicide in Scandinavian psychiatric hospitals increased markedly from 1955, as can be seen from Table 2. In Norwegian psychiatric hospitals, the suicide rate per 100 000 patients at risk was 35 per year for the 5-year period 1950 to 1954 against 277 per year for the period 1970 to 1974. In other words, the risk of suicide was eight times higher in the latter period. The lower part of the same table shows that the suicide rate for the overall population remained stable, at about 7 per 100 000 inhabitants. Table 3 presents the numbers of suicides during the same intervals. Tables 2 and 3 show that the same tendencies were present in Finland and Sweden.

In addition, it clearly appears that the increased incidence of suicide, both absolutely and relatively, started in the year 1955. This was the year that neuroleptics were introduced in Scandinavian psychiatric hospitals.

That most investigators in this field do not find a similar rise in the suicide rate in psychiatric hospitals is probably because there is little change from one year to another. The rate must be studied over longer periods of time if the trend is to appear. Besides, for such 'rare events,' the materials tend to be too small if the investigation covers the suicide rate in one hospital only. Another reason might be that many researches indicate the frequency of suicide in numerical values, which makes it difficult to see the trend.

The various authors indicate the suicide rate in relation to number of admissions, to number of 'patients treated' (the number discharged during a particular year plus number of patients in the hospital at the end of the year), to number of suicides relative to the overall suicide rate in the district or country, or to the mortality rate in the psychiatric hospital; or, finally as Schwartz [19], who finds nine suicides per year in 80% of the psychiatric institutions in Los Angeles County with a total county population of 7.5 million.

To indicate the frequency of suicide relative to number of admissions or discharges is relevant if one takes scrupulous care that a patient who is admitted several times a year is regarded as one individual. In Norway, Sweden, and Finland this is not taken into account in registering the total number of admissions. The introduction of neuroleptics and other modern therapeutic methods has brought to the psychiatric hospitals the so-called swingdoor patients. This means that the patients are admitted at frequent intervals and stay only briefly in the hospital. In Norwegian psychiatric hospitals there are about 3000 first admissions per year, whereas the total number of admission is about 10 000. As personal numbers for identification of the individual patients are not employed, it is not possible to decide whether 3000 or 10 000 different patients are admitted per year. These circumstances detract from the value of studying the suicide rate in relation to total admissions.

Table 5 shows that the frequency of suicide for the period 1970 to 1974 is 247 per 100 000 of the total admissions in Norwegian mental hospitals and, further, that the rising tendency of the suicide rate is not as evident as in Table 2. In his investigation of 1974, Ritzel [17] found a suicide rate of 100 per 100 000 admissions. Koester [11] found 98 per 100 000 admissions. According to Farberow [7], the suicide rate in the neuropsychiatric departments of the Veterans Administration hospitals in the United States is 72 per 100 000 'patients treated.' Niskanen (1974) [14] investigated the suicides in psychiatric hospitals in Helsinki during the period 1964 to 1972 and found 140 suicides per 100 000 'patients treated.'

If one applies the concept of 'patients treated' to conditions in Norwegian psychiatric hospitals for the year 1974, the number of discharged will be 9810 and the hospital population at the end of the year 7476, that is, a total of 17 386 'patients treated.' Theoretically, however, one has the choice between about 10 000 and 17 000, as the patients may have been discharged several times per year. Today, the concept of 'patients treated' is inappropriate and misleading and has disappeared from the official statistics in Scandinavia. According to Niskanen (1974) [14], the suicide rate in psychiatric hospitals in Helsinki during the period 1964—1972 constituted 5% of the number of suicides in the overall

population. Achté (1969) [1] indicates a frequency ranging from 0 to 8.8% of the overall suicide rate for the same area.

Ödegaard [23, 24] found that 3370 persons had died in Norwegian psychiatric hospitals during the period 1926 to 1941, 62 (1.9%) of whom had committed suicide, whereas the corresponding figures for the period 1952 to 1962 were 4251 deaths, 74 (1.8%) of which being suicides, that is, a practically unchanged ratio.

Table 4 shows the incidence of suicide per thousand of total number of deaths in psychiatric hospitals. As can be seen, this incidence is 41 for Norway and 28 for Finland during the period 1970 to 1974. To indicate the suicide rate as the ratio of suicides to total mortality is not a very reliable procedure, however, because, among other things, the age of the hospital populations will influence the findings. That the suicide rate for Finland is lower than the corresponding Norwegian figure is probably connected with the circumstance that a larger number of older patients are admitted to psychiatric hospitals in Finland. In Norway, the frequency of older patient admissions reached its peak in the years 1950 to 1955, whereas it has decreased from 1960 in step with the expansion of alternative therapeutic facilities.

However, three authors [7, 15, 25] find an increasing suicide rate in psychiatric hospitals. Ödegaard (1967) [24] found that the freqency of suicide in Norwegian psychiatric hospitals rose during the period 1955 to 1964 and points out that a corresponding rise occurred during the period 1936 to 1940. He stresses that both periods were accompanied by increasing therapeutic activity. Niskanen (1974) [15] investigated the frequency of suicide in the psychiatric hospital of the University of Helsinki during the period 1965 to 1970 and found a rising tendency. Farberow et al. (1971) [7] studied the suicide rate in the Veterans Administration hospitals during the periods 1950 to 1958 and 1959 to 1966 and found a distinct numerical increase of suicides in the neuropsychiatric departments during the latter period. They discuss whether the rise might be due to introduction of the open-door system, to more widespread use of chemotherapy, or to the goal of *rapid return to society.*

There are, no doubt, several explanations for the increasing suicide rate in Scandinavian psychiatric hospitals. The most probable seem to be:

1. A larger number of all those who commit suicide in Norway are under psychiatric treatment today than was the case 20 years ago. The suicide rate for the overall population has remained fairly constant, i.e., 7—8 per 100 000, whereas the frequency for patients admitted to, or formerly admitted to, psychiatric hospitals in Norway had risen from 1.8% in 1954 to 24% in 1972. That means that at present a larger proportion of all suicidal cases are admitted to psychiatric hospitals and regarded as suffering from a mental disorder. With the expansion of psychiatric treatment facilities the percentage proportion of suicides registered within the psychiatric field is likely to go on rising. Paerregaard (1963) [16] found that 96% of all who committed suicide in the Copenhagen area had a history of psychiatric disorder, and also that 43% of the patients previously admitted to a psychiatric hospital and who later committed suicide were women, against 31% men.

II. There is heavier social pressure on patients in psychiatric hospitals today than there was 20 years ago. There is greater risk that psychiatric patients will marry [24], and the chances that they will have children have increased. Hessö and Retterstöl (1975) [9] found that the risk of accidental death was five times as high among patients with a psychiatric history during the period 1955 to 1969 than in the period 1950 to 1954. After the introduction of neuroleptics, it is no longer the acutely psychotic patients who represent the big problem, it is the chronic cases. The introduction of modern antidepressive drugs has meant that nowadays patients in psychiatric hospitals lead an active life and are not 'allowed' to slip into autism to the same degree as before, but it has also increased the risk that such patients commit self-destructive acts. The chronic patients often improve to a degree where they can be classified neither as ill nor as well. They are obliged to hang on in a sort of midway condition. On the one hand, they are too healthy for institutional life, on the other, society has not as yet provided sheltered work places and housing for them. Milieu therapy, improved social contacts, and access to television and mass media have exposed the patients to intensified pressure towards rehabilitation. That is, to get work, housing, family life, and discharge, while society is not yet ripe for such rehabilitation. Today, suicide seems the only way out for some patients. One does not have to read many case histories before realizing that the causes of many hospital suicides are closely related to the patient's home environment. The social pressure to be normal has grown and the stigma attached to being admitted to a psychiatric hospital has increased to a greater extent than people's knowledge of mental disorders. In today's advanced society the risk and importance of loss of work and family life is bigger than it was a mere 20 years ago. Most studies on suicide in psychiatric hospitals seem to incicate that the loss of home environment is of importance, in that they confirm that most suicides are committed shortly after admission. One likewise finds a high incidence of suicide in connection with rehabilitation programs [14]. according to Temoche [22], the risk of suicide was 34 times higher among patients the first 6 months following discharge from Massachusetts psychiatric hospitals than among the rest of the population.

III. The increased suicide rate in psychiatric hospitals may, however, also be regarded as a side-effect of modern therapeutic methods. The introduction of neuroleptics and antidepressive drugs in 1955 opened the door for milieu therapy. The favorable economic development with work for everybody, inclusive of psychiatric patients, has entailed an intensified pressure on patients in psychiatric hospitals as regards rehabilitation to working life. With the welfare state, any person unable to work gets a pension, which again means greater demands and possibilities to manage outside the psychiatric hospital. The expansion of the treatment facilities in psychiatric hospitals has led to radically altered attitudes to the mentally ill. Closed wards have been opened and the emphasis has been switched from security measures to attractive surroundings and increased activity. The legislation pertaining to psychiatric patients has been amended and made more liberal. More patients are admitted today than 20 years ago. New patient categories, consisting of older persons, alcoholics, and drug addicts, who belong to the highest risk groups for suicide, have found their way to the

psychiatric hospitals. Niskanen [13] found that in 1960 the average treatment time for first-admission schizophrenics in Helsinki was 148 days, as against 38 days in 1970. Today the patients have less time for getting stabilized in the hospitals before being sent back to society. On the other hand, they are readmitted more often than before. They constitute the so-called swingdoor patients.

Milieu therapy has caused the administrative responsibility for the patients to be transfered from the chief physician to the milieu personnel, in other words important security decisions are now made by persons with less clinical experience and education than formerly. There has likewise been a tendency in the psychiatric hospitals towards a quicker personnel turnover, in step with the stricter educational requirements.

Conclusion

That it is now possible to observe in the psychiatric treatment setting a larger proportion than before of the total number of suicides, enhances our possibilities for developing programs for prevention of suicide. No effort should be spared to promote suicide research and improve the prophylactic measures in our psychiatric hospitals. We must intensify our attempts to find dermographic and clinical variables which will enable us to predict a high risk of suicide among psychiatric patients. Today's knowledge and experience make it possible for us to single out patients who belong to high risk suicide categories. Among such patients prophylactic treatment schemes should be tried out. The treatment should include network therapy and long-term psychotherapy.

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