

Schizophrenia and Suicide

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Most experienced clinicians know that suicide is a danger in schizophrenia. About 30 years ago, one of the wisest, Professor Nolan D. C. Lewis, (1927) wrote, "among the frank mental disorder groups, apparently suicide occurs more often among dementia praecox patients than in any other types. The reaction usually happening during the earlier stages of the conflict before regression has proceeded far enough to attenuate the reality principle to any extent." Some years later, he noted (1933) that while the danger of suicide in depressive states now seemed to be widely understood, far less attention had been paid to its occurrence in dementia praecox. A study of text books supports this contention for they have remarkably little to say on this topic. Indeed, generally speaking from the late 19th century on, they have dealt briefly with the whole question of suicide which does not even appear in the index of one widely read book purporting to deal with the day to day work of psychiatry. Lewis (1889), Kraft Ebing (1904), Kraepelin (1904), Jelliffe and White (1919), Bleuler (1924, 1950), Muncie (1939), Olkon (1945), Hall (1949), Henderson and Gilliespie (1951), Noyes (1954), Strecker and Ebaugh (1951), and even Jaspers (1963) although paying attention to suicide in the affective psychoses says little or nothing about it in schizophrenia. Skottowe (1934) who gives an extremely clear, sensible, detailed and highly perceptive account of handling suicidal tendencies in depressions, does not mention this as a danger in schizophrenia, nor does he suggest that it is a likely or even probable outcome of this illness. Menninger (1951) has a long and gruesome section on murder in schizophrenia. He also describes at least two suicides which sound as if their victims

were schizophrenia, but states: "Not all suicides are melancholic, although most of them are. There are suicides with inferiority complexes, with sexual abnormalities and psychopathies, with various types of brain disease, such as paresis, and most important of all, some are apparently normal people."

Even the compendious Bellak (1948, 1958), usually so informative in all matters concerning this disease does not mention schizophrenia in his earlier survey and has only three references to it in his later one, none suggesting that it is a frequent cause of death. The huge American Handbook of Psychiatry (1959) has 49 references to suicide, but does not discuss the frequency of its occurrence in this or any other psychiatric illness. Gross et al. (1955) do indeed state that schizophrenia often leads to suicide, but they produce no conclusive or even suggestive evidence to support this opinion. Schneidman and Farberow (1957) give many suggestions for preventing suicide, but again no figures which might suggest one to the greater risks in different illnesses. Ayd (1962) in a characteristically practical and useful pamphlet does not mention schizophrenia as a cause of suicide. Stengel (1951), writing from a very different viewpoint, discusses alcoholism, the effects of physical illness, preservation of the family, the need for early diagnosis in depression, and measurements against social isolation, but again says nothing about schizophrenia. It is safe to say that none of these authorities has progressed beyond that first reference from a paper written more than 35 years ago. According to the official figures, at least 20,000 suicides occur annually in the United States, about 5,000 in Britain, and 2,000 in Canada. We do not know what proportion of all those who kill themselves are represented by these statistics. Many coroners and juries prefer some less definite verdict if this can be given with-

out obviously violating the evidence. Ayd (1962) states that more people die from suicide than from tuberculosis, diabetes, mepheritis, mephrosis and poliomyelitis combined. Coe (1963) observes that in Minnesota suicide is the third highest cause of death among 15 to 19 year-olds, exceeded only by accident and cancer. It would clearly be very useful to know which illnesses are prone to end in successful suicide and at what stage of a particular illness this is likely to occur.

Suicide among Schizophrenics

During the last ten years we have followed the fortunes of two groups of recently diagnosed schizophrenic patients, one of which had been treated with massive nicotinic acid (Hoffer, 1963) and the other which did not receive this vitamin. This latter group of 450 patients were observed for seven years on average, and during that time, 9 of them committed suicide. These patients had been diagnosed by competent psychiatrists who used the rather conservative criteria of Bleuler (1950). A rough calculation shows that the annual suicide rate for these patients was about 280 per 100,000. The general suicide rate in Saskatchewan at this time was about 9 per 100,000. Automobile accidents killed 17 per 100,000, cancer 122 per 100,000, and heart disease about 250 per 100,000. If the suicide rate had been as frequent among the general population as among these schizophrenic patients and expatriates, about 2,600 people in Saskatchewan would have taken their lives annually, but in fact, only about 70 die in this manner. If Saskatchewan has the usual proportion of people suffering from schizophrenia, that is, about 1% or probably slightly more, and if they commit suicide at the same rate as our patients, then sufferers from schizophrenia would account for 25 to 30 suicides yearly, about N of the total. For the United States, this would suggest that about 6,000 schizophrenics kill themselves a year, many of them young people on the threshold of

adult life. The figures for Britain and Canada would be about 1,800 and 700 respectively. Is there any other evidence to support or refute such a grim conclusion?

Suicide in Mental Hospitals

Levy and Southcombe (1953) found that in their hospital 38 suicides occurred per 10,000 admissions. Almost one half of these were during the first three months in hospital. Exactly half of all these deaths were schizophrenics, two thirds of whom were under 44 years old. Manic depressive illness accounted for only one fifth of suicides, and these were nearly all in patients of the age 50 or over. Of those schizophrenics who committed suicide, 5/7 were diagnosed as being paranoid and only 1/7 as catatonic. This suggests that better organized patients who are more likely to be socially viable, were also more likely to have the skill, energy and determination to end their lives. While this study tells us nothing about patients who are out of hospital, it indicates that those who have a better chance of leaving, are also more likely to kill themselves. Banen (1954) reported on 23 suicides of patients, either in or on leave from a V.A. hospital. Of these, 18 were diagnosed as schizophrenic and 5 as suffering from manic depressive psychoses.

Norris (1959) discussed schizophrenic patients with a mean of 3H years in hospital. In 714 males, there were 5 suicides and in 766 women, only 1 suicide and she calculated that the male suicides were 17.4 times as frequent as in the population of London as a whole and the females 5.4 times as frequent. These three papers strongly support the view that suicide is a grave danger in schizophrenic patients while in hospital, but what about those who are not in hospital? These deaths might conceivably be due to bad conditions in the hospitals themselves.

Follow-up Studies

Romano and Ebaugh (1938) followed up 600 newly admitted patients of the Denver psychopathic ward from January

Table 1. Follow-up Studies of Schizophrenic Suicides

Source	Number of Patients	Length of Follow-up	Number of Deaths	Number of Suicides
Romano & Ebaugh, 1938	600	4-yrs. Max.	44	8
Rennie, 1939	500	1-26 yrs.	100	11
Rupp & Fletcher, 1940	641	4-1/2-10 yrs.	90	10
Hoffer & Osmond, 1962	447	9-10 yrs.	10	9
Clark & Mallett, 1963	76	3 yrs.	4	3
Gurel, 1963	1,254	4 yrs.	40	21

1933 to December 1936. All of these had been diagnosed as schizophrenic. They lost well over G of their sample, but still found that 8, 4 men and 4 women, had committed suicide. Rennie (1939) discussed 500 schizophrenic patients who were first admissions to the Phipps Clinic. It is not easy to be sure how long these patients were followed up, for his reference of "from one to 26 years," is obscure and imprecise, 170 patients were lost to followup, 150 patients never left hospital, (they did not, of course, remain in the Phipps) 100 died, 27 from tuberculosis, 7 men and 4 women committed suicide. Rupp and Fletcher (1940) followed 641 newly admitted schizophrenics for from 4H to 10 years. At the end of their study, 14% of these patients were dead, pulmonary tuberculosis came first, with 43 deaths, suicide with 10, 5 males and 5 females, coming second. Clark and Mallett (1963) made an admirably detailed study of 76 schizophrenic patients, whose average age was 22, and compared them with 74 slightly older depressed patients, carefully selected to avoid schizophrenic features. During the three years after their first admission, 3 of the schizophrenics committed suicide, and one drowned in peculiar circumstances. Of these three, two were men and one a woman. None of the depressives killed themselves. It is curious that these authors did not find this discrepancy between the number of suicides

in schizophrenic and affective illnesses of sufficient importance to mention it in the text.

Gurel (1963) was kind enough to put at our disposal a study which he has made for the Veterans Administration of newly admitted, and newly readmitted male schizophrenics; 1,254 of these were followed in the community for about four years, during that time, 21 committed suicide. Of 65 other functional psychoses, 2 committed suicide.

By combining these figures, including those from Saskatchewan, (see Table 1, above) we have 3,518 schizophrenics whose mean follow-up time was at the very most, 8 years, 62 of these patients committed suicide. In other words, one in 56 killed themselves during an 8 year period or less, or in every year one out of 450 died in this way. This is very close to the Saskatchewan figures, being about 220 per 100,000, or something in excess of twenty times the normal suicide rate of the countries concerned. Although a variety of actuarial corrections for age, sex, etc. should be made, we can safely say that this is far higher than the usual suicide rate.

Theory of Suicide in Schizophrenia

Schizophrenia strikes hardest in late adolescence and early adulthood, and it seems likely that as Gross et al. (1964) noted some of the most distressing and seemingly

inexplicable suicides in young people are probably due to early, unrecognized and neglected effects of this formidable disease, which ought to make its victims particularly liable to attempt to destroy themselves. Long ago Durkheim (1951) suggested that there were three very different kinds of suicide which he called altruistic, egoistic and anomic. He considered that these were all exaggerations of social virtues; social solidarity–altruism; individuality–egoism; and flexibility–anomie. Durkheim's schema is far more sophisticated and inclusive than most of those currently used in psychiatry today, as any reader of psychiatric texts soon discovers. He held that altruistic suicide occurred when social solidarity is very high so that the life of an individual is perceived as being relatively unimportant compared with that of the group. Egoistic suicide is very different, for here a progressive emphasis on the value of individuality characteristic of some phases of civilization results in some people becoming so detached from major social institutions such as God, society, country and all collective sentiments that they can feel and recognize no authority beyond themselves. In times of dislocations, stress, and anxiety, these highly individualized people find that they lack the group support which they now need and are liable to end their lives in despair. Anomic suicide occurs when the "conscience collective," that system of social norms which reflects a commonality of beliefs and feelings is disrupted. This leads to a disastrous "freedom" from social restraints. Durkheim states, "When our desires are freed from all moderating influence, when nothing limits them, they become themselves tyrannical and their first slave the very subject who experiences them."

Durkheim was using sociological terms and did not concern himself with the psychology of the individual. It would seem that altruistic suicide is unlikely to occur often among schizophrenics, except perhaps very early in their illness, for as it has been shown elsewhere (Stengel, 1963), they

are usually lacking in social cohesion. Egoistic and anomic suicide, however, could very easily be precipitated by this illness, not because society has over valued individuality or because social norms have broken down, but because the schizophrenic illness itself produces exactly these effects in those afflicted by it.

Many sufferers from the paranoid varieties of schizophrenia grossly over value the individual as opposed to the social collective, because during their illness their perceptions of themselves and other people have become distorted. These enriched and enlarged perceptions (Kaplan, 1964; Landis, 1964) can themselves cause the sick person to lose touch with social norms by giving him an altered and often inflated sense of the possible. Morality with its easily understood rules is replaced by Durkheim's "tyranny of freedom" and the terror of what has been incorrectly perceived as being enormously increased freedom of choice. For moral, that is acculturated, people who have internalized the values and attitudes of their culture, and the great majority of schizophrenics are acculturated by the time their illness begins, few things can be more terrifying than being cut off from family, friends, and society at large, either by the extreme individualism of egoism, or by the tyranny of unlimited and unremitting choice–anomie. Both of these can be, and probably are imposed by the perceptual instability accompanying schizophrenia. Durkheim believed that a common response to both these catastrophes was suicide.

Psychiatric Treatment and Suicide

Table 2 (p. 20) shows that while changes in treatment from 1935 to the present day have produced a most gratifying reduction of loss of life in every other way, they have had little effect upon the occurrence of suicide. In the late 1930s when both insulin and metrazol shock were widely used, out of 1,741 patients, deaths totaled 234 and suicide accounted for 29 of these, or approxi-

mately 12H%. During the 1950s and early 1960s when tranquil-izers and ECT had usually replaced the earlier treatments, there were only 54 deaths among 1,780 patients. Yet, 33, over 66%, were suicides. The relative importance of suicide as a cause of death has greatly increased. However, among our 242 patients who received massive nicotinic acid or nicotinamide treatment as an adjunctive to their other treatments, none committed suicide. Those who are given this vitamin in massive doses early in their treatment are less likely to remain ill and less likely to have a recurrence of their illness (Hoffer et al., 1957; Hoffer, 1963; Osmond & Hoffer, 1962) than those who don't get it. Their perceptual world returns to its normal stability and consequently their social relationships reknit so that they will be less likely to commit suicide.

Discussion

One might suppose that self inflicted death, the most serious consequence of an illness which attacks at least 1% of mankind and cripples about one third of its victims, would have been studied intensively long before this. However, our findings suggest that this aspect of schizophrenia has been neglected and that there are grave omissions in many widely read textbooks of psychiatry. Our examples have, for obvious reasons, been taken from patients who have already been diagnosed as schizophrenic. We have been unable to inquire about those whose illness drove them to suicide before diagnosis had been made. Yet it seems likely, as Mayer Gross believed, that many young peo-

ple who kill themselves to the dismay and often bewilderment of their families, do so in the early and unrecognized stages of schizophrenia which may last for weeks or months. Were this danger understood and appropriate action taken immediately, many lives might be saved. The adolescent who is changing from child to adult roles and has not fully acquired a grasp of what will now be expected of him, is likely to be peculiarly distressed by happenings which neither he nor his parents understand, or perhaps even recognize as being due to a subtle and destructive illness which erodes social relationships. He is therefore liable to attempt suicide and may succeed before he can receive any psychiatric help. If further studies which certainly should be made without delay confirm these preliminary findings, then the need for efficient diagnostic screening tests for early schizophrenia and a simple, safe and cheap treatment which can be started at once and maintained indefinitely becomes very urgent. We have discussed these matters at length elsewhere (Osmond & Hoffer, 1962).

Schizophrenia seems particularly liable to occur in adolescents or young adults between the ages of 15 and 25, which happens to be a time during which education, the start of employment, and military service makes it likely that their academic and social behavior will be closely scrutinized and compared regularly with their contemporaries by detached, impartial and skilled observers. As a rough and ready rule, grave depression or apathy occurring in those of average or above average intelligence, who fall behind in aca-

Table 2. Psychiatric Treatment and Suicide

Period	Total Patients	Total Deaths	Total Suicides
Pre-1940	1,741	234	29
Post-1950	1,777	54	33

demic and other work, who have difficulty in reading and have few or no friends, raises the immediate likelihood of early schizophrenia and with it the possibility of suicide. Our findings suggest that under the terrifying assault of this disruptive illness, many young people the world over are driven to kill themselves because they have become alienated from family, friends, and society, and do not know what has happened. Few even, of the greatest authorities, seem to have been aware of the gravity of this catastrophe and consequently little has been done to avoid these early deaths and the harm which they do, not only to the dead, but to those who survive.

Summary

Follow-up studies of 3,521 patients diagnosed as schizophrenic were examined. These studies were all made during the last twenty-five years. Sixty-two of these patients committed suicide during a follow-up period that averaged less than eight years. This is about twenty times the normal rate of the countries concerned. While the death rate for these patients has dropped sharply during the last twenty years, the suicide rate has not changed. Although suicide seems to be just as frequent in schizophrenia as in the affective psychoses, no text book, and only two papers were found that gave this information, and none of them indicated its significance. This is that suicide from schizophrenia is a major cause of death in adolescence and early adult life. If our findings are confirmed by others, then steps must surely be taken to reduce this loss of life, both by remedying these omissions in many current texts and by developing better means for early diagnosis, effective treatment and sustained follow-up.

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Addendum

When this paper was completed two and a half years ago, it was sent to four general medical journals whose editors rejected it. Apart from one editor who was frankly rude, the rejections have this in common: (a) an expressed belief that the relationship of schizophrenia to suicide was already familiar not only to psychiatrists but to other medical men, and (b) that other matters would be of greater interest to their readers. This second comment may be true, but the lack of interest could be due to lack of information about the extent of suicide among schizophrenics. The first, as this paper shows, was, and still is, demonstrably false. Stengel's (1964) book "Suicide and Attempted Suicide," published in 1964, devotes one and a half pages to depressive illness which he states had "the highest suicide risk." Regarding schizophrenia, to which he gives only nine lines, he notes "schizophren-

ics sometimes commit suicide." In three papers (Haven, 1967; Murphy & Robins, 1967; Solomon, 1967 and one editorial (1 JAMA, 1967) published last month, in two of the journals which refused this communication, schizophrenia is not mentioned, indeed the word appears just once in more than ten full pages of print—and this makes no reference to suicide in this illness.

Depression is referred to frequently. Stengel (1964) and James (1961, 1965) suggest that schizophrenics are more likely to make successful suicide attempts than those with other diagnoses. Is it possible that our method of recording suicide has mislead us? At present we count heads, and since suicide occurs more often in old than in young people, we tend to see it as being a greater danger in the old. However, if we estimate the loss of life expectation, the picture changes greatly. For instance, a person aged 100 years has a life expectancy of about six months, while a 15 year old has a life expectancy of at least 50 years, according to actuarial tables. If these two people kill themselves, they would be recorded as two suicides, but in terms of life lost, the younger has been deprived of at least one hundred times as much life expectancy as the older. Schizophrenics are probably the largest single group of young suicides and consequently their true loss of living time is much greater than the figures presently suggest.

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