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 textbooks 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), OIkon (1945), Hall (1949), Henderson and Gillespie (1951), Noyes (1954), Strecker et al. (1951), and even Jaspers (1963), although paying attention to suicide in the affective psychoses, say little or nothing about it in schizophrenia. Skot-towe (1964) 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 schizophrenic, 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 on all matters concerning schizophrenia, does not mention suicide in his earlier survey. There are only three references to it in his later work, 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. Mayer Gross et al. (1955)

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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) have many suggestions for preventing suicide, but give no figures indicating that there are greater risks in some illnesses than in others. Ayd (1962) in a characteristically practical and useful pamphlet does not mention schizophrenia as a cause of suicide. Stengel (1963), 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 without obviously violating the evidence. Ayd (1962) states that more people die from suicide than from tuberculosis, diabetes, nephritis, nephrosis, 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 10 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, nine 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 nine 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 ex-patients, about 2,600 people in Saskatchewan would have taken their lives annually, but in fact, only about 70 died in this manner. If Saskatchewan has the usual proportion of people suffering from schizophrenia, that is, about 1 percent, 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 $_{1/3}$ 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 schizophrenic, 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, five-sevenths were diagnosed as being paranoid and only one-seventh 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 five as suffering from manic-depressive psychoses. The manic-depressive patients were aged 30 to 55. Nine, exactly half of the schizophrenic patients, were under 30, four being under 25, and only two over 40.

Norris (1959) discussed schizophrenic patients with a mean of 3 $^{1}/_{2}$ years in hospital. In 714 males, there were five suicides, and in 766 women, only one 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, 1933, to December, 1936. All of these had been diagnosed as schizophrenic. They lost well over one-quarter of their sample, but still found that eight, four men and four 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 follow up, 150 patients never left hospital (they did not, of course, remain in the Phipps), 100 died—27 from tuberculosis, seven men and four women committed suicide. Rupp and Fletcher (1940) followed 641 newly admitted schizophrenics for from *4Vi* to 10 years. At the end of their study, 14 percent of these patients were dead; pulmonary tuberculosis came first, with 43 deaths, suicide coming second with 10, five males and five females. 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 three 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, two committed suicide.

By combining these figures, including those from Saskatchewan (see Table 1), we have 3,518 schizophrenics whose mean follow-up time was at the very most eight years; 62 of these patients committed suicide. In other words, one in 56 killed themselves during an eight-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 20 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.

Suicide in Schizophrenia Compared With the Affective Psychoses

Suicide in schizophrenia seems to be at least as frequent as in the affective psychoses, especially in younger people. Because there are few long-term follow-up studies of patients with affective psychoses whose age is the same as those with schizophrenia, our findings are suggestive, but not conclusive. But they do, however, indicate that the present emphasis upon the affective psychoses as the main psychiatric illness associated with suicidal risk is misplaced and ought to be changed.

TABLE 1

Follow-Up Studies of Schizophrenic Suicides

Source	Number of Patients	Length of Follow-up	Number of Deaths	Number of Suicides
Romano and Ebaugh, 1938	600	4-yrs. Max.	44	**8**
Rennie, 1939	500	1-26 yrs.	100	**11**
Ruppand Fletcher, 1940	641	4-14-10 yrs.	90	10
Osmond and Hoffer, 1962	447	9-10 yrs.	10	**9**
Clark and Mallett, 1963	76	3 yrs.	**4**	**3**
Gurel, 1963	1,254	4 yrs.	40	**21**

Theory of Suicide in Schizophrenia

Schizophrenia strikes hardest in late adolescence and early adulthood, and it seems likely that as Mayer Cross 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 overvalued individuality or because social norms have broken down, but because the schizophrenic illness produces exactly these effects in those afflicted by it.

Many sufferers from the paranoid varieties of schizophrenia grossly overvalue 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 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 1930's when both insulin and metrazol shock were widely used, out of 1,741 patients, deaths totaled 234 and suicide accounted for 29 of these, approximately 12 $^{1}/_{2}$ percent. During the 1950's and early 1960's when tranquilizers and ECT had usually replaced the earlier treatments, there were only 54 deaths among 1,780 patients. Yet, 33, over 66 percent, 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 and 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.

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

Discussion

One might suppose that self-inflicted death, the most serious consequence of an illness which attacks at least 1 percent 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 people 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 and 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 academic 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 25 years. Sixty-two of these patients committed suicide during a follow-up period that averaged less than eight years. This is about 20 times the normal rate of the countries concerned. While the death rate for these patients has dropped sharply during the last 20 years, the suicide rate has not changed. Although suicide seems to be just as frequent in schizophrenia as in the affective psychoses, no textbook and only two papers (Levy and Southcombe, 1953; Banen, 1954) 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," devotes one-and-a-half pages to depressive illness which he states had "the highest suicidal risk." Regarding schizophrenia, to which he gives only nine lines, he notes "schizophrenics sometimes commit suicide." In three papers (Havers, 1967; Murphy and Robins, 1967; Solomon, 1967) and one editorial (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 10 full pages of print—and this makes no reference to suicide in this illness.

Depression is referred to frequently. Stengel (1964) and James (1964, 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 misled 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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Except for some minor corrections this paper first appeared as Volume 1, Number 1, of the **journal of Schizophrenia,** a decade ago. The **Journal of Schizophrenia** was the precursor of the **Journal of Orthomolecular Psychiatry.** As the reader knows, after our paper was completed in 1964 we submitted it for publication in several medical journals. The editors showed no interest, even though we were presenting some of the first evidence that schizophrenia was a major cause of death in young people.

When we decided to re-examine our work on suicide our first intention was to redraft that paper of more than a decade ago and to incorporate, the recent findings on this topic. However, the recent writings do not add to our much earlier paper, which seems to our admittedly biased eyes to be more original and comprehensive than its successors. We therefore decided to reissue our 1967 paper with a few corrections and defer another critical review until there is more to criticize. Nevertheless there are signs that schizophrenia is beginning to get some attention as a killer of young people. We shall mention a few of these encouraging writings in this postscript.

For instance, **The Comprehensive Textbook of Psychiatry II** (Freedman et al., 1975) has this to say on page 909 under the curious heading "Suicide and Homicide" (sic):

Suicide is a danger for schizophrenics that must never be forgotten. More schizophrenics than manic-depressives commit suicide although the immediate risk of suicide is relatively greater among manic-depressives. A schizophrenic may commit suicide because he is deeply depressed, for instance, during schizo-affective reaction. Or he may kill himself in response to the relentless commands he is receiving from hallucinatory voices.

These same authors also state:

Probably the greatest number of schizophrenic suicides occurs among those suffering from incipient schizophrenia. Sometimes, when the disease is in an early stage of development, even the victim's family and best friends have virtually no inkling of the terrible problem with which the patient is grappling. Many of the unexplained suicides among students on a university campus are probably committed by young persons who become aware of a malignant, insidious process that threatens to destroy their minds. Rather than seek psychiatric treatment or confide their feelings of uncontrollable disintegration to their friends, they choose to end their lives. Winokur and Tsuang, 1975, as part of the valuable "Iowa 500" studies summarized their findings on "Suicide in Mania, Depression and Schizophrenia" thus:

Long-term (30- to 40-year) follow-up data for 75 manic patients, 182 depressives, 170 schizophrenics, and 109 controls showed that 10 percent of the schizophrenics, 8.5 percent of the manics, and 10.6 percent of the depressives who were deceased had died by suicide. None of the controls had committed suicide.

The authors suggest that suicide is a significant outcome factor in all three of these illnesses and is likely to occur at an earlier age in schizophrenia than in the other illnesses.

The death rate is higher in schizophrenic patients than in the general population. Tsuang and Woolson (1977) examined the death rate over a 40-year period of patients admitted between 1934 to 1944. As a control they used patients who had undergone surgery. Over the four decades of follow up, schizophrenics had the highest death rate. For depressions and mania the death rate was higher only during 1945 to 1954. Electroconvulsive therapy came into general use during this decade. Its use, followed in the next decade by the antidepressants, apparently has been successful in eliminating the higher death rate from the depressions and manias.

However, in spite of ECT and tranquilizers, the schizophrenia death rate remains higher than for all the other groups examined. If death rate is a measure of the success of treatment, then it follows that

modern toximolecular psychiatry has been much less successful than its proponents have claimed for it.

Trotter (1977), in a paper describing Medryck's studies of those with a high risk for schizophrenia, reported that seven out of 207 high-risk children committed suicide during a 15-year period. Of 104 low-risk children, none suicided during the same period. Thirteen of the high-risk children have been diagnosed as being schizophrenic, but apparently none of the seven suicides were so diagnosed. This lends support to Freedman et al.'s remarks about unexplained suicides on university campuses.

These findings show that our quantitative study confirming Nolan D.C. Lewis's shrewd clinical observations made 25 years earlier is now itself being confirmed by others. None of these authors have acknowledged either Lewis or our own work. Neither do they seem to have recognized the significance of the absence of writings on suicide and schizophrenia from the literature on both suicide and schizophrenia.

Freedman and Winokur both accept the fact that schizophrenia is a major, probably the major, cause of suicide in those under the age of 30. Suicide itself has with steadily improved health in younger people become a major cause of death in these age groups. Schizophrenia, then, has been confirmed as a major killer of adolescents and young adults.

If one uses the concept of lost "living time" referred to in the addendum of the 1967 paper, the nature and extent to which schizophrenia wastes human talent and the social losses which it inflicts become much clearer. A colleague has suggested that insurers should acquaint themselves with this matter and encourage those who believe that these grave losses can be prevented to do what can be done to help.

Our findings reported in 1967 showed that suicide was much less frequent among schizophrenic patients who have been treated with niacin than among patients who have not received large doses of this vitamin. Our experience during the last decade continues to support those early conclusions.

In our 1967 paper we reported that there were no suicides from a cohort of 242 schizophrenic patients under treatment with large doses of vitamin B3 as a major component of the treatment program. Clinical experience since then has confirmed the conclusion that Orthomolecular treatment as it is used today markedly reduces the risk of death by suicide. But we have not been in a position to gather follow-up data as carefully as we were able to in our first report and there may well have been a few since then. One would hardly expect a suicide rate less than the usual 10-12 per 100,000 for the population from which our patients came. There is little doubt, however, that the use of Orthomolecular therapy reduces the suicide rate substantially. We will have to wait for other Orthomolecular psychiatrists to publish results of their research.

So far as we can tell, nobody noticed our discussion of Durkheim's general theory of suicide, which we related to the deaths of many young schizophrenics. This is of both practical and theoretical importance. It is reassuring to find that Durkheim's sociological terms can be translated into experiential terms which makes our patients' behavior less eccentric and bizarre than it often appears. Suicide is a usual response to excess of egotism and anomie. Our patients, having many perceptual disturbances, as we have shown conclusively, are liable to become ready victims of egotism or anomie.

As we wrote in the original paper, *Many sufferers from the paranoid varieties of schizophrenia grossly overvalue 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.*

Once it is understood that the sociological disasters which enmesh schizophrenics are often due to the perceptual disturbances accompanying their illness, then means of preventing these can be devised.

We have to be able to recognize the presence of egoism and anomie (it may be that excess of altruism too should receive our attention) so that we can take steps to reach those suffering from schizophrenia before they attempt a fatal act. We may well require specially devised experiential tools to protect our patients better.

Meanwhile we have become more adept at using the Hoffer-Osmond Diagnostic Test (Hoffer et al., 1975) to detect schizophrenia early. Since the original paper was published we have developed the Experiential World Inventory (El-Meligi and Osmond, 1970). This test is beginning to be used extensively in the U.S.A. and Canada. It has been translated into French, German, Italian, and Spanish. The Inventory has been constructed to explore schizophrenic experience in depth. It helps not only to detect illness early and quickly, but also to monitor changes during treatment. It draws attention to constellations of symptoms which are sufficiently distressing to make self-destruction less threatening than staying alive.

We have also found that skillful use of the medical model in psychiatry (Osmond, 1972), especially when combined with a clear definition and full understanding of the responsible patient (Siegler and Osmond, 1974), sustains many patients who might otherwise be edged towards self-destruction. Suicide or suicidal gestures are not infrequent among those who have been often quite inadvertently deprived of the sick role due to failure to recognize such illnesses as endogenous depressions. The intelligent and imaginative use of the role of the responsible patient was a major ingredient of the moral treatment of the insane which was so successful during the mid-19th century. We are in a much better position now to learn from those who developed and used the moral treatment and to build upon the foundations which they laid. Now that there is a growing consensus that suicide resulting from schizophrenia levies an appalling toll of young lives every year, what can be done to stop this tragic waste?

Our original paper merely alerted readers to a hitherto little recognized danger. We can now state that our experiential tests speed diagnosis and guide treatment. We must use our growing knowledge of the medical model to help patients acquire and maintain responsible patienthood, which is a barrier to despair and so to suicide. Finally with the development of Orthomolecular psychiatry (Hawkins and Pauling, 1973) we are now in a position to employ a much greater range of tests and treatments than was possible in 1967 when this paper was first published.

Summary

By republishing and commenting upon a little known paper of theirs written more than a decade ago, the authors show that until recently suicide by schizophrenic patients has been ignored. They present evidence indicating that suicide is at least 20 times as frequent among these patients as it is in members of the general population of similar age. They note that suicide in schizophrenia is at least as frequent as in the affective psychoses, but since schizophrenia commonly occurs in younger people, the loss of "living time," which can be calculated with actuarial tables, is greater. They examine suicide in schizophrenia in the context of Dunkheim's theory of suicide and suggest that prevention is possible. They state that the Hoffer-Osmond Diagnostic Test and the Experiential World Inventory

give access to patients' experience, making one more alert to the possibility of suicide. Such tests combined with an intelligent use of the medical model, with an emphasis on responsible patienthood and sustained use of modern Orthomolecular treatment, can save the lives of many young schizophrenics who become despairing and suicidal due to egoism and anomie resulting from massive perceptual disturbances.

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