SUICIDAL BEHAVIOUR IN DEPRESSIVE ILLNESS

A STUDY OF AETIOLOGICAL FACTORS IN SUICIDE

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HYPOTHESIS

AMONG factors held to be causally related to suicide are: (*i*) social isolation (1); (*ii*) social degeneration (2); (*iii*) parental deprivation (3, 4, 5). If these factors are aetiologically related to suicide, they should present prominently in that minority of depressive patients who attempt suicide. On the other hand, these factors should be found less frequently in non-suicidal depressive patients. The hypothesis that a factor is causally related will not be supported if it is found to occur as frequently among non-suicidal depressive patients as among those showing both depression and suicidal behaviour.

EXPERIMENTAL DESIGN

The detailed case notes were examined of all patients with depressive illness hospitalized in the Maudsley and Bethlem Royal Hospitals during 1955. The patients were separated into two groups (Table I): (*A*) Non-suicidal depressive patients; (*B*) Suicidal depressive patients.

TABLE I

Total	Non-suicidal	Suicidal	
223	163	60	20 serious attempts 25 mild attempts 15 suicide threats

The suicidal group of 60 patients was made up of patients with depressive illness who had attempted suicide, and also those who had expressed to some other person a threat of suicide taken seriously enough to rank among the reasons for admitting the patient to hospital. Those patients with suicidal ideas only, i.e., those who, after admission, expressed to the examining physician troubling thoughts that they would or should kill themselves, were not included in the suicidal group.

The two groups thus separated were then examined for the incidence in each of the three hypothesized causal factors, which were defined as follows:

(i) *Parental deprivation:* loss of a parent before the age of 14 years; or strife between the parents so gross that in the initial interview the patient described violence taking place repeatedly between the parents; or as an outcome of parental disharmony a feeling of prolonged estrangement from one of the parents.

(ii) *Social isolation:* at the time of becoming ill the patient had lived alone in private rooms, or a boarding house or an hotel.

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(iii) *Social degeneration:* there had occurred before the onset of illness loss of a job, divorce, the birth of an illegitimate child, or a cutting off from social contact (ostracism due to a criminal act, immigration to an alien community without finding acceptance in it).

Experimental Findings

Among the 60 patients who were both depressed and suicidal, parental deprivation occurred in 46, social isolation in 6, and social degeneration in 10 (Table II). In the other group, of non-suicidal depressives (163 cases), the corresponding incidence of the three factors was 32 cases, 17 cases and 19 cases.

Table II

Frequency of Factors "Parental Deprivation", "Isolation" and "Degeneration"

	Suicidal Depressives 60 Cases		Non-suicidal Depressives 163 Cases		Chi-square	P
	Yes	No	Yes	No		
Parental deprivation	46	14	32	131	62·69	P < ·01
Social isolation	6	54	17	146	·00	P < ·99
Social degeneration	10	50	19	144	·96	·50 > P > ·30

Statistical Analysis

Parental deprivation: For this factor χ^2 is highly significant, well beyond the ·01 level of significance. A significant association is thus found between suicidal attempt or threat and the occurrence during childhood of parental deprivation. An examination of the fourfold table shows that the greatest contribution to the total χ^2 comes from the cell associating suicidal behaviour with parental deprivation.

Social isolation: For this factor χ^2 is not significant, the possibility of its occurring in association with suicidal behaviour being that of chance.

Social degeneration: For this factor χ^2 is not significant, the possibility of its occurring by chance being about 1 in 2.

Discussion

1. *Ecological and Psychological "Causes" of Suicide*

Suicidal behaviour is a highly complex phenomenon. No single factor brings it about. Aetiological factors can be understood only as part-causes, affecting the total psychophysical make-up of an individual who is relating in varied ways to his special environment.

In the renewed attention accorded the phenomenon of suicide during recent years (2, 1), sociological studies have extended the proposition of Durkheim (6) that suicide is due to social disintegration and isolation.

Psychiatric research has not yielded so neat and manageable an hypothesis. The complex information derived from clinical study of individual patients does not lend itself readily to statistical generalization. However, many psychiatrists interested in suicide have been struck by the prevalence of "broken homes" in the case histories of suicide and attempted suicide. This finding has not been placed on a statistical basis; all that can be shown is the apparently high percentage of disturbed parental relationships among suicidal patients themselves.

It is a criticism of some of this work that criteria have been unduly lax, e.g., Batchelor when assessing parental deprivation defines childhood at the high limit of 17 years. Probably by this age a sizeable proportion of non-suicidal persons also will have been deprived of one of their parents. In this experiment the age-criterion was narrowed, the parental loss (or estrangement) required to have taken place before the age of 14 years. In this experiment, furthermore, a standard of comparison is obtained by matching suicidal patients with non-suicidal patients having the same psychiatric disorder. When this is done, it is seen that parental deprivation very significantly distinguishes the suicidal from the non-suicidal group.

Ecological hypotheses have not been neglected by psychiatric investigators, some of whom have produced findings to validate the causal association of sociological factors with suicide. Ruth Cavan (2) had shown in 1928 that in Chicago suicide was commonest in the central rooming-house areas. Sainsbury (1) demonstrated that ecological factors are correlated with the occurrence of suicide; he found that 27 per cent. of persons dying by suicide had lived in isolation. (He also confirmed the finding that suicide rates in a particular area correspond closely with the divorce incidence in it.) Investigating attempted suicide, Stengel (7) found that 22 per cent. of patients admitted to an observation ward following attempted suicide had been living alone, an incidence of isolation reckoned to be three times that of the normal population.

In this experiment, the factor of social isolation does not distinguish at all the suicidal from the non-suicidal depressive group; this factor, therefore, cannot be considered causative of suicidal behaviour in the patient sample under investigation. The factor of social degeneration does not significantly distinguish the suicidal group either; evidence is thus not obtained that loss of a job, foreign birth, divorce, an illegitimate child or a criminal action distinguishes the suicidal from the non-suicidal depressive patient in the case material studied.

2. *Relation of Suicide and Attempted Suicide*

Suicide and attempted suicide do not appear related so closely as to differ only in outcome. Suicides comprise a somewhat different population from attempted suicide. Women are in the majority in cases of attempted suicide, but in a minority among suicides. Attempted suicide is more common in the younger age group than suicide. While attempted suicide is many times more common than suicide, only a minority of suicides appears previously to have attempted suicide. Sainsbury (1) found that in 9 per cent. of his cases of suicide in North London 1936–1938, a previous suicidal attempt had been recorded. Stengel (8) found a higher proportion; a record of previous suicidal attempt was present in 13 per cent. of 119 suicides in 1953 in the same area.

The findings of this investigation, dealing as it does with suicidal behaviour short of successful suicide, cannot therefore be applied directly to suicide. On the other hand, psychiatric understanding of the phenomenon of suicide will continue to be derived from cases of attempted suicide; death removes the patient from the possibility of being studied, and psychiatric issues can rarely be studied in patients unable to reflect or talk. The present patient-sample contains 45 cases of attempted suicide, and also included are 15 patients who made overt threats of suicide to others. It may be objected that only those patients making a definite suicidal attempt should have been held to constitute the suicidal depressive group.

If the statistical significance of the three postulated factors is determined when the patient-sample is divided according to the occurrence of overt suicidal attempts, depressive patients not attempting suicide number 178 cases and those attempting suicide 45 cases. The statistical association of suicidal behaviour (overt attempt) with parental deprivation is found to be highly significant (Table III). On the other hand, both the factors of social isolation and of social degeneration are seen to be of no significance.

TABLE III

Occurrence of the Three Factors in Depressive Patients Making Actual Suicidal Attempts (Suicidal Threats not Included)

	Suicidal	Non-suicidal	Chi-square	P
Deprivation ..	32	46	32·35	P < ·01
Isolation	5	18	·038	·90 > P > ·98
Degeneration ..	6	23	·0052	·90 > P > ·80

In these patients the suicidal attempt was more often mild than serious. However, such distinction is of limited clinical usefulness; a mild attempt does not necessarily imply that a patient was poorly motivated towards suicide. In depressive illness physicians customarily give grave attention to any suicidal manifestation.

Suicidal threats have been given weight in this investigation. Suicidal ideas have not. Even when the patient described marked suicidal rumination which may have been disturbing him for some time before admission, if he had failed to exteriorize such ideas in the shape of a threat, his case was not classed among the suicidal group. (The impression is not intended that threats necessarily indicate a graver risk of suicide than unexpressed suicidal ideas would constitute.) If only overt attempts are studied, and suicidal threats excluded from consideration, a very partial picture of the suicidal component in depressive illness will be conveyed. It is also necessary to mention that this study deals exclusively with each patient's illness during 1955; a proportion of patients behaved suicidally before 1955 or subsequently, while being non-suicidal during the period under investigation, and vice versa.

Age is an important factor in suicide. The suicide rate is found to be highest in the aged; Swinscow (9) calculated that for recent years the average age of suicide in men was 61 years and in women 57 years. As shown in Table IV, for the sample of depressive patients under investigation, suicidal behaviour is about equally common in the fourth, fifth and sixth decades. Thus for the sample of depressive patients studied, age was not an important correlate of suicidal behaviour.

TABLE IV

Age and Sex Distribution

	Non-suicidal	Suicidal
Under 20 years	1	2
20–29	18	10
30–39	42	13
40–49	32	13
50–59	33	11
60–69	26	9
70–79	11	2
Male	60	17
Female	103	43
Total	163	60

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In the sample studied, women showed suicidal behaviour considerably more often than male depressed patients.

3. *Depression and Suicide*

The association of suicide with depressive illness has been over-emphasized at times. Suicide is a common hazard in patients with depressive illness, but it occurs also in schizophrenia, in psychopathic states, in cases of psychoneurosis and in persons who may not be considered psychiatrically abnormal. The majority of patients with depressive illness show no sign of suicidal behaviour, nor do they admit to suicidal intentions when questioned. It follows, therefore, that when a patient with depressive illness behaves suicidally, other factors than those producing the depressive mood must have operated.

It is controversial whether cases of depressive illness, in consideration of aetiology, course or outcome, can be subdivided into two categories, endogenous and reactive. In practice the validity of such a distinction is frequently doubted at the hospitals where this group of depressive patients was treated. All patients were diagnosed as having depressive illness. The following diagnostic categories were included: depressive psychosis, reactive depression (in some of the patients thus diagnosed neurotic symptomatology or abnormal personality traits were marked), and agitated depression (including the involutional depressive syndrome).

Because of the tendency in many cases to refrain from making a distinction between either endogenous or reactive (psychogenic) disorder, it cannot be stated what proportion of the depressive patients were allocated at the time of hospitalization to each of these categories. Although a retrospective assessment may be attempted from scrutiny of the case records, the results cannot be viewed with much confidence. Nevertheless, such tentative estimate as might be attempted would be of interest if it emerged that suicidal behaviour appeared to predominate in either the endogenous or the reactive category. Such is not the case (Table V). There appears to be no significant association between suicidal behaviour and either diagnostic category. ($\chi^2 = \cdot 0452$; $\cdot 90 > P > \cdot 80$).

4. *The Factors Producing Suicide-Proneness*

In Britain there is legal restriction against suicide, in addition to the social stigma found in other countries. In spite of being contrary to the mores of the community and against the law as well suicidal behaviour takes place regularly. The causes of suicide are not yet established. Aetiological hypotheses have been provided by psychiatric and sociological studies, and may be tested experimentally.

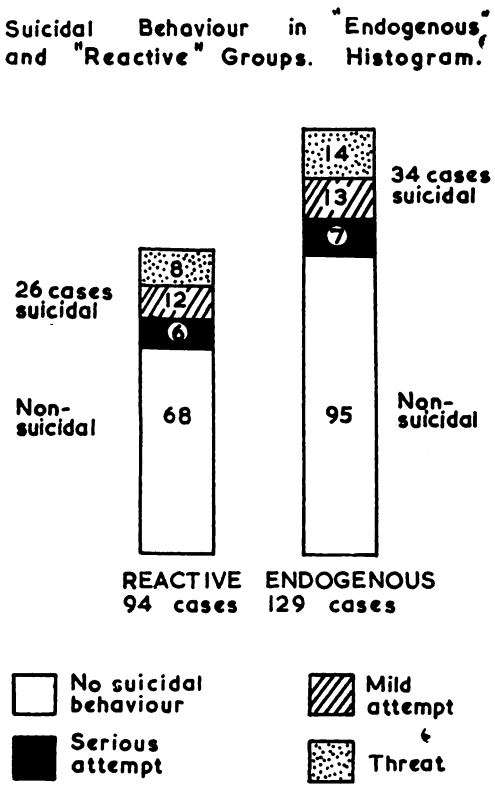
In this experiment an attempt has been made to provide a control group of non-suicidal patients suffering from a similar mental disturbance as that exhibited by the suicidal patients. The occurrence in the two groups of another variable, the psychogenic as against the endogenous nature of the depression, appears also to have been controlled. The two groups separated for study varied chiefly in that suicidal behaviour occurs in one of them.

The suicidal group of patients is not differentiated from the non-suicidal group by either of the two sociological causative concepts postulated by ecological workers. On the other hand, the suicidal group is strongly differentiated by the occurrence of parental deprivation in it. This experimental finding confirms the theory that disturbed parental relationship in childhood

TABLE V

Classification of Suicidal Depressive Patients into "Endogenous" and "Reactive" Categories

	Reactive	Endogenous
Non-suicidal depressives	68	95
Suicidal depressives	26	34
Serious attempts	6	14
Mild attempts	12	13
Threats	8	7



may be suicidogenic. Absence of a parent in early life or gross parental disharmony may predispose persons with depressive illness to suicidal attempts.

(i) *Social Isolation:* Faris and Dunham hold that social isolation produces suicide (10). Sainsbury's finding supports this. There is thus evidence that the relation between the solitary mode of life and suicide is probably one of cause and effect. Support is not given to this hypothesis by study of the present small group of patients.

(ii) *Social Degeneration:* High suicide rates have been found in areas where divorce, illegitimacy and other indices of social degeneration are prevalent. The present study does not provide confirmation.

(iii) *Parental Deprivation:* Because ecological studies deal with neighbourhoods and not with individuals, an ecological finding does not implicate particular persons in the neighbourhood factor yielded by a statistical survey. Only direct clinical study finds which particular individuals are affected. In this

experiment, evidence is not obtained that such neighbourhood factors as "social isolation" and "social degeneration" operate in a direct association with suicidal behaviour in depressive patients. The childhood experience of "parental deprivation", on the other hand, increases suicide-proneness in depressive patients.

There is much evidence that ecological factors play some part in causation of mental disorder. Such factors are important to define, for they may be easier to manipulate than the psychological responses of psychiatrically disturbed adults. But investigation of the relation of these social correlates of mental disorder, as Lewis (11) has commented, is held up at present by a grave lack of methods for studying the direct interplay between social process and psychological process.

How can the clinical finding of family disturbance predisposing to suicide, which this study supports, be reconciled with neighbourhood factors which ecological studies have shown to be statistically linked with suicide? A possible explanation is that social disorganization in an area leads to increased deterioration in that area of family bonds. It may be that in a disorganized neighbourhood parents more often tend to become separated from or neglectful of their offspring. Such children in later life, having lacked adequate involvement with two parents (who were to have conveyed to their children the cultural norms), fail to accomplish satisfying personal relationships in adult life and may behave suicidally. As this study suggests, the parental inadequacy will have affected the child directly. The adverse neighbourhood conditions may have served to increase the inadequacy of his parents. Ecological factors may be related in this secondary way to the occurrence of suicide, and not be found reflected directly in the suicidal behaviour of depressive patients.

That this study has not yielded a positive correlation of social isolation and degeneration with suicidal behaviour may be explained, on the other hand, by the case material on which it is based. The patient-sample was a highly selected one. The patients were brought into hospital by a responsible relative in most cases, an admission requirement perhaps serving to exclude some patients living under conditions of isolation and social degeneration. In addition, ecological studies have dealt mainly with suicide, while this investigation studied suicidal attempts and threats. Against a possible interpretation that suicide occurs under conditions of social isolation, while suicidal attempts occur in people who are not isolated, is the report (7) of a high occurrence of social isolation among attempted suicides.

SUMMARY

1. The hypothesis was tested that (*a*) parental deprivation, (*b*) social isolation and (*c*) social degeneration are related to suicidal behaviour.

2. Patients hospitalized during the course of a year with depressive illness were subdivided into two groups: Suicidal (60 patients) and Non-suicidal (163 patients).

3. The two groups were not differentiated by the incidence in them of social isolation or social degeneration.

4. Parental deprivation during childhood was very significantly associated with suicidal behaviour in depressive illness.

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