Suicide in Brighton

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INTRODUCTION

The County Borough of Brighton is a seaside town with a population at the 1971 census of 166,081. This population has fluctuated only slightly. In 1951, the total population was 156,486; in 1961 it was 163,159; in 1966 it was 159,510. Brighton's population contains a large percentage of elderly people; in 1966 there were $25 \cdot 7$ per cent of the population over the age of 60, and 18 $\cdot 8$ per cent were over 65 years old, compared with 18 per cent over 60, and 12 per cent over 65 for England and Wales.

Within the borough there are few industries, a high proportion of hotels, lodging-houses and rooms for letting. A growing student population attends the University of Sussex, Colleges of Technology, Arts and Crafts and technical schools.

Recent studies of suicide have included London (Sainsbury, 1955); certain industrial communities (Stengel and Cook, 1961; Jennings and Lunn, 1962); and comparisons of suicide in urban and rural communities (Capstick, 1960; Carstairs and Brown, 1958); Edinburgh (McCulloch, Philip and Carstairs, 1967).

Method

With the kind permission of H.M. Coroner for Brighton, Mr. C. Webb, the records of all suicides for the years 1963–1969 were examined. All depositions of witnesses, statements made by general practitioners, consultant psychiatrists, officers of the law, and by relatives, friends, neighbours, work associates, all of whom had been in touch with the patient, and whose statements were included in the coroner's records, were scrutinized. Details of postmortems and the causes of death were examined. In addition, records of the year 1968 in which deaths were listed as 'accidental' or 'misadventure' or where an 'open verdict' was returned were likewise examined, and so were records for 1964 and 1969 in which death was attributed to 'misadventure' or an 'open verdict' was returned, in order to ascertain whether any of these deaths might have been brought about through suicide, although the evidence was insufficient for a verdict of suicide.

Whenever the record indicated that a victim had been under hospital care at any time in the past, the hospital clinical file was examined.

Coroners' records were examined for any information that would throw light upon the epidemiological features of suicide, including physical or mental illness, domestic background, visits to general practitioners and consultants, the previous history and habits of the victim. These records were collected from the years 1963 to 1969 inclusive for victims resident both inside and outside Brighton, a total of 210 inquests.

The Registrar General's Statistical Reviews from 1952 until 1969 for England and Wales were also consulted for information about suicide, population, age distribution, occupation, marital state or any other relevant facts that would contribute to the study of suicide in Brighton.

The epidemiological section of this investigation is confined to data abstracted from the Brighton Coroner's files. Coroners' investigations of Brighton residents who committed suicide outside Brighton were not examined.

Results

Having collected the suicide data it was necessary to examine incidence of suicide in Brighton. This was determined through the suicide rate.

In the years under consideration for each year the following quantities were determined:

(a) The male suicide rate per 100,000 males.

(b) The female suicide rate per 100,000 females.

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- (c) The total suicide rate per 100,000 people.
- (d) The ratio of the male suicide rate to the

female suicide rate per 100,000 of each sex. For Brighton the census population figures were not available for many of the years considered. In fact only three sets of figures were available, namely for the years 1951, 1961, and the sample census of 1966. Fortunately these figures are well spread over the 20 years considered. As the population in this time was not growing rapidly (less than 5 per cent over the entire period), it is reasonable to calculate the annual suicide rate, using the arithmetic mean of the population over the entire period. The error in using the arithmetic mean is not more than 4 per cent for male, 2 per cent for the female and 2 per cent for the total estimates of the suicide rate.

In order to throw light on the Brighton trends it is worth while examining the national figures to see if there is any correspondence.

ANALYSIS OF THE STATISTICAL INVESTIGATION (a) National Statistics (for England and Wales)

From Table I the following were observed.

- (i) Between 1950–1969, the suicide rate was highest in 1963 for males and females.
- (ii) In 1969 the suicide rate was the lowest for males and among the lowest for females.
- (iii) Since 1963 a sharper drop has occurred for males than for females.
- (iv) The female rate has been constantly rising with respect to the male rate.

(b) Brighton statistics

Table II demonstrates that there is much more fluctuation in the Brighton data than in the data for England and Wales. The standard deviation for Brighton is $6 \cdot 1$ compared with $0 \cdot 9$ in the national suicide rate. This is no doubt due to the fact that the national population being so much larger than the Brighton population, fluctuations iron out in the national data. For this reason, extreme caution was required in interpreting any trend from the Brighton figures.

In order to examine the trends in the incidence of suicides in Brighton, a series of 3 year moving averages on the figures were made, which have the effect of reducing the fluctua-

<u></u>				Population							
Yea	r	No. of male suicides	Rate per 100,000 males	No. of female suicides	Rate per 100,000 females	Total no. of suicides	Rate per 100,000 people	Male/ Female rate	Male pop. × 1,000	Female pop. × 1,000	Total pop. × 1,000
1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966		2,885 2,831 2,788 3,020 3,178 3,060 3,198 3,170 3,175 3,116 3,059 3,025 3,264 3,308 3,175 2,942 2,823	$13 \cdot 6$ $13 \cdot 4$ $13 \cdot 2$ $14 \cdot 9$ $14 \cdot 9$ $14 \cdot 5$ $14 \cdot 5$ $14 \cdot 5$ $14 \cdot 5$ $14 \cdot 5$ $14 \cdot 5$ $14 \cdot 3$ $14 \cdot 4$ $13 \cdot 5$ $14 \cdot 3$ $14 \cdot 4$ $13 \cdot 5$ $14 \cdot 2$ $13 \cdot 8$ $13 \cdot 5$ $14 \cdot 4$ $13 \cdot 5$ $14 \cdot 2$ $13 \cdot 8$ $13 \cdot 5$ $14 \cdot 2$ $14 \cdot 3$ $14 \cdot 4$ $13 \cdot 5$ $14 \cdot 2$ $14 \cdot 2$ $14 \cdot 3$ $14 \cdot 4$ $13 \cdot 5$ $14 \cdot 2$ $14 \cdot 2$ $14 \cdot 3$ $14 \cdot 4$ $13 \cdot 5$ $14 \cdot 4$ $13 \cdot 5$ $14 \cdot 2$ $14 \cdot 2$ $14 \cdot 3$ $14 \cdot 4$ $13 \cdot 5$ $14 \cdot 2$ $14 \cdot 2$ $14 \cdot 3$ $14 \cdot 4$ $13 \cdot 7$ $12 \cdot 6$ $12 \cdot 9$	1,586 1,638 1,550 1,734 1,865 1,940 2,084 2,146 2,123 2,091 2,054 2,176 2,325 2,407 2,391 2,219 2,171	7.0 7.2 6.8 7.6 8.1 8.4 9.2 9.1 8.9 9.2 9.1 9.7 9.9 8.7 9.7 9.9 8.8	4,461 4,469 4,338 4,754 5,043 5,000 5,282 5,316 5,298 5,207 5,113 5,201 5,589 5,715 5,566 5,161 4,004	10·2 10·2 9·9 10·8 11·4 11·2 11·8 12·0 11·7 11·4 11·1 11·2 12·0 12·0 11·7 10·8 10·4	1.9 1.9 1.9 1.9 1.8 1.6 1.6 1.6 1.5 1.5 1.5 1.5 1.4 1.4	21,169 21,049 21,119 21,213 21,288 21,569 21,669 21,782 21,887 22,002 22,176 22,448 22,748 22,748 22,748 22,748 22,748 22,748 22,748 22,748 22,748 22,748 22,748 22,748 22,748 23,504	22,661 22,751 22,821 22,877 22,986 23,054 23,054 23,367 23,367 23,502 23,686 23,821 24,020 24,195 24,359 24,537 24,684	43,830 43,940 44,090 44,274 44,623 44,623 44,821 45,043 45,244 45,504 45,862 46,269 46,768 47,129 47,511 47,884 48,188
1967 1968 1969	•••	2,736 2,695 2,523	11·6 11·4 10·6	1,975 1,889 1,803	8.0 7.6 7.2	4,711 4,584 4,326	9·7 9·4 8·9	1.5 1.5 1.5	23,658 23,704 23,752	24,830 24,764 25,074	48,488 48,669 48,826

TABLE I

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tions in the data (see Table II). This series of figures is obtained by averaging the number of suicides for the year under consideration together with the numbers for the previous and subsequent year.

Examination of the 3 year moving averages for Brighton in Table II clearly shows the similarity which exists between the Brighton trend and the national trend. The suicide rate reached a peak in 1963, followed by a decline, while the ratio of the female to the male suicide rate has gradually been rising. However, this ratio is higher in Brighton than nationally. The overall Brighton suicide rate is generally twice the national rate for England and Wales.

EPIDEMIOLOGICAL FEATURES

In the statistical survey of suicides in the Brighton area the comprehensive figures provided by the Registrar General's Office were used. However, for the purpose of analysis from the epidemiological point of view it was

necessary instead to consider the data contained in the coroners' files. These files provided the only means available for assessing the environmental and personal factors leading to suicide. Data were considered in the seven year period 1963-1969, as only these coroners' files were examined. Since the coroner's figures of Brighton residents relate only to suicides committed in the Borough of Brighton itself, the number of suicides from this source falls short of the Registrar General's figures by 25 (13 per cent) between the years 1963/1969. To obtain details of varied coroners' inquests on these 25 suicides proved impossible.

For this reason specific rates based on the coroners' figures may be inaccurate by as much as 13 per cent. This is unfortunate, because precise rates would enable proper comparisons to be made with data from other areas. However, specific rates based on the Brighton coroner's figures are quoted where necessary.

Consideration has been given to the following

	Brighton											
		No. of	No of	Tatal				Thr ec B	years mo righton su	ving aver nicide rate	ages of	
Year		male suicides	female suicides	no. of suicides	Male pop.	Female pop.	Total pop.	Rate per 100,000 males	Rate per 100,000 females	Rate per 100,000 people	Male/ Female rate	
1950	• •	21	8	29								
1951	• •	15	15	30	69,704	86,782	156,486	21.2	11.5	15.9	1 • 8	
1952	••	10	7	17			• • •	17.2	30.0	15.0	1.4	
1953	••	13	12	25				17.1	9.9	13.1	1.7	
1954	••	14	7	21				22.6	15.2	1 <u>8</u> .6	1.5	
1955	••	22	21	43				26 • 3	13.3	19.2	2.0	
1956	••	21	7	28				29.0	15.6	21.7	1.9	
1957	••	20	13	33				25.8	12.2	18.4	2.1	
1958	• •	15	12	27				25.8	16.4	20.7	1.6	
1969	• •	21	18	39				28.1	17.9	22.5	1.6	
1960	••	25	17	42				25.8	18.3	21.7	1.4	
1961	••	10	13	23	74,140	89,019	163,159	26.3	19.4	22.6	1.4	
1962	••	22	21	43				20.3	21.0	20.7	1.0	
1963	••	12	21	33				28·6	25 • 1	26.7	1 • 1	
1964	••	28	24	52				25.3	23.3	24.2	1 • 1	
1965	••	15	16	31				24.9	21.0	22.8	1.5	
1966	••	II	15	26	73,060	86,450	159,510	16.1	13.2	14.8	1.5	
1967	••	9	5	14				14.3	11.4	12.7	1.3	
1968		II	10	21				10.6	10.4	11.1	1.0	
1969	• •	3	15	18	Average:				-			
					72,301	87,417	159,718					

T. II

TABLE III

			Male suid	cides		Female su	icides	Total suicides			
Age		No.	% of No. male suicid es	Rate per 100,000 per annum	No.	% of female suicides	Rate per 100,000 per annum	No.	% of total suicides	Rate per 100,000 per annum	
15-24		5	7.1	0.20	0	0	0.00	5	2.9	0.31	
25-34	••	3	4.3	0.59	8	8	1 • 46	11	6·5	1.04	
35-44	••	13	18·6	2.20	12	12	1.77	25	14.7	1.99	
45-54	••	5	7 • 1	0.40	14	14	1 • 76	19	11.2	1.26	
55-64	••	16	22 • 8	2.32	26	26	3.11	42	24.7	2.59	
65-74	••	14	20.0	2 · 87	31	31	3·83	45	26.5	3.60	
75 and	over	14	20.0	5.81	9	9	1.60	23	13.2	2.86	
		70			100			170			

Distribution of suicides according to age and sex, between 1963 and 1969

Rates quoted are based on the coroners figures which are incomplete, and on the 1966 sample census.

factors which provide a means of analysing suicide in Brighton.

(a) Age and Sex

Over the entire period, 1963-1969, $52 \cdot 2$ per cent (89) suicides in Brighton were of persons over the age of 60, and 40 per cent (68) were over the age of 65. In England and Wales, in 1964 and 1968, $25 \cdot 4$ per cent and $26 \cdot 6$ per cent of suicides were over 65 years of age. Brighton demonstrates a suicide rate $1 \cdot 6$ times the national rate for the over 65 age group. This fact, coupled with the unusually large percentage of elderly people in Brighton, accounts for the suicide rate in Brighton amounting to almost twice the national rate.

Stengel (1964) writes that the majority of people who kill themselves are elderly. Certainly in our series this holds true.

(b) Social class distribution

TABLE IV

	Social class distribution									
Social clas	s	Male	Female	Total	% of Total					
Ι		7	24	31	18.23					
II		10	20	30	29.41					
III	••	22	19	41	24.2					
IV		6	11	17	10.0					
V	••	23	21	44	25.88					
Unknown	••	2	5	7	4 · 12					
		70	100	170	100					

The high number of suicides in Classes I and II correlates with the great numbers of retired people living in Brighton. There were 27 men (36.5 per cent of all male suicides) and 31 women (26.6 per cent cent of all female)suicides) who were listed as retired. There were 15 men (16 per cent of males) who were unemployed at the time of their suicides. Two student suicides were reported among an estimated student population of 12,000, including Sussex University and various colleges.

(c) Marital status

In Table V the marital status of all persons is given at the time of suicide.

Including those cohabiting, 72 (44 per cent) of suicides had spouses, but there were 56 per cent without spouses. The high incidence of suicide among the widowed and divorced has been well documented. The unmarried state contributes to social isolation, as in the case of elderly widows living alone in rooms, lodgings, or their own desolate large houses. In Bristol (Seager and Flood, 1965) approximately 50 per cent of suicides were married at the time. The greater longevity of the Brighton population would tend to increase suicide among the widowed.

(d) Residence of non-Brighton suicides (visitors)

Of the 210 suicides for the years 1963-1969 examined by the Brighton coroner, 170 lived in

Marital status of suicides, Coroners	figures compared with marital Marital status of suicides	l status of population (19	66 Census)

TADLE V

Status		Males	Females	Total	% of total suicides (Coroners' figures)	Marital status of population (percentage 1966 Census	
Single	••	14	23	37	21.8	40	
Married		37	33	70	41.2	49	
Widowed	••	12	33	45	26.5	10	
Divorced or se	parated	7	9	īĞ	9.4	1.3	
Cohabiting	••	ò	2	2	I • 2	· ·	
		70	100	170	100.00		

the Borough. The remainder lived outside the borough, 9 in Hove, 7 in London, 15 in the County of Sussex, and 9 in other counties.

(e) Social and family contacts

Of those listed as living in their own homes or in lodgings there were 23 men and 39 women who lived alone—a total of 62 (29.5 per cent) which presents a higher percentage than in the Bristol series (20.3 per cent) described by Seager and Flood (1965). Of these suicides living alone 30 were 65 and over, 6 men and 24 women. Undoubtedly, living alone contributes very much to a situation of social isolation, which though present in this series as a contributory factor, was not so important as other factors, because social contacts with relatives and others were not at all infrequent.

These contacts are singularly difficult to estimate. A person may be living alone in seclusion from relatives, friends and acquaintances, or on the other hand may be having frequent visits and contacts. However, we assumed that where the patient had members of the family alive, these might afford clues as to the amount of concern they felt about the patient by the frequency of their contacts.

At least 60 per cent of persons in this series had quite close contact with members of their families within one week of their suicide, and in only 20 per cent of cases had there been no contact with members of the family for over four weeks. Only 8.8 per cent were severely deprived of all social contacts, with no family visitors, very rare friends or acquaintances, and no visits by local authority welfare organizations.

(f) Medical history

(i) Previous medical and psychiatric care

At the time of committing suicide, 93 persons (54.7 per cent) were under the care of their general practitioners, including 44 men (62 per cent of all men) and 49 women (49 per cent of all women) under care by their general practitioners. In addition, 27 persons (16 per cent) were under the care of psychiatrists, and approximately half of these were seeing their psychiatrists solely, visiting the out-patients clinics or private consulting rooms in preference to their general practitioners. There were 38 persons (22.5 per cent) who had not been attending a doctor for any complaint over a long period of time.

Of all suicide victims, 78 (46 per cent) had seen their general practitioners within two weeks of taking their lives. Thus roughly half of all patients had seen a doctor when ill, and for the most part they had been prescribed tablets, for insomnia especially. There were 38 patients $(22 \cdot 3 \text{ per cent})$ who, though under general practitioner care, had not seen their doctors for over four weeks. Only ten victims nominally under the care of general practitioners had not seen their doctor within four weeks of committing suicide.

Within the week preceding an appointment at

the out-patients department of a general hospital, 6 patients, 4 men and 2 women, failed to attend and committed suicide.

On the whole, the care of patients, in so far as they were under medical supervision by general practitioners and consultant psychiatrists, seemed to be regular, and frequent attendances were made, especially if physical symptoms were the chief complaint. But there can be little doubt that symptoms of distressing mental illness either eluded the doctors, or else no undue emergency could be detected. Insomnia and depression were treated routinely with sedatives and tranquillizers, and especially barbiturates.

(ii) Physical illness

In 50 cases $(29 \cdot 4 \text{ per cent})$, there was evidence of physical illness sufficient to cause great discomfort, or pain, or debility, or immobility, and confinement to bed over long periods. Of these cases 25 were men $(35 \cdot 7 \text{ per cent of all men})$ and 25 were female (25 per cent of all women). Men were more likely to suffer from physical illnesses and to become preoccupied with their effects sufficient to induce intense despair. Illnesses in both series were of various kinds; cardiovascular, respiratory, carcinoma, and rheumatoid disease made up the majority of cases of disablement, and their existence was especially high in those aged 50 or over. In 5 cases shingles was a cause of great distress in the very old. Most significant was the high incidence of cardiac disease in the overall incidence of suicide, as reported in each case by the pathologist.

Coronary occlusion, old infarcts, coronary narrowing, myocardial degeneration were reported in 79 cases ($46 \cdot 5$ per cent). No reference was made to infective or post-infective valvular disease of the heart in any of the post mortems. No case of pregnancy was discovered.

In 5 men and 10 women pronounced mental illness and severe physical disabilities were present simultaneously, having been observed and treated over many years by the medical practitioners in charge of the patients.

(iii) Mental illnesses

Undoubtedly mental illness was the commonest cause relating directly to suicide. In all,

86 cases (50.6 per cent) of histories preceding suicide indicated mental illness of sufficient severity as to give concern to those sufficiently involved with the welfare of the patient. Of these, 27 were men (38.6 per cent of the men) and 59 women (59 per cent of the women). These patients were described as being mentally ill by relatives, friends and/or doctors who treated them. What was even more obvious were those symptoms which were so striking as to be described spontaneously by witnesses, namely insomnia in 103 cases ($60 \cdot 6$ per cent) and frank depression in 119 cases (70 per cent). It is very likely that more intensive studies of cases along the lines conducted by Barraclough et al., (1967), namely interviews with all people close to the patient immediately previous to the suicide, would increase the number of patients exhibiting overt symptoms of frank mental illness. In our records, these two disabling symptoms of depressive disorders, namely insomnia and pronounced depressed mood, were only too manifest in those who knew the patients at all intimately.

Insomnia especially is the symptom calling for the agents leading directly to suicide, namely the sleep-inducing barbiturate drugs.

(iv) Alcoholism

There were 2 men and 3 women who suffered from chronic alcoholism, i.e. 3 per cent. In Bristol the rate was 1.5 per cent (Seager and Floor, 1965) and in London it was estimated as 6 per cent (Sainsbury, 1955).

(v) Previous admissions to psychiatric units

In 54 cases $(31 \cdot 8 \text{ per cent})$ there had been previous admissions to psychiatric units in general hospitals, or to mental hospitals. There were 19 men (27 per cent of all men) and 35 women (35 per cent of all women) who had past histories of such admissions. Nineteen patients 50 per cent of the admissions to mental hospitals were admitted three or more times.

There were 26 cases $(15 \cdot 3 \text{ per cent})$ in which threats had been expressed openly; 8 of these victims were men $(11 \cdot 4 \text{ per cent of all men})$ and 18 were women (18 per cent of all women).

It would seem in this series that women are

more likely to threaten suicide, but men are (h) Temporal incidence more likely to make the attempt.

(g) Methods of suicide

We followed the scheme of the Registrar General's Statistical Review (1965). See Table VI.

Of deaths due to drugs and poisons, various barbiturates accounted for 68 deaths (40.1 per cent) either alone or in combinations with alcohol (10 cases in all) or rarely with a tranguillizer. The tranguillizers and antidepressants accounted for 4 deaths in all $(2 \cdot 4 \text{ per cent})$. Aspirin accounted for 8 deaths $(4 \cdot 7 \text{ per cent})$. Men used coal gas as frequently as women. Precipitation (falls) was relatively frequent, owing to the presence of cliffs in the area.

On the whole there was little difference between the older and younger groups as to choice of method. The younger group resorted less to drugs than the older. Of those committing suicide by violent methods, there were 36 who resorted to hanging, shooting, drowning, precipitation, and cuts, i.e. 21 per cent of all cases. Of these 14 were over the age of 60, a lower proportion among the ageing population.

Of the 40 persons resident outside Brighton who committed suicide, 25 used barbiturates, 1 used Aspirin, 8 precipitation, 2 carbon monoxide, 2 drowning, 1 shooting, 1 cuts. Precipitations by visitors from outside Brighton accounted for one third of the total incidence of precipitation in this series.

Brighton shows two annual peaks-May-June-July and December. As regards day of the week, the incidence rises on Friday, Saturday and Sunday. The hours between 6 p.m. and midnight are the time of day usually chosen.

CORONERS' VERDICTS

It is well known that coroners' verdicts are often in doubt on the question of suicide. Decisions are reached through painstaking consideration of the evidence, but certainty of suicide may remain in doubt because of failure to elicit absolute legal evidence, However, a careful reading of the record may incline the psychiatrist to view the case as 'suicide', rather than 'misadventure', 'accident' or 'open verdict'. Coroners may also decide upon a verdict least likely to upset the relatives, provided it is in keeping with the facts offered to them.

We examined the coroner's records of all 176 inquests for the year 1968. In this year the inquests concluded that there were 22 suicides. There were four cases which were open verdicts and seven cases of misadventure due to drugs, drownings, and gassings. We reviewed all these latter II cases, and nine seemed to be possible suicides if the psychiatric evidence were to be considered over-riding.

In inquests during 1969, of four cases of open verdict and eight due to misadventure through drugs or drowning, at least 10 of these deaths

Method	Male		%	Female	%	Total	%	
Coal gas	••		23	33	24	24	47	27.6
Car exhaust	••	••	2	2.9	ō	ō	2	1.17
Drugs and poisons	••	••	27	38·Ğ	57	57	84	49.41
Hanging	••	••	5	7.1	6	Ğ	11	
Shooting	••	••	ĭ	i • 3	0	0	I	· 58
Drowining			2	2.0	3	3	5	2.04
Precipitation			5	7.1	ğ	ğ	14	8.24
Cut throats, wrists	••		ă	4.3	ŏ	ŏ	3	1.77
Fall on railway lines	••	••	2	2.9	I	I	3	1.76
		* * *	70	100	100	100	170	100

TABLE VI

might have been due to suicide, in addition to the 21 declared suicides in 1969.

In inquests during 1964, there were six cases of open verdict and five of misadventure due to drugs, drowning and gassing; at least 10 of these deaths might have been due to suicide. In this year there were 57 cases of verdicts of suicide.

It would seem logical to conclude that the real incidence of suicide might be at least 20-30 per cent higher than the verdicts established by the coroner. This conclusion is not at variance with those reached by other investigators into suicide (Sainsbury, 1955; Stengel, 1964; Seager and Flood, 1965).

Influence of the Samaritans and Voluntary Services

There was no Samaritan organization operating in the Borough of Brighton in the years 1964-1968. The Samaritan service has been reconstituted for a larger area, which includes Brighton, only since 1969. On the other hand, local authority mental health services are increasing in numbers of personnel, efficiency of organization, and thoroughness of follow-up care. The fall in the incidence of suicide in Brighton over the years 1965-1969 might be related to these developments.

DISCUSSION

Comparing the data for Brighton with the data for England and Wales, there is some evidence that the pattern of suicides in Brighton tends to reflect national trends. The rise in the female rate, fall in the male rate, and consequent relative decline in the male fraction is reflected locally and nationally. A continuing fall in the suicide rate is evident in England and Wales, and Brighton follows this trend. The total rate has been lowered over the years 1965-1969. Again this national trend is reflected in the Brighton figures. However, the figures since 1950, both nationally and in Brighton reflect fluctuations in rate, and the trend of the past five years needs to be viewed cautiously. Certainly as far as the Brighton figures are concerned the fall is not due to the influence of voluntary bodies such as the Samaritans. Other explanations for the fall are called for, such as

the increasing efficiency of local authority mental health services, and certainly more careful assessment, awareness and treatment of the problem by the medical profession.

The high suicide rate reflects the high percentage of ageing people living in the borough, which is the most important cause for the high suicide rate in the Borough of Brighton.

The socio-economic status of the suicides suggested a significantly high rate in the Social Classes I and II, agreeing with the findings of Sainsbury for London (1955). Brighton is a popular seaside resort for the retired and semiretired. Retirement brings boredom, isolation, and a declining elan for living. The rate of suicide in retirement areas must be high, when comparison is made with suicides classified as 'retired' in Brighton (32 per cent) and Bristol (20.9 per cent).

Suicide was related to a high incidence of serious organic disease. In 29.4 per cent of cases the symptoms of physical illness were sufficient to cause great distress provoking severe depressive reaction; and males especially reacted violently to prolonged physical agony, or unsettling discomfort. Cardiac disease was the commonest disabling disease.

However, mental illness was the commonest cause relating to all suicides. In $50 \cdot 6$ per cent of all cases, evidence of mental illness was described in the records. When to this figure is added a history of severe insomnia (103 cases, $60 \cdot 6$ per cent) and frank depression (145 cases, 70 per cent) the evidence grows that suicide is most frequently the result of severe mental illness. Seager and Flood found that in at least three-quarters of their cases suicide was related to an episode of mental illness of either short or long duration.

In our series, 54 of the victims $(31 \cdot 8 \text{ per cent})$ had had previous admissions to mental hospitals, and in 38 of the cases whose records were traced, over 50 per cent of them were admitted three or more times. This is evidence of the severe and prolonged course of illnesses which may lead to suicide. But in the larger percentage of cases there is evidence of profound disturbance not such as to lead to hospital admission, but distressing enough to impair sleep and mood. It is in this group that medical care is most

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elusive. In our opinion any case of prolonged insomnia deserves a thorough social history and psychiatric examination to ascertain the degree of depression.

Prolonged insomnia, persistent depression, and suicide threats are a trio of symptoms which should raise the alarm over a possible successful suicide. Added to this, a careful examination, especially in the case of the ageing who suffer from physical illness, should forewarn the doctor about the danger in those patients with physical symptoms of disease.

SUMMARY

(1) Coroner's inquests on 210 suicides committed during the years 1963-1969 were examined. Further figures were made available for Brighton from the year 1950. A twenty year assessment of suicide trends in Brighton was available.

(2) A comparison was made between the incidence of suicides in England and Wales and those among residents in Brighton. Both incidences revealed similar trends; especially a decline over the years 1965–1969.

(3) Brighton's incidence is almost twice the national incidence, and this is attributed to the large numbers of elderly persons in a borough where 25.7 per cent of the population is over the age of 60, as compared with 18 per cent for England and Wales.

(4) Previous histories indicated a high incidence of physical illness $(29\cdot4 \text{ per cent})$, of mental illness $(50\cdot6 \text{ per cent})$, and of complaints of depression (70 per cent) and insomnia (60 per cent).

(5) Closer liaison and co-operation between general practitioners and local authority mental welfare officers would seem to be essential to further reduce the incidence of suicide.

(6) A more serious appraisal of symptoms of depression by general practitioners is stressed.

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