Association of age and social class with suicide among men in Great Britain

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Abstract

Study objective—The aim was to investigate suicide and “undetermined” deaths by age, economic activity status, and social class in Great Britain among males of working age.

Design—The study was a cross sectional analysis of Registrar General's data for England and Wales around 1981, repeated for around 1971, and for Scotland around 1971 and 1981.

Measurements and main results—For England and Wales around 1971, suicide and undetermined death rates showed a progressive increase with age and a markedly higher rate in the lower social classes. A significant interaction effect was identified in the central age groups of the lower occupational categories. This interaction was confirmed in the remaining three data sets, notwithstanding some differences in the profile of age specific mortality. Other findings included a higher standardised mortality ratio for the economically inactive, who also showed an earlier peak in age specific mortality, and a relative concentration of undetermined as compared to suicide deaths in the lower social classes, but not all these further results were fully replicated.

Conclusions—There is a concentration of suicide and undetermined deaths in the middle age groups of the lower social classes. Plausible explanations include both the social drift and the social genesis hypotheses, the latter including the effects of long term unemployment.

rates occurred in the *lowest* social class. Three further studies from the USA endorsed his conclusions.⁶⁻⁸ There appear to have been no British investigations specifically on this topic since World War II, though Bulusu⁹ commented in passing that no social class trend in suicide was discernible for England and Wales for the years around 1951, 1961, and 1971.

The comparability of these studies is limited by three considerations. First, the age groups investigated have varied, with some workers including persons over 65 years of age, notwithstanding the well known problems of social class classification for this group. Second, the rates cited for the different social classes have not always been age standardised; this is important since suicide rates are very sensitive to age effects and the age structure of the populations in different social classes cannot be assumed to be uniform. Third, definitions have varied with respect to being economically occupied, with some studies including and others excluding the unemployed; where the “unoccupied” have been separately considered, virtually all the studies listed cite strikingly higher suicide rates among this group (whatever the definition) than for those in work. Despite these methodological considerations, the published reports could be interpreted as suggesting that the relationship of suicide to social class has varied over the last century, and possibly also differs between countries.

This paper explores the social class relationship for England and Wales, and for Scotland, for suicide, for “undetermined” deaths, and for the two mortality groups combined. It examines data from each jurisdiction for the period around 1971 and around 1981, thus beginning at a point subsequent to the major decline in United Kingdom suicide which occurred during the 1960s.^{10 11} Since social class classification is highly unsatisfactory for women and for those over retirement age, the investigation is confined to males of working age (15-64 years for 1971, 16-64 years for 1981). We shall present in some detail the findings for England and Wales for the years around 1981, initially considering the findings for suicidal deaths only (E950/959 in both the 8th and 9th revisions of *The International Classification of Diseases*) and subsequently for those deaths categorised as “injury undetermined whether accidentally or purposely inflicted” (E980/989 in both ICD Versions); these two groups of deaths are then amalgamated, and the analysis repeated. Subsequently we comment more briefly on three other data sets, namely those for Scotland for the same period, and for England and Wales, and for Scotland, for the years around 1971.

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Opinion concerning the relation of suicide to social class had undergone major shifts since the topic began to attract scientific interest during the late 19th century. In 1897 Durkheim¹ concluded from evidence from several European countries that the suicide rate was higher among the upper social classes, whom he regarded as suffering from a lack of social regulation, or *anomie*. Sainsbury² in London confirmed this pattern for suicides occurring in the mid-1930s. However from data for England and Wales for the period around 1951 Dublin³ concluded that the relationship of suicide to social class was U shaped, a pattern he also described for one of two sets of American statistics, the second yielding equivocal results. Support for the U relationship was also provided by Powell⁴ using material from Tulsa, Oklahoma. A third phase began when Breed,⁵ using New Orleans data, reported that the highest suicide

Methods

Information was obtained from the Annual Reports of the Registrars General for England and Wales, and for Scotland, and from the Decennial Supplements on Occupational Mortality for England and Wales and for Scotland around the Census years 1971 and 1981, published by the Office of Population Censuses and Surveys and the Registrar General, Scotland, supplemented by additional data kindly made available to us. The mortality data finally comprised information on each individual death categorised by age, ICD code, and social class.

Social class classification was based on the revisions introduced in 1971 for the earlier period and in 1980 for the later period. As previously mentioned analysis was confined to males of working age, defined as 15–64 years for the earlier phase and 16–64 years for the second phase. Populations for 1971 and 1981 were taken from the relevant censuses published by the Office of Population Censuses and Surveys and by the Registrar General for Scotland.

For both mortality and census data we divided individuals into two categories, namely those classified to a social class and those not so classified, the latter including members of the armed forces, those with inadequate occupational descriptions, and those who had never worked. Note that current employment status does not

Table I Composition of male population, age 16–64 years, England and Wales 1981.

Census terms	Revised terms	n (%)
In workforce categorised inadequately described	Classified	13 474 330 (88.4)
Outside workforce students never worked Armed Forces	Not classified	1 766 490 (11.6)
	Total	15 240 820

Table II Male suicide, England and Wales 1979–80, 1982–83: numbers, annual rates/100 000, and mortality ratios (MR), by age, occupational classification, and social class.

		Age (years)							
		16-25	25-34	35-44	45-54	55-64	16-64	SMR	
(a) Total population	Classified	(n)	744	1660	1695	1695	1765	7559	97
		Rate	8.0	12.8	15.0	16.2	17.9	14.0	
		MR	0.57	0.92	1.08	1.16	1.29	1.01	
	Not classified	(n)	271	237	173	144	103	928	127
		Rate	6.0	24.6	30.3	32.4	17.6	13.1	
		MR	0.43	1.76	2.17	2.32	1.26	0.94	
	All	(n)	1015	1897	1868	1839	1868	8487	100
		Rate	7.3	13.6	15.7	16.8	17.9	13.9	
		MR	0.53	0.98	1.13	1.21	1.29	1.00	
	(b) Classified by social class								
I	(n)	17	108	83	107	91	406	92	
	Rate	6.5	11.2	10.7	17.7	19.9	13.2		
	MR	0.46	0.80	0.76	1.26	1.42	0.94		
II	(n)	75	272	359	392	385	1483	83	
	Rate	7.2	8.6	11.7	14.6	17.0	12.1		
	MR	0.51	0.62	0.83	1.04	1.21	0.86		
IIINM	(n)	87	205	188	182	197	859	99	
	Rate	5.9	12.9	16.8	17.3	17.2	13.5		
	MR	0.42	0.92	1.20	1.23	1.22	0.96		
IIIM	(n)	249	572	574	506	504	2405	88	
	Rate	6.6	12.1	13.7	13.5	15.5	12.2		
	MR	0.47	0.86	0.97	0.96	1.10	0.87		
IV	(n)	175	293	289	333	393	1483	116	
	Rate	9.0	15.5	18.2	18.9	19.7	16.2		
	MR	0.65	1.11	1.30	1.35	1.41	1.16		
V	(n)	141	210	202	175	195	923	200	
	Rate	16.7	32.9	38.2	28.1	26.5	27.4		
	MR	1.19	2.34	2.73	2.00	1.89	1.95		
Total	(n)	744	1660	1695	1695	1765	7559	100	
	Rate	8.0	12.8	15.0	16.2	17.9	14.0		
	MR	0.57	0.91	1.07	1.15	1.28	1.00		
Social class SMR		55	93	110	116	125	100		

SMR = standardised mortality ratio

affect this division, and that in the 1981 census, but not in that of 1971, the majority of the permanently sick were allotted a social class designation. Table I illustrates the ensuing division of the population for England and Wales in 1981.

Results

SUICIDE: ENGLAND AND WALES 1979–80, 1982–83

A total of 8487 suicidal deaths were available for analysis; their distribution by age, whether “classified” in the sense just defined, and if classified, by social class, is shown in table II, together with the annualised population rates for each subgroup and their mortality ratios.

The upper section of the table gives age specific rates for the classified and not classified, with standardised mortality ratios based on the experience of the total population. At 16–64 years those unclassified with respect to social class have lower suicide rates than those who are classified, but at each subsequent age interval up to 54 years the rates for the unclassified are much higher than those for the classified. At 55–64 years the difference disappears. It can also be seen that among those with any social class designation the suicide rate increases linearly with age from 8.0 to 17.9 per 100 000, whereas for the unclassified the rates rise to a peak at 45–54 years, at a remarkable 32.4 per 100 000.

The youngest men, aged 16–24 years, who are not classified are principally students, and make up about two thirds of all those in the unclassified population. In consequence the rate for all ages, 16–64 years, is slightly lower in the unclassified than the classified, but after age standardisation, the higher mortality of the unclassified is evident.

In the lower section of table II, data are presented for each of the social classes, by age, but this time with standardisation based only on classified individuals. The steady increase in mortality rates by age for the whole classified population also appears within each social class with the important exception of social class V where a distinct peak is evident for the 35–44 year age group. When read vertically the table shows that for all ages considered together, and for each age group separately, there is no consistent trend across the rates in the higher social classes I to IIIM, a distinct increase in social class IV, and a marked further increase in social class V. The mortality ratios reflect the same pattern.

Some of these data are illustrated in figs 1 and 2. Figure 1 shows that the death rates increase

Figure 1 Age specific suicide rates and after standardising for social class.

Figure 2 Suicide rates by social class and after standardising for age.

directly with age, as previously noted, and that standardising for social class within each age band makes little difference to the trend. Similarly fig 2 shows both the crude death rates by social class and the (minor) effect of age standardisation. There is little variation among classes I–IIIM, a

Table III Male undetermined deaths, England and Wales 1979–80, 1982–83: numbers, annual rates/100 000, and mortality ratios (MR), by age, occupational classification, and social class.

		Age (years)							
		16-25	25-34	35-44	45-54	55-64	16-64	SMR	
(a) Total population	Classified	(n)	343	546	467	403	460	2219	
		Rate	3.7	4.2	4.1	3.8	4.7	4.1	
		MR	0.83	0.95	0.93	0.87	1.05	0.93	92
	Not classified	(n)	167	102	78	82	61	490	
		Rate	3.7	10.6	13.6	18.4	10.4	6.9	
		MR	0.84	2.38	3.07	4.15	2.35	1.56	171
	All	(n)	510	648	545	485	521	2709	
		Rate	3.7	4.7	4.6	4.4	5.0	4.4	
		MR	0.83	1.05	1.03	1.00	1.12	1.00	100
(b) Classified by social class									
I	(n)	2	20	20	20	18	80		
	Rate	0.8	2.1	2.6	3.3	3.9	2.6		
	MR	0.19	0.50	0.63	0.80	0.96	0.63	63	
II	(n)	17	79	74	78	65	313		
	Rate	1.6	2.5	2.4	2.9	2.9	2.6		
	MR	0.40	0.61	0.58	0.70	0.70	0.62	62	
IIINM	(n)	39	50	47	42	34	212		
	Rate	2.7	3.1	4.2	4.0	3.0	3.3		
	MR	0.65	0.76	1.02	0.97	0.72	0.81	81	
IIIM	(n)	120	174	135	106	139	674		
	Rate	3.2	3.7	3.2	2.8	4.3	3.4		
	MR	0.77	0.89	0.78	0.69	1.04	0.83	83	
IV	(n)	84	115	91	91	114	505		
	Rate	4.3	6.1	5.7	5.2	5.7	5.5		
	MR	1.05	1.48	1.39	1.26	1.39	1.34	134	
V	(n)	71	108	100	66	80	435		
	Rate	8.4	16.9	18.9	10.6	10.9	12.9		
	MR	2.04	4.10	4.60	2.57	2.64	3.13	315	
Total	(n)	343	546	467	403	460	2219		
	Rate	3.7	4.2	4.1	3.8	4.7	4.1		
	MR	0.89	1.02	1.00	0.93	1.13	1.00	100	
Social class SMR		80	100	107	95	108	100		

SMR = standardised mortality ratio

rise in social class IV, and a marked increase in social class V. Note from the standardised mortality ratios in table II that the amount of variation which can be ascribed to each factor—age and social class—is approximately equal, about twofold, when the influence of the other is controlled.

AGE × SOCIAL CLASS INTERACTION

Table II presented suicide rates by age and social class jointly considered, but the magnitude of the interaction between these variables is more readily appreciated from fig 3. The peak in the central age bands for social class V is evident. Statistical tests for the significance of the interaction effect are presented below.

UNDETERMINED DEATHS

There were 2709 deaths classified as undetermined “whether accidentally or purposely” caused. Table III gives details corresponding to those given in table II.

We first noted that proportionally more of the undetermined deaths (18.1%) were not given a social class ascription compared to 10.9% of the suicides ($\chi^2=95.00$, d.f. = 1, $p<0.001$). Subsequently we analysed the data on undetermined deaths in the same manner as those just presented for the suicides. The salient findings were that the pattern of the rates by age and social class, and their interaction, closely reproduced those already found for the suicides but that the trends were more marked. For example the gradient in the age standardised mortality rates by social class was steeper than was found for suicide (fig 4).

Figure 4 Standardised mortality ratios (SMR): suicide and undetermined deaths by social class.

Figure 3 Annual suicides 1979–80, 1982–83, England and Wales.

SUICIDE PLUS UNDETERMINED CAUSES OF DEATH
The criteria used by legal authorities to determine suicide are highly conservative when compared to those used by psychiatrists.^{12 13} A considerable body of publications, which will not be reviewed here, concerns how undetermined deaths should be treated in epidemiological studies of suicide. The consensual view is that the official category of undetermined deaths contains a substantial proportion of concealed suicides, that the addition of the undetermined deaths to the suicide deaths produced an epidemiological *profile* which is broadly the same as that for suicide alone, and that the preferred strategy is to combine the two categories in studies of adult populations to obtain more valid estimates. We have followed this procedure and analysed the findings for the combined categories of death. Since it has already been shown that the results for each group are similar it would be superogatory to describe the results in detail: the data are given in appendix 1. For the combined categories the peak observed in the middle age groups of social classes IV and V becomes more pronounced than when suicides are considered alone.

OTHER DATA SETS
All the findings reported so far concern the years around 1981, and relate to England and Wales. Three other data sets were available to us. They were (1) for the same period, namely 1979–80, 82–3, for Scotland, (2) for 1970–72 for England and Wales, and (3) 1969–73 for Scotland. The data for suicide, and for suicide plus undetermined deaths, are given in appendices 2 to 4. It should be recalled that the social class classification used in 1971 and 1981 differed in certain important respects; in particular the permanently sick were excluded in 1971, and counted as not classified. The age specific rates for suicide plus undetermined deaths for all ages had increased in 1981 in comparison with 1971 in both

regions: in addition the curve of the Scottish death rates changed in that the linear increase at each age interval evident in 1971 no longer pertained by 1981, at which period the oldest group no longer had the highest rate (see fig 5). For England and Wales no such shift was evident.

These differences did not, however, preclude analysis to determine whether the findings reported in detail above for England and Wales around 1981 could be confirmed. Table IV summarises the results. These will be discussed in sequence below, but here we note an extension to findings on the age/social class interaction (item 4 in table IV). Log-linear analysis showed an age by social class interaction in the two larger data sets (for England and Wales); the interaction term was close to significance levels in the remaining two, and the interaction terms for the four sets did not differ significantly between themselves (details not shown). As previously noted, the important deviations from expected values were the high mortality rates in the central age groups for social class V. Table V gives further details of the analysis.

Table V Summary of log-linear analysis of suicide and undetermined deaths.

Sample		Deviance	Degrees of freedom
England and Wales 1981	Null	1454.1	24
	Age + class	1334.4	8
	Age × class	119.7	16
England and Wales 1971	Null	1140.2	24
	Age + class	1066.7	8
	Age × class	73.5	16
Scotland 1981	Null	273.4	24
	Age + class	251.8	8
	Age × class	21.6	16*
Scotland 1971	Null	235.1	24
	Age + class	213.2	8
	Age × class	21.9	16*

Notes
Classified data *only* have been used.
Classes IIInm and IIIIm have been combined to achieve uniformity.
Entries in the table correspond to deviance attributable to model terms. They sum to the null deviance in each set.
*p>0.05 (NS)

Figure 5 Scotland: suicide and undetermined deaths. Age-specific rates around 1971 and around 1981 for populations classified to social class.

Table IV Results of testing observations on England and Wales around 1981: data on further data sets.

Observations on England and Wales circa 1981	If confirmed on		
	England and Wales circa 1971	Scotland circa 1981	Scotland circa 1971
1 SMR higher for unclassified than classified	Yes (but weakly)	No	No
2 Peak mortality rates in unclassified at younger age than classified	Yes	Yes	Yes
3 Higher SMR for social class IV and V	Yes	Yes	Yes
4 Age × social class interaction; central age groups in social class V have higher rates	Yes	Yes	Yes
5 Higher proportion of undetermined deaths with no social class ascription	Yes	No	No

SMR = standardised mortality ratio

Discussion

The questions of definition and case finding that arise when working with suicide mortality data are familiar and need not be further rehearsed. Some of the problems attendant on economic activity data will be touched on below but our discussion will be centred principally on the main findings, and the extent to which they have been replicated, as shown in table IV.

STANDARDISED MORTALITY RATIO HIGHER FOR UNCLASSIFIED THAN CLASSIFIED
The original analysis based on the England and Wales data around 1981 showed a clearly raised standardised mortality ratio for the unclassified segment of the population. This finding is only weakly replicated, if at all, for England and Wales a decade earlier, and does not emerge in either of the Scottish samples. This failure of replication is somewhat paradoxical, especially in the light of the raised mortality reported for men not

classified in the 1971 census, as reported in the OPCS Longitudinal Study for all causes¹⁴ and for suicide (unpublished). For the comparison between the 1971 and the 1981 England and Wales data it may be relevant that around the former time very few deaths were recorded as having a designation as “unoccupied”, while more were reported at the later period.¹⁵ Even so the difference between the findings for England and Wales and for Scotland around 1981 remain unexplained. Clarification would require further analysis, which should perhaps recognise the distinction between the different subgroups included within the umbrella term “unclassified” in our study. Though the issue is important it should be recalled that the unclassified account for only 10–12% of the adult male population, and so the suicide deaths they generate will have only a marginal influence on the national rates.

PEAK MORTALITY RATES IN UNCLASSIFIED AT YOUNGER AGE THAN FOR CLASSIFIED

Whether the rates among unclassified are higher or lower than among the classified, the difference in the curve of age specific mortality emerges as a consistent finding. The peak rate among unclassified men always occurs at least a decade earlier than among the classified, a phenomenon which does not appear to have been previously recorded. Possible reasons for the difference in the profile may be similar to those suggested in connection with (4) below.

HIGHER STANDARDISED MORTALITY RATIOS FOR SOCIAL CLASSES IV AND V

It has been found in each data set that mortality rates show no clear gradient across social classes I, II, IIINM, and IIIM, an increase in social class IV, and a further considerable rise in social class V. A higher suicide rate for social class V compared to other social classes has also been noted for both the 1971 and 1981 cohorts of the OPCS Longitudinal Study (unpublished). Our findings thus support the pattern emerging from the more recent American studies. In view of the significant interaction between age and social class noted below it may be that the claims for a general increase in rates in the lower social classes may require some modification. However close consideration of the data, such as those illustrated in fig 3, shows that in each group the social class gradient just described is easily discerned.

CENTRAL AGE GROUPS IN SOCIAL CLASS V HAVE HIGHER RATES

The age by social class interaction effect, illustrated in fig 3, confirmed by log-linear analysis, is perhaps the most striking finding to emerge. Interpretation must first consider the possibility of reporting artefacts, and in particular the so called “numerator-denominator bias” which may result when the occupation of the deceased reported on the death certificate differs from that recorded at the census. The bias may be of two kinds. One is of “promotion on death” (as, for example, when the deceased is designated according to his highest ever occupational status rather than that held just before death), which would tend to increase the rates for the upper social classes at the expense of the lower. In so far

as such bias operates then the excess rates in the lower social groups, as revealed in our data, would tend to be *underestimated*. Conversely, it is possible for the occupational description on the death certificate to be at a lower level than on the census. For example, ascription to a residual rather than a specific occupational category would result in “demotion” and inflate the rates for the lower social groups. In so far as both processes operate they would tend to cancel out. There is a possible further cause of misclassification in that individuals who at the time of death would by census criteria be classified as not economically active—corresponding to the unclassified group in our study—may be given a classifiable occupation which has not been relevant for many years, if ever. This problem may be most marked for those with no settled occupation who are given a social class V ascription at death, and thus raises the possibility that their high rates might in part be due to the erroneous inclusion of unclassified individuals, whose death rate in at least one of our data sets is higher than for all those with a social class ascription. This possibility cannot be eliminated, and suggests caution in accepting our findings. It may be relevant however that in all the data sets the age specific mortality rate in social class V is usually *higher* than in the corresponding age group among the unclassified.

It is very difficult to assess overall the potential contribution of misclassifications of various kinds to our results, but on balance it seems most unlikely that they could account for the major differences noted between the social classes, nor could they explain why the effects are particularly marked in certain age groups.

In substantive terms, the high rates in the middle age groups of social class V, and to a lesser extent, of IV, might reflect two different processes. The first is that of social drift associated with chronic mental illness, of which perhaps the most salient in the present context is alcohol dependence. Severe social deterioration due to chronic alcohol abuse tends to be a feature of those with an early onset of abnormal drinking (in adolescence or the early twenties) continued for one or more decades, thus bringing the heavy drinker into the 35–44 year age band, and suicide associated with alcohol dependence tends to occur at an average age of approximately 40 years, with less dispersion around that age than is found in suicide associated with other causes. Chronic schizophrenia might also be implicated, although the contribution of this disease to suicide is much smaller than is alcohol abuse.^{16 17} Downward social drift in the history of suicides was demonstrated by Breed⁵ in his controlled study in New Orleans, though no such effect was found by Porterfield and Gibbs¹⁸ or by Shepherd and Barraclough;¹⁹ it is likely that the magnitude of social drift associated with chronic psychiatric disabilities varies according to the social conditions pertaining at a particular time, and may not be consistently demonstrable in modest size samples.

The second process, we speculate, is the impact of unemployment, especially long term. The association of unemployment and suicide is undoubted,²⁰ though there is some controversy about the reasons. Unemployment is more

common in lower social classes than upper, and it is known that the long term unemployment has particularly serious consequences for those in the middle age span.^{21 22} Several studies have shown that only about half of male suicides are actually in employment at the time of death.^{5 19 23} Whether being out of work is a consequence of mental illness, or is due to impersonal economic factors, or to complex interactions between the two, there can be little doubt that the sense of hopelessness associated with chronic unemployment must act as a further adverse factor conducive to suicide.

HIGHER PROPORTION OF UNDETERMINED DEATHS WITH NO SOCIAL CLASS ASCRIPTION

The last of the findings listed in table IV, concerning the association of undetermined deaths with the absence of a social class designation, holds only for England and Wales around 1971 and 1981, and not for Scotland. The former jurisdiction employs the undetermined category more sparingly than the latter; moreover the systems of legal enquiry in the two countries differ in many respects. A full explanation would clearly require further study.

The changes occurring between 1971 and 1981

within each region have also been considered but not analysed in detail. Over the decade the rate for suicide plus undetermined deaths within the age range 15–64 years increased in England and Wales by 29%, and by 28% in Scotland. Unfortunately comparison of social class rates across time is extremely hazardous owing to changes in the basis of classification. However, Goldblatt²⁴ recently concluded, after a series of careful adjustments for changes in social class definitions and other factors, that the social class differential for all cause mortality had indeed increased between 1971 and 1981. From our data the same is true for suicides and undetermined deaths. The rates have apparently increased in all social classes, but whereas in England and Wales in 1971 the standardised mortality ratios for social classes I and V were respectively 105 and 193 (in Scotland 93 and 166), by 1981 these were 85 and 226 (in Scotland 76 and 219). It seems unlikely that changes in definition could account for differences of these magnitudes, but the caveats concerning the comparability of social class data across time preclude a firm conclusion. Further progress would require longitudinal studies of serial cohorts, using consistent definitions.

Appendix 1

Male suicide plus undetermined deaths; mortality ratios (MR), England and Wales 1979–80, 1982–3

	Age (years)								
	16–25	25–34	35–44	45–54	55–64	n	16–64 Rate	MR	SMR
(a) Total population									
Classified	64	93	104	109	123	9778	18.1	99	96
Not classified	53	191	239	276	153	1418	20.1	109	139
All	60	99	111	116	125	11196	18.4	100	100
(b) Classified Social Class									
I	40	73	73	115	132	486	15.8	87	86
II	49	62	78	96	109	1796	14.7	81	78
IIINM	47	88	116	117	111	1071	16.8	93	95
IIIM	54	87	93	90	109	3079	15.6	86	87
IV	74	119	132	133	140	2498	27.3	150	151
V	138	274	315	213	206	1358	40.3	222	226
Total	64	94	106	110	124	9778	18.1	100	100
Social class standardised mortality ratios	57	92	105	106	114	11196	18.4	100	

SMR = standardised mortality ratio

Appendix 2

(a) Male suicide; mortality ratios (MR), Scotland 1979–80, 1982–3

	Age (years)								
	16–25	25–34	35–44	45–54	55–64	n	16–64 Rate	MR	SMR
(a) Total population									
Classified	70	88	113	146	123	1019	18.5	107	104
Not classified	42	66	102	36	26	64	8.4	49	61
All	62	87	113	141	117	1083	17.3	100	100
(b) Classified Social Class									
I	55	57	84	217	106	53	18.4	99	99
II	55	61	74	125	127	174	16.7	90	86
IIINM	39	63	101	126	69	80	14.0	76	78
IIIM	56	72	95	102	110	336	15.7	85	86
IV	89	106	131	142	99	211	20.9	113	112
V	103	211	256	283	201	156	35.1	190	194
Total	66	82	106	136	115	1019	18.5	100	100
Social class standardised mortality ratios	65	85	109	138	114	1083	17.3	100	

SMR = standardised mortality ratio

(b) Male suicide plus undetermined deaths; mortality ratios (MR), Scotland 1979–80, 1982–3

	Age (years)						16–64		
	16–25	25–34	35–44	45–54	55–64	n	Rate	MR	SMR
(a) Total population									
Classified	74	91	113	137	123	1416	25.7	107	104
Not classified	43	67	93	69	44	96	12.6	52	65
All	64	89	112	134	118	1512	24.1	100	100
(b) Classified Social Class									
I	53	45	71	156	76	57	19.8	77	76
II	48	58	73	107	108	217	20.8	81	78
IIINM	37	61	80	103	62	97	17.0	66	68
IIIM	61	73	94	99	114	474	22.1	86	87
IV	88	121	144	141	118	316	31.2	121	121
V	126	233	279	314	214	246	55.4	215	219
Total	69	85	106	129	116	1416	25.7	100	100
Social class standardised mortality ratios	66	88	110	129	114	1512	24.1	100	

SMR = standardised mortality ratio

Appendix 3

(a) Male suicide, mortality ratios (MR), England and Wales 1969–70, 1972–3

	Age (years)						16–64		
	16–25	25–34	35–44	45–54	55–64	n	Rate	MR	SMR
(a) Total population									
Classified	53	82	105	126	151	4810	11.8	104	100
Not classified	47	140	123	122	71	391	8.0	70	95
All	51	85	106	126	146	5201	11.4	100	100
(b) Classified Social Class									
I	44	66	127	145	176	274	12.8	108	110
II	39	76	83	108	136	819	11.1	94	89
IIINM	48	75	127	153	161	624	12.7	108	112
IIIM	34	59	74	93	123	1415	8.8	75	76
IV	79	98	115	139	154	993	14.1	119	116
V	102	201	222	208	201	685	21.8	185	181
Total	51	79	101	122	146	4810	11.8	100	100
Social class standardised mortality ratios	51	81	103	122	141	5201	11.4	100	

SMR = standardised mortality ratio

(b) Male suicide plus undetermined deaths; mortality ratios (MR), England and Wales 1969–70, 1972–3

	Age (years)						16–64		
	16–25	25–34	35–44	45–54	55–64	n	Rate	MR	SMR
(a) Total population									
Classified	56	80	102	123	151	5977	14.7	102	99
Not classified	46	150	158	169	104	560	11.5	80	106
All	53	84	104	125	148	6537	14.3	100	100
(b) Classified Social Class									
I	45	63	112	142	171	322	15.0	102	105
II	39	70	79	103	135	981	13.3	90	86
IIINM	51	73	121	148	153	753	15.3	105	108
IIIM	37	60	72	91	123	1757	10.9	75	76
IV	85	97	116	141	156	1257	17.8	121	118
V	114	203	239	216	220	907	28.9	197	193
Total	55	78	99	120	147	5977	14.7	100	100
Social class standardised mortality ratios	54	80	101	121	141	6537	14.3	100	

SMR = standardised mortality ratio

Appendix 4

(a) Male suicide,
mortality ratios (MR),
Scotland 1969–70,
1972–3

	Age (years)						16–64		
	16–25	25–34	35–44	45–54	55–64	n	Rate	MR	SMR
(a) Total population									
Classified	64	77	103	121	149	893	12.8	102	103
Not classified	38	60	105	100	50	55	6.3	50	66
All	57	76	103	120	142	984	12.5	100	100
(b) Classified Social Class									
I	33	78	63	152	145	38	11.6	91	93
II	83	69	71	86	132	121	11.3	88	84
III	44	59	88	99	127	361	10.2	80	82
IV	104	107	150	135	174	229	17.4	136	132
V	95	122	160	224	178	144	19.9	155	153
Total	63	76	101	118	146	893	12.8	100	100
Social class standardised mortality ratios	63	77	102	118	140	100			

SMR = standardised mortality ratio

(b) Male suicide plus
undetermined deaths;
mortality ratios (MR),
Scotland 1969–70,
1972–3

	Age (years)						16–64		
	16–25	25–34	35–44	45–54	55–64	n	Rate	MR	SMR
(a) Total population									
Classified	65	79	107	123	151	1371	19.7	104	104
Not classified	31	57	99	95	55	74	8.4	45	60
All	55	77	107	122	144	1481	18.9	100	100
(b) Classified Social Class									
I	87	56	75	153	115	58	17.8	90	93
II	76	69	68	83	126	179	16.8	85	81
III	46	61	84	108	124	563	15.9	81	83
IV	89	99	142	126	173	331	25.2	128	124
V	93	143	216	200	201	240	33.1	168	166
Total	63	75	103	118	145	1371	19.7	100	100
Social class standardised mortality ratios	63	77	105	118	140	100			

SMR = standardised mortality ratio

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