Occupationless Health

"I couldn't stand it any more": suicide and unemployment

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A Welshman who was 40 hanged himself after searching unsuccessfully for work for 10 months. The next day a letter arrived offering him a job. The letter the dead man left said: "I can't go on like this, reading and watching television all day. I'm drinking my unemployment money away." Was it unemployment or poverty that led this man to kill himself or was it alcohol? Or was it a combination of all three or none of them?

Such questions are impossible to answer, but even the most casual readers of British newspapers will have noted accounts of inquests where coroners have suggested that people (almost always men) have killed themselves because they could not find jobs. The journalist John Pilger selected 12 such stories from "a much longer list" collected between June 1983 and June 1984.¹ These accounts do not impress scientists much because there is no proof that unemployment caused these men to kill themselves, but they do impress the public; and they may thus have a bigger effect on politicians than scientific studies because—when the chips are down (and an election is in the offing)—politicians pay more attention to public opinion than to scientists.

Suicide versus parasuicide

But scientists have devoted considerable energy to studying the relation between suicide and unemployment, and Platt has collected no fewer than 156 relevant studies in a review that is unlikely to be superseded for some time.² This article draws heavily on his work.

Unemployment has been associated not only with suicide but also with the inelegantly named parasuicide, which the *Oxford Textbook of Medicine* prefers to call "non-fatal deliberate self harm" and defines as: "a deliberate non-fatal act, whether physical, drug overdosage, or poisoning, done in the knowledge that it was potentially harmful, and in the case of drug overdosage, that the amount taken was excessive."³ Despite the preference of the Oxford textbook, I will use the word parasuicide—as do most people writing on the subject. But it is important not to be deceived by the similarity of the words suicide and parasuicide into thinking that parasuicide is simply failed suicide: it is not. Suicide is usually associated with severe and often longstanding psychiatric or physical illness and is commoner in older people and in men; parasuicide, in contrast, is commoner in younger people and women and is usually not associated with longstanding psychiatric illness, although the patients have often experienced intense but short-lasting anxiety or depression. Parasuicide, too, is commoner in social classes IV and V and in deprived urban areas: some association with unemployment would thus be expected.

Studies looking for an association between suicide and unemployment are much commoner than those looking for an association with parasuicide, and the main reason for this is simply that parasuicide

is a modern phenomenon: it has increased rapidly in the past 20 years and now accounts for about a fifth of all medical emergency admissions. (Interestingly the most recent data suggest that the parasuicide rate has begun to fall, while the unemployment rate has continued to rise.) Although the older studies have thus been of suicide and unemployment, many recent studies are of parasuicide. These have the potential to be more rewarding; because there are many more cases of parasuicide than suicide prospective studies of individuals become a possibility and also the individuals are left alive to investigate. Nevertheless, these potential advantages have not led to much. And one disadvantage is that parasuicide is more difficult both to define and to measure than suicide.

Studies of suicide and parasuicide in the employed and unemployed

More than 150 years ago Falret suggested that suicide rates rise during economic depressions,⁴ and Durkheim (the father of the modern word "anomie") in his classic book on suicide confidently wrote: "It is a well known fact that economic crises have an aggravating effect on the suicidal tendency."⁵ Many contemporary researchers are less confident.

In his review Platt follows Dooley and Catalano⁶ in classifying studies of unemployment and both suicide and parasuicide into cross sectional versus longitudinal and individual versus aggregate. For each condition there are four possible categories of study: individual cross sectional, aggregate cross sectional, individual longitudinal, and aggregate longitudinal. This is not an entirely happy classification, and the jargon is intimidating, but the system is worth following because it provides some guide to a maze of often inadequate and contradictory studies.

Many uncontrolled series of suicides have found high unemployment rates, and two recent case-control studies have found

It's made me very quick tempered. I lose my temper just like that [he snaps his fingers]. I get bored very easily. I prefer to be on the go all the time. If I got a job I'd want to do it every hour of the day if I could, to stop me being bored. Just loafing about gets right up my nose. You can't even watch TV in the day, there's nothing on for the unemployed. As time goes on, I've got very pessimistic about getting another job. You reach the point where you get to the door of the interview and you say to yourself, what a waste of bloody time. The Jobcentre is useless: you spend quite a lot of time looking till you find a job you really like, you think great, then you get the girl to phone up. But it's always gone. It's really heartbreaking. You pick out any card you like in there, and I'll guarantee you won't get that job because it will be gone.

An unemployed deaf man quoted in *Inside the Inner City* by Paul Harrison.⁴⁰

significantly more unemployment among men who have killed themselves than among matched psychiatric controls.^{7,8} Roy looked at 90 psychiatric patients (53 men and 37 women) who had killed themselves and found that 38 of the men (72%) were unemployed compared with 23 (43%) of the psychiatric controls ($p < 0.02$).⁷ The difference was not significant among the women, and Robin *et al*, although they found significantly more unemployment among men who had killed themselves, found that among women more of the controls (5/50) than the cases (1/50) were unemployed. This may be something to do with the difficult problem of classifying unemployment among women (is a woman with two children under 3 unemployed because nobody pays her?).⁸

Platt found four studies that looked at suicide rates among the employed compared with the unemployed; generally rates are higher among the unemployed. But again the association is not so strong for women.^{9,12} Studies like these cannot tell us whether unemployment is leading to suicide or whether a psychiatric illness that leads to unemployment also leads to suicide. Some of these cross sectional studies of suicide and unemployment have looked at the "cause" of unemployment and several mention poor physical or mental health.^{13,14} Others have attempted retrospectively to work out how much unemployment contributed to death, and only one was unequivocal that it had—and the paper did not give adequate data to support the conclusion.¹⁵

Cross sectional studies of whole populations, which compare suicide rates and unemployment rates in different geographical areas (wards, boroughs, counties, or countries), are even less helpful. Some show a positive correlation, others show a negative one, and most find no significant relation.

Following the unemployed through time

Platt found eight studies that looked at individuals and used a longitudinal design.¹⁶⁻²³ Three were retrospective and found some association between suicide and unemployment or occupational loss.¹⁶⁻¹⁸ One British study looked at the work records of 40 men and 35 women who had killed themselves and compared them with those of 150 controls matched by age, sex, location, and marital status.¹⁸ At the time of death significantly more of the cases than the controls were unemployed (9 versus 0) or off sick (6 versus 4), and in the three years before death 95% of the controls had either kept the same job or changed it only once compared with 66% of the cases. Of the nine patients who had killed themselves when unemployed, two had been dismissed (one for drinking), and seven had left voluntarily (five impulsively and two because they could not keep up with the work).

The five other individual longitudinal studies were prospective, but none is the perfect study, which would have detailed and validated information on the health of a large employed group representative of the general population and then closely followed it

for years so that the work records of those who eventually killed themselves could be compared with the records of those who didn't. Because suicide is a rare event such a study could probably never be mounted. The study that comes closest is that of the Office of Population Censuses and Surveys that I described in the last article

Above—Unemployed men scratch for coal at a slagheap in Newcastle, December 1938 (copyright BBC Hulton Picture Library). The picture was used by the Germans in the last war to illustrate the terrible conditions that existed in Britain. Below—Unemployed men search for saleable objects among the waste being dumped at Bidston Moss, Merseyside, 1985 (photograph by Peter Marlow, copyright Magnum). Jack describes the scene: "These are people up to their shins every day in old tea bags, cat food tins, and onion skins, sliding and falling on slopes of polythene bags and bacon rind, scrambling to get a copper wire before the next man, seizing a pair of discarded shoes, triumphantly unearthing a bicycle pump, shouting warnings when the municipal bulldozer threatens to bury half a dozen of them in a grave of discarded nylon stockings and fish finger cartons."¹⁹

(16 November, p 1409): it showed a statistically significant association between unemployment and suicide, but the authors could not be confident either that poor mental health had not led to both unemployment and suicide or that some other confounding variable such as educational status, housing, or alcohol problems could not have accounted for the association.¹⁹

Two large Scandinavian prospective studies of psychiatric

patients related the work experience of those who eventually killed themselves with matched controls—and they found contradictory results.^{20, 21}

Aggregate studies

The largest number of studies of unemployment and suicide have been aggregate longitudinal studies, which look for an association between unemployment rates (or other indicators of economic recession) and suicide rates over time. Most of the 30 studies find a positive correlation—indeed, all but one of the 22 American studies do.² Durkheim's confidence was thus not too misplaced, but

relative risk was related strongly to length of unemployment: it was nine to one among those unemployed for fewer than four weeks; five to one among those unemployed for five weeks to six months; 10 to one among those unemployed for 6 to 12 months; and 19 to one among those unemployed for more than a year. These figures fit with one of the "phases" models of unemployment, which suggests that the initial shock causes much distress and that people then adapt only to become steadily more distressed if they do not find a job after many months.

Thus the evidence is strong that many of those who are seen after parasuicide are unemployed and that risk of parasuicide is much higher among the unemployed than the employed. Oddly, however, unemployment is rarely mentioned by the unemployed as a cause of

Incidences of parasuicide among employed and unemployed men in Edinburgh city and measures of relative and population attributable risk 1968-82

Year	Incidence of parasuicide 100 000			Relative risk ratio*	Population attributable risk†	Maximum percentage of overall incidence attributable to unemployment‡
	Among unemployed	Among employed	Among all economically active			
1968	2824	98	172	29.0	74	43.2
1969	2284	117	188	19.6	71	38.1
1970	1955	122	204	16.1	82	40.4
1971	2302	115	238	20.0	123	51.5
1972	2106	141	252	14.9	111	44.0
1973	2458	134	240	18.3	106	44.2
1974	2374	149	247	15.9	98	39.6
1975	1991	139	239	14.4	100	42.1
1976	2052	173	299	11.8	126	42.0
1977	1779	153	284	11.6	131	45.9
1978	1647	150	257	11.0	107	41.8
1979	1523	160	253	9.5	93	36.6
1980	1663	143	260	11.6	117	45.0
1981	1743	154	322	11.3	168	52.3
1982	1345	114	272	11.8	158	57.8

*Parasuicide incidence among the unemployed to parasuicide incidence among the employed.

†Parasuicide incidence among all economically active men minus parasuicide incidence among employed men.

‡Population attributable risk divided by parasuicide incidence among all economically active men.

evidence from Britain is more conflicting. Swinscow, a past deputy editor of the *BMJ*, found a positive correlation between unemployment and suicide in Britain for 1923-47,²⁴ but Kreitman and Platt found a significant negative correlation among men for 1955-80.²⁵ Cleverly, however, they discovered that this negative association arose in the eight year spell 1964-72 and hypothesised that it had something to do with the introduction of natural gas in Britain. Kreitman had argued previously that this had been the cause of the significant fall in suicide from carbon monoxide poisoning,²⁶ and once suicides from domestic gas poisoning had been excluded from the analysis there was a significantly positive correlation between suicide and unemployment in Britain for 1955-80.²⁵

Unemployment and parasuicide

Many studies have reported on unemployment rates among patients seen after parasuicide. Whenever comparisons are possible the rates seem to be higher than those among the general population. The first cohort studies of patients who had deliberately harmed themselves—from Edinburgh and Newcastle in the early 1960s—showed that about a third of the men were unemployed, and this proportion has had a tendency to rise ever since.^{27, 28} In 1982 in Edinburgh 62% of the 501 men seen after parasuicide were unemployed as were 47% of the 213 seen in Oxford (unpublished data quoted by Platt²).

Studies that have compared parasuicide rates among the unemployed and the employed have tended to show much higher rates among the unemployed.^{29, 30} Kessell *et al* showed that in a provincial region of Victoria, Australia, the parasuicide rate per 100 000 men for 1971-2 was 21 for professionals and managers, 109 for white collar workers, 234 for blue collar workers, and 2686 for the unemployed.³⁰ In Edinburgh Platt and Kreitman found that the rate per 100 000 men for 1968 was 98 for the employed and 2824 for the unemployed, a ratio of nearly 29 to one (see table).³¹ The ratio of

them injuring themselves.^{32, 34} Almost always the main precipitating event is a row or a fight with a loved one. But these results do not mean that unemployment is unimportant in leading to parasuicide, for it is axiomatic that there is a considerable gap between why we think and say we do things and the "real" reason why we do. Also unemployment may make people more likely to injure themselves but may only rarely be what precipitates the injury—most, after all, have been unemployed for more than six months when they injure themselves.

Aggregate cross sectional studies of unemployment and parasuicide have been carried out in Edinburgh^{35, 36} and Brighton,³⁷ and they have shown a positive and significant association—that is, areas with more unemployment tend to have more parasuicide. There are also strong associations with other indicators of poverty and deprivation.

No good individual longitudinal study of parasuicide and unemployment has been carried out, although this might be possible with parasuicide because it is so much commoner than suicide. (Platt disagrees and suggests that a prospective cohort study is not practicable or feasible.³) There have, however, been aggregate longitudinal studies of parasuicide and unemployment from Edinburgh and Oxford.³⁸

The Edinburgh study showed overall a strong positive association between parasuicide and unemployment rates among men for 1979-82 (table)^{31, 36}—although it broke down in 1982 and has puzzlingly been negative for 1983 and 1984 (S Platt, personal communication). The fall in the relative risk of parasuicide among the unemployed compared with the employed may, the authors hypothesise, be due to more mentally healthy people finding themselves unemployed when overall unemployment is high. When unemployment is low the selection effect, whereby the unhealthy are more likely to lose their jobs, may be more powerful. Platt and Kreitman also found that the relative risk of parasuicide was lower in those areas of Edinburgh with high unemployment: this may be because the stigma of unemployment is less in such areas. This fits with a further

Two men who go every day to the dump at Bidston Moss (see picture, p 1564) describe the experience³⁹:

"I couldn't believe it when I came here first. For the first two weeks I just stood here and looked at them. Well, I'd never been out of work before and never seen anything like it. But there's not much else you can do, you know what I mean? Just now the kids' bedroom needs redecorating. I could never afford the paper and paint on social security. This way you earn a bit extra, but I still can't stand the shite and the dogs. You get about half a dozen dead dogs up here every day. And cats. People just put them into plastic bags. Even now if I come across shite or a dead dog, that's it. I just walk down the road and go home for the day."

"You come every day and meet your mates. It's like a proper job. It's so boring being unemployed. I eat, breathe, and sleep tip. I'd still come if I won the pools. It's part of life, getting your hands dirty, isn't it?"

finding that the relative risk is highest in social classes I and II despite both unemployment and parasuicide being much commoner in lower socioeconomic groups. In a rather sad way these last results might be seen as optimistic: once unemployment becomes very common in particular groups then the misery is reduced.

The data from Oxford also show a correlation between unemployment among men and the proportion of employable men who were unemployed when they injured themselves; the risk of parasuicide was about 12 to 15 times higher among the unemployed than the employed.³⁸ The risk of parasuicide was also related to duration of unemployment, being 26 to 36 times higher among those unemployed for more than a year than among the employed. Hawton and Rose from Oxford looked too at the psychiatric and alcohol histories of those injuring themselves and found that, compared with the employed, twice as many had been in psychiatric care, a quarter as against one in ten were receiving psychiatric treatment at the time, and alcoholism was diagnosed three times more often.

Conclusions and mechanisms

Clearly both suicide and parasuicide are associated with unemployment. The unemployed are overrepresented among both people killing and non-fatally injuring themselves, and suicide and parasuicide rates are higher among the unemployed than among the employed. Most longitudinal studies of individuals show more unemployment and job instability among those who kill or injure themselves non-fatally, and all aggregate studies from the United States show that unemployment and suicide rates have changed together. The seemingly inconsistent results from Britain in the 1960s can with considerable confidence be attributed to the introduction of natural gas.

But the question remains: How is unemployment associated with suicide and parasuicide? Although there is good evidence that unemployment causes deterioration in mental health (9 November, p 1338), it does not prove that unemployment on its own causes either suicide or parasuicide. The other possible explanations are that people with poorer mental health are more likely to become unemployed or that both the higher unemployment and suicide and parasuicide rates are caused by other factors—for instance, poverty or alcohol problems.

The answer is almost certainly that all three explanations contribute. Those in poorer health seem to be more likely to become unemployed and find it more difficult to get another job. The mental

health of most people suffers during periods of unemployment and continues to deteriorate as the time without work continues. And these miseries are associated with poverty, unhealthy changes in lifestyle, poor education, bad housing, and other factors that may contribute to higher suicide and parasuicide rates.

There will be no simple explanations. Students of medicine and particularly of epidemiology seem to find themselves grappling with problems that are ever more complex and ever more resistant to their traditional methods of study. The epidemiology of smoking related disorders is more complicated than the epidemiology of cholera, and the epidemiology of disorders associated with alcohol is more complicated than both; the range of conditions associated with alcohol is wider; the data on which hypotheses must be generated and tested are weaker; there are more confounding variables; the latest round of concern with the issue is newer; and the problem is just more complicated. And the epidemiology of unemployment and health is more complicated still for essentially the same reasons. What will be next?

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