Occupationless Health

"I'm just not right": the physical health of the unemployed

RICHARD SMITH

Medicine's bias is towards physical rather than psychological illness: in his training a doctor spends most time studying physical illness, and he will often go to great lengths to exclude a physical cause for a patient's symptoms, even though he is convinced that the cause is psychological. Readers may therefore be surprised that this article on the physical health of the unemployed comes after two articles on their psychological health, one on mortality, and another on suicide and parasuicide. But this reversal of the usual bias reflects the superiority of research into unemployment and psychological health compared with that into physical health.

Despite Britain having more than three million unemployed people nobody has ever started the large longitudinal study that would have been needed to tell us exactly how unemployment affects physical health or, indeed, how much more at risk those in poor physical health are of becoming unemployed. The best studies that we have—those from the Office of Population Censuses and Surveys' longitudinal study¹ and from the British Regional Heart Study²—are both spin offs from studies undertaken for other reasons; both therefore offer only partial insights into the problem. Both, too, collected their original data before unemployment in Britain had really taken off.

The failure to start a high quality study of this problem is an indictment of politicians, doctors' leaders, and those who decide research priorities. Whether nobody saw the need for such a study or whether a study was proposed and rejected because of the political sensitivity of unemployment I do not know, but a variety of people around the country have suggested that the government has discouraged rather than encouraged research into unemployment and health.

The Michigan study

One prospective longitudinal study that did produce information was done in Michigan in the 1970s. It is often quoted because it was for a long time the only well designed and, more importantly, controlled study.^{3,7} The study was, however, small and the initial field work was done in 1967, when unemployment was not nearly as severe as now—and most of the 113 men made redundant got other jobs quite quickly. Cook and Shaper have said that the results are less interesting than the methods, and they suggest that it should be thought of as a pilot study.⁸ Unfortunately nobody has satisfactorily repeated the study despite almost 20 years passing and unemployment becoming a much bigger problem all round the world.

I have already described the design and some of the results of this study (9 November, p 1338). The researchers used many different measures of health—including a "days complaint score," a symptoms scale, and a depression score—and many did not produce satisfactory results, but they also measured blood pressure and serum concentrations of cholesterol and uric acid.

The sick versus the unemployed role

<i>Sick</i>	<i>Unemployed</i>
Exempted from certain social obligations and commitments	Not exempted from social commitments; expected to fulfil them irrespective of financial and emotional problems
Cannot voluntarily recover or be held responsible for his condition	Expected to be able to recover and held responsible if he cannot find work
Must want to get well and be willing to seek and accept treatment	Must regard unemployment as undesirable and temporary and must accept work of any type and at any wage
Continuation depends on becoming a patient and accepting competent (professional) help	If he does not find a job he is deemed lazy or incompetent and "has something wrong with him"
Can only be granted if there is adequate evidence of internal disease	Permanent unemployed status granted only if there is evidence of unemployability—chronic disease, total abandonment, or demoralisation

The researchers found no significant changes in blood pressure among the controls from just under two months before the plants closed until two years after. Nevertheless, among the men made redundant there was a significant drop in systolic (5.32 mm Hg) and diastolic (3.06 mm Hg) blood pressure from the early phase when they were expecting redundancy, unemployed, or just starting new employment to the later phase when most were settled in new jobs. Unfortunately the researchers have no data from before closure was mooted, but they showed a significant increase in both systolic and diastolic blood pressure as closure came closer. They also showed that those whose blood pressures remained high longer had more difficulty finding a permanent job. Although these data may be statistically significant they are of doubtful clinical importance, and there were too few men who could be classed as hypertensive to allow statistical analysis. Another flaw is that the nurses who took the blood pressure knew which men had been made redundant, although, as the authors point out, they did not have records of their previous measurements and it is the change that is being measured. For all these reasons the results cannot be seen as very important.

Another report from the Michigan study showed that uric acid but not cholesterol concentrations were higher in men expecting the closure of the plants than in controls.⁴ The uric acid concentrations dropped sharply to normal when men found new jobs quickly but otherwise remained high until men settled into new jobs. Cholesterol concentrations rose when men became unemployed and dropped later when they found jobs. Again the methods are more interesting than the results because the clinical importance of these results is not clear. They show that statistically significant bodily

Slums in Dundee in the 1940s (photograph and copyright W Suschitzky) and in Glasgow in 1985 (picture by Rick Mathews, copyright International Freelance Library).

changes can be detected in people experiencing redundancy and unemployment and that these are reversed with re-employment, but whether they matter remains unknown. The poverty of the conclusions is well illustrated by a sentence from a later report on the study: "In a larger sample an excess of diabetes, peptic ulcer, and gout might appear and that there may have been a temporary increase in atherogenesis which might have future implications." (This reminds me of a notice I once saw in a tobacconist's window advertising "a small miniflatlet.")

British Regional Heart Study

Clinically more important results have come from the British Regional Heart Study despite its being designed to answer other questions.² Detailed information was collected from January 1978 to June 1980 on 7735 men aged 40-59 who were randomly selected from representative general practices in 24 medium sized British towns. No inner city areas were included and only two of the towns, Hartlepool and Merthyr Tydfil, had high unemployment. The men were asked various questions about employment—including "If you are unemployed is this because of ill health?"—and on the strength of their answers were classified into employed (7165), ill unemployed (258), not ill unemployed (150), retired (55), and unemployed but not clearly ill or not ill.⁷ Thus 5.3% of the men were unemployed, lower than the national average at the time and much lower than the present 13%. As would be expected, the unemployed were slightly older and less skilled than the employed.

Although the authors do not make much of it, I find it surprising and interesting that 63% of the unemployed and 76% of the 259 who had been unemployed for more than a year should say that they were unemployed because of ill health, and some of those who had retired had also probably done so because of poor health. Probably some men answered yes to the question because the stigma of unemployment is less if you are ill and because the "sick role" is much preferable to the "unemployed role" (table 1).⁹ Indeed, a woman has written to me to describe how demeaning it is for an unemployed person who has a working spouse and no dependents because he or she is not then entitled to any other benefit once he becomes ineligible for unemployment benefit: "My husband," she says, "was one of the 'lucky' ones whose unemployment made him very ill."¹⁰ He then became eligible for sickness benefit.

When such a high percentage of those without jobs say that they have lost them because of ill health no wonder there are powerful associations between unemployment and ill health. But as unemployment increases so broader categories of workers—for example, the skilled as well as the unskilled and the healthy as well as the ill—lose their jobs, and so the association between unemployment and ill health may weaken.

The men in the study were asked whether their doctors had diagnosed any of 12 illnesses (angina, heart attack, other heart trouble, high blood pressure, stroke, diabetes, peptic ulcer, gout, gall bladder disease, thyroid disease, arthritis, bronchitis, and asthma). They were also asked standard questions to determine whether they might have bronchitis or ischaemic heart disease. Their blood pressure was measured, and they completed simple lung function tests.

About half of the employed (49%) and the unemployed who were not ill (47%) but 82% of the ill unemployed recalled their doctors having diagnosed at least one illness. The screening showed that both the groups of unemployed were more likely to suffer from bronchitis, obstructive lung disease, and ischaemic heart disease, even after standardisation for age, social class, town of residence, and smoking state. The higher

prevalence compared with the employed was significant for all conditions in the ill employed but only for ischaemic heart disease in the not ill unemployed. For hypertension there were no significant differences.

This study does not allow conclusions on whether unemployment causes ill health or vice versa, but the authors hope that the information that will continue to emerge from the study will lead to more confident conclusions. Indeed, they have sent the men in the study a questionnaire asking about work experience and have

promised an analysis linking the answers to the health information that they are gathering.

DHSS cohort study

Yet another study that was not specifically designed to answer questions on health and unemployment but that did produce some information was the Department of Health and Social Security cohort study.¹¹ It was started in response to public worries about “scroungers” and the worry that some people were better off on the dole than in work—very few were (2 November, p 1623). A national sample of 2300 men who became unemployed in the autumn of 1978 was asked questions relevant to health one, four, and 12 months after registration; 12% of the sample was unemployed for the whole year. Among the whole sample 12% had spent some time out of work sick in the year before the study began, and among those who were unemployed for the whole year 22% had. Older men were both more likely to have been out of work sick and to have been continuously unemployed. During the year of the study only 8% of the sample had time off sick, which might be interpreted as representing an improvement in health. But the fall may well be due, the authors warn, to underreporting of sickness because of the “time and effort” necessary to move from unemployment benefit to sickness benefit and back again.

The men were also asked whether they had a disability or a health problem, and at the first interview 19% said that they had. Again the proportion increased with age: 9% among those under 25 to 38% among those aged 50-59. During the year of the study 18% of those who said that they had a disability remained continuously unemployed compared with 11% of those without a disability. Nevertheless, at each interview the proportion reporting a disability or health problem remained about the same. Again there is no evidence of an increase in self reported health problems. At the second and third interviews the men were asked whether their health had stayed the same, got better, or got worse. About three quarters at both interviews said that it had stayed the same, and roughly equal numbers said that it had got better or worse.

The authors “cautiously” concluded that if there is an effect of unemployment on health then it is small: there was little decline in health even among those unemployed for the whole year. Also most people who become unemployed are healthy and stay that way, but those who start with a disability are more likely to stay without a job and so the long term unemployed will contain a higher proportion of

the unhealthy. Another conclusion is that the “sick” among the employed are not a static group.

The caution is because there is no control group, and the information was all self reported, the study lasted for only a year and was small, and there was attrition in the sample from the original 2300 to 1500 by the third interview. These limitations are so severe that the study might be disregarded but for the fact that we do not have much that is better; the authors concluded that “the effect of unemployment on health will be . . . a fruitful area for future research.” There is little evidence that the department that sponsored the research has heeded this conclusion.

United Kingdom Training Survey

Further, and again limited, information comes from the United Kingdom Training Survey—a complicated statistical analysis of the remembered work experience of 17 707 men who were available for work from 1965 to 1975.¹² The authors concentrated on those who were either “sick” or “unemployed” for over three months, trying to work out whether such an experience increased the probability of another such experience. A spell of sickness, they concluded, made another such spell more likely, as did an experience of three months or more of unemployment, but there was little evidence that a spell of unemployment made sickness more likely.

The limitations of this study were that no information was given on sample selection, all the information was based on recall, and three months was a long time to be unemployed in 1965-75.

The Calne and Miami studies and use of health services

People do not visit their doctors only when they are sick and many people who are sick do not seek professional help, but we can get more information on how unemployment affects health by looking at how those without jobs—and their families—use health services. Warr has summarised several aggregate studies from America that have searched for associations between hospital admission rates and unemployment, and they produce conflicting evidence.¹³ Some authors who have found increases in hospital admissions in association with unemployment think that the mechanism is more that unemployment “uncovers” illness rather than “provokes” it; thus the health services may be more accessible to the unemployed, they may have more time to attend, or they may feel less able to cope with usual illnesses.^{14 15} Some authors have suggested that unemployment may be associated with reduced visits to doctors and hospitals because those who are just clinging on to jobs may be reluctant to go sick.^{13 16}

The DHSS cohort study showed that the unemployed used health services more than the general population, as measured from the General Household Survey, but the authors did not control for disability or for socioeconomic status.¹¹ The study also showed that the long term unemployed did not consult general practitioners more often than the short term unemployed.

Jacobsen, in contrast, studied the workers at a factory that had closed and found that those who lost their jobs sought medical advice significantly more often in the month in which the factory closed and in the following month than they did in the same months in the previous year.¹⁷ A better study was of the closure of a sausage factory in Calne, Wiltshire, by Beale, a local general practitioner, and Nethercott, a statistician. They showed a significant 20% increase compared with controls in the consultation rates of the families of 80 men and 49 women from the time they knew the factory might close—two years before it did close—until two years afterwards.¹⁸ Visits to hospital outpatient departments also increased by 60%—despite the nearest hospital being 17 miles away—and these may be more likely than general practitioner consultations to be for definable physical morbidity. Beale and Nethercott point out that if similar increases are occurring in the families of the 3.3 million unemployed people in Britain then there must be considerable costs to the National Health Service.

Another recently published study that was controlled has also

My husband is disabled but seeks work. He has been out of work a number of years. I also have a son just left school who is out of work. He is not the type of lad who does not seek work. He has a pile of letters—about 70 to be precise—about jobs he has written off for. We have got to the point where if we see a van with an address on he jots it down and he writes off. There are no vacancies but he might be lucky one of these times. We have to live with not enough money for the things other people take for granted, such as a weekend joint. This is a luxury for us. Our weekend joint is strips of breast of lamb, turkey wings, or even a tin of corned beef. We survive on stodge such as potatoes, rice. Chips are a main meal with egg. The unemployed take a lot of stick. They are made out to be scroungers and weak people. It's not them, it's the system. We treat as luxuries what other people take for granted—good meals, nice clothes, holidays—and just being able to buy something without thinking what will I have to do without to buy this item. And it's always thinking, “No, I don't really need it.” And you always walk away feeling really low. You feel let down, full of stress, ratty with the family and friends. I dread Christmas coming on.

Extract from a letter quoted in *Unemployment and the Family* by Jennie Popay²⁰

found increased consultation rates among the unemployed.¹⁹ As part of a prospective study of 300 men aged between 35 and 60 and living in Miami Linn *et al* identified 30 who had lost their jobs but not been fired. They then followed them up and compared their health with 30 closely matched controls. At the beginning of the study—in 1979—the two groups had similar psychological and physical health, but over the next six months the unemployed were significantly more likely to suffer a deterioration in mental health (although there was a wide range in response, with some improving) and significantly more likely to see their doctor, spend days sick in bed, and take medicines. In six months the employed visited their doctors 1.2 times on average, whereas the unemployed visited 5.9 times. The unemployed, however, had on average almost exactly the same number of diagnoses made (1.9) as the employed (1.8). The study also showed strong correlations between measures of psychological and physical health, and the lower the degree of social support of the unemployed man and the lower his self esteem the more likely he was to visit his doctor.

This is an important study but a small one. Furthermore, the authors do not know how stressful were the jobs the unemployed lost, and as the study began after the men had lost their jobs nothing is known about when the changes in health began. Nor, because of the short follow up, do the authors know if the unemployed men will adapt the longer they are unemployed.

Conclusions

The studies discussed here have produced conflicting information on how unemployment might affect physical health, and most have severe methodological weaknesses. A previous article (23 November, p 1492) presented the evidence on unemployment and mortality, with the conclusion that we could not be certain, although we could be fairly confident, that unemployment caused extra and premature deaths. Similarly, we cannot be certain that

unemployment causes extra physical illness, although the best evidence suggests that it does. As a group the unemployed are, however, more unhealthy than the employed and clearly the unhealthy have a higher chance of becoming and staying unemployed.

The next article will consider how unemployment may damage families.

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It appears that sometimes gross bacterial contamination, particularly coliforms, can contaminate the chilled water section of vending machines. How safe are these machines?

Vending machines for dispensing hot drinks have been available for many years and provided that they are properly maintained will deliver beverages of good bacteriological quality even though the supplied water may be considerably contaminated.¹ More recently, vending machines capable of delivering chilled drinks have appeared. These consist essentially of a chiller unit delivering a neutral base (syrup) in a semi-frozen form (slush) which is added to a fruit juice flavoured according to choice. Previously bacteriological sampling of the neutral base has given rise to concern in that high viable counts of *Pseudomonas species*—for instance, 5×10^6 per ml—were commonly found, together with (less commonly) non-faecal coliforms; *Escherichia coli* rarely seems to have been isolated.² These findings were related to doubtful maintenance and indicated that potential enteropathogens, if introduced, might proliferate within the machine to levels capable of causing illness. Other factors thought to be contributing to these high bacterial counts included the rise in temperature associated with switching off the refrigeration unit overnight (for reasons of economy), frequent topping up of the syrup reservoir without prior cleaning, and the use of plumbing materials that might assist the proliferation of certain bacteria. Nevertheless, despite all this, I have been unable to find any reports of illness associated with the consumption of such chilled beverages in the United Kingdom.

These findings prompted a review of the recommendations relating to the installation and maintenance of machines delivering chilled beverages and to the manufacture of a more acidic syrup base. Briefly, it is now recommended that the water supply to the machine must be of potable quality—that is, directly off a rising main; that the neutral base should be prepared for use strictly in accordance with the manufacturer's instructions; that the dispensing apparatus should be regularly thawed, drained, and disinfected with a combined detergent/disinfectant at shorter intervals than hitherto; and that the fittings used should conform to the requirements of the United Kingdom water fitting bylaws scheme.³ Provided that this regimen is

conscientiously followed, these machines should deliver beverages of good bacteriological quality and will not pose a health risk to the consumer.—J V DADS WELL, consultant microbiologist, Reading.

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What is the origin of the term Stockholm syndrome?

"Stockholm syndrome" is a curious and unsatisfactory term that refers to the positive bonds that sometimes develop between hostages and their captors during a lengthy siege. For example, cases are recorded in which a hostage has actively hindered police action to release him by warning his captor of danger. The term came into fashion after a bank raid in Stockholm in 1974 that turned into a siege during which a female hostage had sexual relations with the robber and after he had been sent to prison continued to visit him. The phenomenon of developing sudden and strong affective bonds with strangers is not confined to criminal sieges: it may happen when people are thrust together in other emotional, especially life threatening, circumstances. Several psychodynamic theories have been postulated but a simple explanation could be that an intensely gregarious animal who is very vulnerable when alone needs to develop strong group bonds when under extreme threat, and bonding or identification with an aggressor may well reduce the aggressor's hostility and ability to destroy the victim. Political and religious conversions under emotional circumstances have been described from biblical times onwards.—J GUNN, professor of forensic psychiatry, London.

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