

The effect of unemployment on mental health

Gregory C. Murphy*

Faculty of Health Sciences, La Trobe University, Australia

James A. Athanasou

Faculty of Education, University of Technology, Sydney, Australia

Sixteen recent longitudinal studies are examined for evidence relevant to the claim that a change to one's employment status affects one's mental health. Although there were limitations to the set of studies examined, most of the studies supported this claimed relationship. Examination was then made of the size of this effect. In carrying out this examination, the set of study results were divided into two categories: (a) those addressing the question of the extent to which *gaining* employment impacts on mental well-being; (b) those addressing the question of the extent to which employment *loss* impacts on mental health. The meta-analyses indicated that there was a weighted effect size of .54 for the first question, and a smaller weighted effect size (.36) for the latter question.

Depressive affect is probably the most frequently studied psychological variable among unemployed people. In the 10 years since O'Brien (1986) reviewed the literature on the psychological effects of unemployment, 16 longitudinal studies have appeared in MEDLINE or PSYCLIT to complement the large number of cross-sectional studies which have compared employed and unemployed persons on various measures of personality, mood and psychiatric vulnerability. With the addition of these recent longitudinal studies it is possible to attempt to summarize what is known about the mental health consequences of unemployment, even while acknowledging certain methodological issues that continue to constrain the study of this aspect of the psychology of unemployment.

In this article we review what is known about the mental health effects of unemployment. We do not pay detailed attention to personal and contextual factors which might limit the validity of any generalizations about the nature and extent of the relationship between unemployment and negative affect, as our main aim is to consider the scientific evidence for the claim that job loss generally affects the mental health of the unemployed. A second aim of the paper is to describe the size of any demonstrated effect.

*Requests for reprints should be addressed to Gregory C. Murphy, Faculty of Health Sciences, La Trobe University, Melbourne, Victoria 3083, Australia.

Table 1. Longitudinal studies of the mental health effects of unemployment: 1986–1996

Study	Sample	Psychological measure	Results
Bolton & Oatley (1987)	49 British recently unemployed men and a matched sample of 49 employed men were interviewed and then followed up 6–8 months later.	Beck Depression Inventory (Beck <i>et al.</i> , 1961).	The unemployed group became significantly ($p < .01$) more depressed between time 1 and time 2; the re-employed group became significantly less depressed ($p < .05$).
Claussen, Bjorndal & Hjort (1993)	291 unemployed Norwegians (83% of a random sample of 310 registered unemployed) who were assessed in 1988 and again in 1990.	(i) Hopkins Symptom Checklist (see Derogatis <i>et al.</i> , 1974); (ii) 28-item version of GHQ.	The prevalence of mental disorder was reduced by getting a job; however only the depressive subscale of the Hopkins' scale showed significant ($p < .05$) differences.
Dew, Bromet & Penkower (1992)	141 female American blue-collar workers, of whom 73 were subsequently laid off.	Hopkins Symptom Checklist (Derogatis <i>et al.</i> , 1974).	After controlling for baseline variables, the 'lay-off' variable remained a significant predictor ($p < .05$) of depressive, but not anxiety, symptoms at follow-up. There was little evidence from longitudinal analysis of change scores that a shift from unemployment to employment or the reverse transition had significant effects on psychological well-being but unemployment attributions were systematically affected ($p < .459$).
Feather & O'Brien (1986)	Four subgroups of Australian school leavers ($N = 508$) who were tested in 1981 and again in 1982. Subgroups were (i) employed–employed; (ii) employed–unemployed; (iii) unemployed–employed; (iv) unemployed–unemployed.	1. Self-concept measures (6). 2. Value measures (5). 3. Locus of control (Rotter, 1966). 4. Affective measures (3).	Depression increased in the two unemployed groups ($p < .01$) and decreased in the other two groups ($p < .05$). Authors concluded that 'the impact of unemployment on depression has been surprisingly strong and consistent' (p. 177).
Frese & Mohr (1987)	51 German unemployed male blue-collar workers were assessed and re-assessed two years later, when four groups could be distinguished: (i) the employed; (ii) the unemployed; (iii) the retired; and (iv) the re-unemployed.	Depression scale of Zung (1965).	

Study	Sample	Psychological measure	Results
Graetz (1993)	Almost 9000 young Australian men and women were interviewed and then re-interviewed on three subsequent occasions over the subsequent four years. 6151 respondents remained active at Wave 4.	General Health Questionnaire (12-item version).	Among employed people who became unemployed, there was a significant ($p < .01$) lowering of psychological well-being; unemployed people who subsequently became employed had significant ($p < .01$) improvements in mental health.
Hammer (1993)	A representative sample of 1997 young (17–20 years) Norwegians were assessed three times over four years (1985–1989).	10 questions about anxiety and depression from the SCL-23 (Derogatis <i>et al.</i> , 1974).	While mental health before unemployment explained most of the variance in 1989 mental health, unemployment itself had a significant ($p < .01$) negative effect on changes in mental health symptoms.
Iversen & Sabroe (1988)	1275 male Danish shipyard employees who were followed up over 2 years.	12-item version of the GHQ	Movement to or from employment was associated with significant changes in psychological well-being.
Lahelma (1992)	703 unemployed Finnish males and females who answered a questionnaire in 1993 and again more than a year later.	12-item version of the GHQ.	Employment had a strong impact on the improvement in mental well-being between the two measurement points.
Layton (1986)	101 male skilled and semi-skilled British workers facing selective redundancy, 39 of whom subsequently became unemployed.	60-item version of the GHQ.	At the second testing there was a significant ($p < .05$) increase in score for the unemployed, suggesting a decline in general mental well-being.
Liem & Liem (1988)	41 white-collar workers, and 41 blue-collar male American workers who had recently lost their jobs were interviewed four times over the subsequent 12 months.	Bradburn's (1969) Affect Balance Scale, Derogatis (1977) Brief Symptom Inventory.	The workers who found jobs prior to the second wave of interviews (around 4 months post initial job losses) exhibited a 'dramatic' ($p = .92$) decline in psychological symptoms.

Table 1. (continued)

Study	Sample	Psychological measure	Results
Morrell, Taylor, Quine, Kerr & Western (1994)	Two cohorts of 15 to 24-year-old Australians were surveyed annually over 4 years: one cohort ($N = 8995$) was from the general population, the other ($N = 2403$) from the Commonwealth Employment Service. Excluded from the analyses were those who had pre-existing health or other problems and those who experienced problems between annual follow-ups.	12-item version of the GHQ.	'We have established that the movement of young people from employment into unemployment will increase the chances of being psychologically disturbed by approximately 50% . . . gaining employment after being unemployed will increase the chances of recovery from psychological disturbance by approximately 60–70%' (p. 1563).
Payne & Jones (1987)	90 'middle-class' and 54 'working-class' previously unemployed British men were followed up 12 and 24 months after an initial cross-sectional investigation.	12-item version of the GHQ, plus the anxiety and depression scales derived from the GHQ.	Respondents in both social class groups perceived much less psychological distress ($p < .001$), anxiety ($p < .001$) and depression ($p < .001$) after becoming re-employed.
Schaufeli & Van Yperen (1992)	Two Dutch samples were studied; a group of students leaving technical college (sample 1, $N = 635$) and a group of technical college graduates who had been unemployed for a year or more (sample 2, $N = 487$). Five waves of assessment were carried out over 2 years (i.e. 6-monthly). For the present review, sample 2 results are most pertinent.	Symptom Checklist 90 (Arrindell & Ertema, 1986).	Re-employed respondents exhibited much lower initial levels of distress compared with the permanently unemployed, suggesting a selection effect. It was demonstrated that employment status did not substantially influence the level of psychological distress among (recent) graduates' (p. 301).

Study	Sample	Psychological measure	Results
Shamir (1986)	432 previously employed but registered unemployed university-educated middle-aged (27–47 years) individuals were assessed twice, 6 months apart.	Depression Adjective Checklist (DACL; Lubin, 1967). Anxiety measure derived from Warr (1978).	Changes in employment status were significantly ($p < .01$) related to depressive affect. 'The present study has demonstrated clearly that the psychological well-being of the respondents was strongly related to their employment status and was very sensitive to changes in employment status' (p. 70). The 'satisfied employed' experienced an increase in mental health from time 1 to time 2; the 'continuously unemployed' and the 'dissatisfied employed' showed no significant changes in mental health over time.
Wanberg (1995)	129 unemployed persons were assessed initially and then 9 months later; at follow-up, participants were classified as 'still unemployed' ($N = 30$); 'satisfied employed' ($N = 80$); 'dissatisfied employed' ($N = 19$).	12-item version of the GHQ; Satisfaction with Life Scale (SWLS, Diener <i>et al.</i> , 1985); Optimism Scale (Scheier & Carver, 1985).	

Mental health following unemployment: An overview of recent studies

There is a 'formidable' (Feather, 1990, p. 10) scientific literature on the affective and behavioural sequelae of employment and unemployment. Following on from the early classic studies and reviews by Jahoda, Lazarsfeld & Zeisel (1933), Bakke (1933) and Eisenberg & Lazarsfeld (1938), at least four major reviews of the topic appeared in the mid-1980s (Fryer & Payne, 1986; Hartley & Fryer, 1984; O'Brien, 1986; Warr, 1987). While these reviewers identified a large number of studies whose results indicated significantly more 'psychological distress' (Warr, 1987) for the unemployed, the reviewers were uneven in their opinions about the extent to which any claimed mental health-unemployment relationship had been reliably established. Thus, while Fryer and Payne concluded that 'in all cases the [cross-sectional] evidence suggests that groups of unemployed have higher mean levels of experienced strain and negative feelings . . . than comparable employed people' (p. 247), O'Brien's opinion from his review of 12 longitudinal studies was that the results provided 'rather meagre information about the effect of unemployment' (p. 227), and he also proposed that 'the length of long-term effects is small' (p. 228).

In an effort to understand how job loss affects the personality, adjustment and behaviour of the unemployed, a literature search on this topic was conducted using MEDLINE and PSYCLIT. Studies identified in the search were retained if they met three criteria: (1) the use of standardized psychological tests as measures of the dependent variable; (2) conducted within a longitudinal design (i.e. at least some of the sample had to have been assessed in two conditions, 'employed' and 'unemployed'); and (3) published in the last 10 years in English-language scientific journals. This process yielded 16 studies (see Table 1) relevant to the current review's main question: 'Does job loss, on average, affect the mental health of the unemployed?'

Examination of the table's information enables one to make three preliminary conclusions about the participants and dependent measures used in recent research in this area. First, many studies involve both male and female participants, as contrasted with much of the previous decade's research which predominantly involved studies investigating unemployment in *males*, thus seriously restricting the generalizability of obtained results. Notwithstanding the prevalence of studies involving both males and females, it is still true that, where study participants were restricted to those of a particular sex, there was a dominance of male respondents (there being only one study of women employees as opposed to six of men). Second, with respect to the measure of psychological well-being employed, researchers are increasingly using well-known standardized psychological tests. Thus, the General Health Questionnaire (GHQ), which has established reliability and validity claims (see Goldberg, 1972) is the most commonly used dependent measure in the studies listed in Table 1, and the second most frequently used measure was the Hopkins Symptom Checklist (Derogatis *et al.*, 1974) which has been extensively used in studies of health and stress (see, for example, Schwarzwald, Weisenberg & Solomon, 1991). As a set, the measures used in recent research are of higher psychometric quality than those typically found in equivalent studies a decade previously. Thus, in the studies reviewed by O'Brien (1986), the

GHQ was used only once, and there was a much more diverse set of psychological measures used, including a one-item 'dissatisfaction with self' measure used by Cohn (1978). This more frequent use of standardized measures of psychological well-being increases our confidence in the internal validity of findings from particular studies, and (because of the construct validity of the most commonly used measures) provides a sounder base for making generalizations about the mental health of the unemployed. Third, a final characteristic to note about the studies in Table 1 is that a substantial minority of these (five studies in all; i.e. Feather & O'Brien, 1986; Graetz, 1993; Hammer, 1993; Morrell *et al.*, 1994; and Schaufeli & Van Yperen, 1992) involved studies of school leavers or young unemployed. It is a moot point as to whether studies involving youth and young adults need to be considered differently from those involving more mature adults. O'Brien (1986) put forward two reasons for not combining studies whose samples come from these two populations: (a) the economic impact of unemployment is likely to be greater for adults because of their greater financial responsibilities; and (b) because the two groups differ markedly in prior work experience, the responses of adults are likely to be determined more by their past work experiences, while young people's reactions to work are likely to be affected largely by their recent educational experience. Because of the relatively small number of longitudinal studies in this area, it seems premature to exclude studies using data from young people, although it is acknowledged that in the future, division of the literature into two categories may facilitate a better understanding of the relationship of mental health to employment status.

Empirical support for the impact of unemployment on mental health

The results from the Table 1 studies provide good support for the claim that job loss on average has a negative impact on the psychological well-being of the unemployed. Holding aside consideration of the particular strengths and weaknesses of individual studies, it is clear that in 14 of the 16 studies, there is evidence of a depressed mental health score being associated with unemployment. In two of the studies (Feather & O'Brien, 1986; Schaufeli & Van Yperen, 1992), the results did not support the hypothesized relationship between mental health and employment status. Taken as a group, these longitudinal studies strongly support the notion that individuals who have lost their jobs are more symptomatic than employed comparison groups. The fact that distress levels fall following re-employment implies that job loss provokes psychological distress, rather than the reverse (although this interpretation is subject to a major qualification about selection bias, which is discussed further below). These relatively consistent findings have been obtained in studies that varied considerably in the length of follow-up period, sample recruitment procedure and the country in which data was gathered. In interpreting the results from these longitudinal studies there is one prominent methodological issue that needs to be recognized: the issue of 'selection bias'.

Many studies which attempt to demonstrate the effect of moving out of, or into, employment produce results that are ambiguous because of the difficulty in ruling

out selection effects—i.e. the least fit may be more likely to lose employment, or the more fit more easily to gain re-employment. According to Kessler (1986) the potential impact of selection bias in applied research on predictors of health is far from trivial. Among the studies in Table 1, the Dew *et al.* (1992) study is one whose *prospective* design provides good evidence for employment effects, even after controlling for the baseline depression level of the individual employees. Other Table 1 studies which, through statistical control, produced evidence of an employment status effect independent of stable mental health are those of Frese & Mohr (1987) and Graetz (1993). Similarly, the conclusions of Morrell *et al.* (1994) are not easily vulnerable to a selection effect interpretation since these researchers excluded from their analyses those with pre-existing health problems, those who were dissatisfied with their jobs and those who underwent marriage break-up. Evidence suggesting the potential importance of personal vulnerability to distress in this area was, however, provided by Schaufeli & Van Yperen (1992), whose analysis of long-term unemployed graduates' personality scores indicated that 69 per cent of the variance in the respondents' distress scores was due to their stable personal vulnerability rather than to their changed situations, including changes in employment status. Another study from Table 1 whose results emphasized the importance of recognizing the potential for selection effects in this area is that of Claussen, Bjorndal & Hjort (1993). They found that, in the follow-up part of their study, there was considerable mental health-related selection to re-employment. Normal performance on psychometric testing of mental well-being translated into an increased chance of re-employment by two to three times.

A final consideration relevant to what the scientific evidence suggests about the answer to our review question has to do with the overall quality of the research designs used in the Table 1 studies. Most relevant to our review question are those studies whose participants constitute a representative sample of the relevant labour force population, and whose sample size is such that adequate numbers of potential confounders can be controlled for, either by exclusion or statistically. The two studies which best meet the above design criteria are those of Graetz (1993) and Morrell *et al.* (1994). Both of these studies utilized as their dependent measure the GHQ. The conclusions from the two studies are similar although not identical. Graetz's (1993) main conclusion was that his 'results show that employed people report significantly lower levels of health disorder than do students and the unemployed. These differences are largely unaffected by demographic attributes, living arrangements, socio-economic status or immediate labour market experiences and can be attributed to employment status itself rather than to predisposing health differences' (p. 715). Morrell *et al.* (1994) concluded that 'unemployment was a significant cause of psychological disturbance in young people who were initially employed, not suffering physical ill-health and psychologically normal; conversely, re-employment reversed this effect' (p. 1553). The main difference between the conclusions of these two researchers is that Graetz (1993) made a particular analysis of the mental health of the dissatisfied employed and thus he was able to draw an additional conclusion from his data. From his analysis of the responses of those who held 'satisfying' as opposed to 'dissatisfying' jobs, Graetz (1993) concluded that 'the health consequences of employment and unemployment are

directly contingent on the quality of work. This means that the benefits of employment are confined to those, albeit a majority, who manage to find a satisfying job. In contrast, those who do not end up in a satisfying job . . . report the highest levels of health disorder. At the same time, the adverse consequences of job loss are confined to those who were satisfied with their former jobs' (p. 722). With respect to Graetz's (1993) second conclusion, it is important to note that, *because the majority of those in work are satisfied*, the overall effect of employment is higher general well-being.

While the results from studies examined in this review clearly support the claim for a reliable deterioration in mental health being associated with unemployment, the literature reviewed (obviously) does have its limitations in providing a comprehensive understanding of this topic area. For example, Osipow & Fitzgerald (1993), in their selective review of the relationship between unemployment and mental health, raised the question of the generalizability of research findings originating from the large body of work on this topic carried out in the UK. The role of the country of origin in influencing the results obtained in particular studies is difficult to determine but it is perhaps noteworthy that the authors of one of the two studies that did not yield results supportive of the proposed relationship of mental health to employment status did speculate that 'the unique Dutch structural and cultural context [was] responsible for the major finding of the current study, namely that the negative changes in employment status are minimally related to psychological distress' (Schaufeli & Van Yperen, 1992, p. 302). By 'unique . . . context' Schaufeli and Van Yperen were referring to the availability of relatively high unemployment benefits and the existence in The Netherlands of a tendency towards cultural normalization of unemployment.

Related to this consideration of cultural factors which might limit the external validity of any conclusions drawn from the studies examined, is the concern noted by Turner (1995) about the 'economic context' within which job loss occurs. One weakness of most studies in Table 1 is that, for obvious practical reasons, samples have generally been drawn from a single geographic area. Consequently, according to Turner (1995), in the majority of studies the local economic context in which unemployment is experienced has been essentially invariant. The valid research question raised by Turner's concern is whether the local job market affects vulnerability to the health effects of unemployment. The findings from his cross-sectional study suggest that the local employment situation influences the impact of unemployment on psychological and physical distress. 'Specifically, it is better to lose a job when the chances for re-employment are good' (p. 224).

The overwhelming majority of the studies in Table 1 support the contention that unemployment has on average a negative psychological impact on the individual who loses his or her job. The most common threats to the internal validity of this conclusion (those to do with a selection effect whereby the more capable stay in, or move into, employment) do not seem to obtain in the majority of the surveyed studies. Furthermore, the two studies which were best placed to control for potential confounding variables both concluded that unemployment *per se* had an effect on mental health. While there are many questions about the precise nature of the unemployment experience of particular individuals or groups which have not

been addressed in this review, there is one other major question that can be addressed by examining the results obtained in the studies listed in Table 1. This second question is 'How large is the mental health effect of unemployment?' The last section of this paper will examine this question.

Effect size

If it is accepted that unemployment has a negative impact on mental health, an important related issue then is the size of the decrement in mental health that results from job loss. Interestingly, this 'effect size' question has been largely ignored by the major reviewers in this area. Thus, if we consider the content of the four prominent mid-1980s reviews referred to earlier (i.e. Fryer & Payne, 1986; Hartley & Fryer, 1984; O'Brien, 1986; Warr, 1987), the question of effect size is not raised by Hartley & Fryer (1984), O'Brien (1986) and Warr (1987) and received attention only by Fryer & Payne (1986). It seems likely that a major reason for reviewers' omitting to discuss the size of the mental health 'effect' has to do with the fact that in many of the earlier studies there was minimal use of standardized tests of mental well-being. The observed increased use of the standardized GHQ from the 1980s seems to have facilitated consideration of the question as to how much of a difference in mental well-being was to be expected between the scores of the employed as opposed to the unemployed. Fryer & Payne (1986) in their review of studies in the area stated that 'none of these studies has calculated the effect size of employment status on GHQ-12 [the shortest form of the instrument] but the best estimate comes from the correlation between employment status and GHQ-12, quoted by Banks and Jackson (1982)' (p. 248). From their analysis of the pattern of correlations obtaining in the data set, Fryer & Payne (1986) concluded that 'the median correlation is 0.34, indicating that employment status accounts for about 14% of the variance in GHQ-12' (p. 248). Fryer & Payne (1986) also note that another approach to assessing the size of effect is to ask what proportions of the employed and the unemployed are 'at risk' of becoming psychiatric cases. Using this approach, Warr (1984) found that up to 62% of unemployed participants scored more than the criterion score on the GHQ indicative of 'increased risk' of becoming a psychiatric case, whereas only a maximum of 25% of employed respondents attained such a score.

Some of the authors of the Table 1 studies addressed the issue of effect size. For example, Payne & Jones (1987) seemed to accept that 'employment status accounts for 10–16% of the variance of psychological health' (p. 182). And Claussen *et al.* (1993), using a change in relative risk of scoring above a critical point on the Hopkins Symptom Checklist subscales, concluded that in their study, those who were re-employed were less than half as likely to experience depression as were those who remained unemployed. Graetz (1993) used *eta* to measure the strength of association between employment status and health. He obtained *eta* values which ranged from 0.10 to 0.17, which he interpreted as indicating a statistically significant difference in GHQ scores which was 'moderate' in size. Finally, Iversen & Sabroe's (1988) study produced changes to GHQ scores which correlated with changes in employment status. However, while the correlations were highly

significant ($p < .001$), no more than 3% of the variation in well-being scores was explained by respondents' employment pattern. It is interesting to note that while certain studies (e.g. Shamir, 1986) produced results easily able to be translated to yield measures of effect size, rarely was this done or the matter discussed. The main aim of such papers seemed to be the identification of *reliable* differences between, say, the employed and the unemployed. Little discussion was entered into about the 'practical importance' or 'meaningfulness' of any observed mental health differences between the groups who had been compared.

In an attempt to summarize more adequately what recent longitudinal studies have taught us about the practical significance of the impact of unemployment on mental health, the studies from Table 1 were examined with a view to combining the results and effect sizes associated with individual studies to arrive at an estimate of the effect size across all comparable studies. Before describing our method for computing the measure of effect size, and combining results, there is one semantic point which has been largely ignored in the literature but which should be acknowledged before we proceed with describing the results of our effect size calculations. Logic demands that the question of how employment affects mental well-being can be regarded as a general question that, in fact, masks two more precise questions. The more precise questions are: (a) to what extent does *losing* employment impact on mental well-being?; and (b) to what extent does *gaining* employment impact on mental well-being? If we state our twin questions in this more precise way, it is obvious that we need to calculate effect sizes for two groups of studies: (a) those involving the movement out of employment; and (b) those involving the movement into employment.

Meta-analyses of the mental health effects of unemployment

The results from this review's set of longitudinal studies which examined the mental health effects of transfer (a) from unemployment to employment, and (b) from employment to unemployment were combined, separately, in two meta-analyses. All 16 studies from Table 1 were reviewed to obtain details such as mean scores, standard deviations and the statistical test used to compare the mental health scores of the unemployed and the employed. Studies were also coded for age of respondents (young adults; mature adults), the nationality of the study population (European; Anglo-Saxon), the gender of respondents (males only; combined male-female) and the measure used to assess well-being or psychological health (GHQ; other measure of mental health). Of the 16 studies, 7 were retained that reported *t* tests, or significance levels or means and standard deviations that enabled a *t* test to be computed. In addition, two studies (Lahelma, 1992; Morrell *et al.*, 1994) were also retained which did not report group means but which used odds ratios suitable for use in calculating an effect size. The retained studies are listed in Table 2. Effect sizes were calculated by converting test statistics to 'd' and by combining results from studies of different size to gain an average 'weighted' effect size (see Wolf, 1986, pp. 35–41). Seven of these studies provided data relevant to the question of moving from unemployment to employment (see Table 2a). These studies involved 1509 participants, and enabled the calculation of

Table 2. Effect sizes in studies of the impact on mental health of the move to and from employment

Study ^a	Effect size ^b	Psychological measure ^c	Age of respondents ^d	Nationality ^e	Gender ^f	Months between measurements
<i>(a) Moving from unemployment to employment</i>						
Graetz (1993)	.47	1	1	0	0	12
Iversen & Sabroe (1988)	.64	1	0	1	1	12
Lahelma (1992)	.66	1	0	1	1	15
Payne & Jones (1987)	.44	1	0	0	0	12
Payne & Jones (1987)	.38	1	0	0	0	12
Schaufeli & Van Yperen (1992)	.15	0	1	1	0	6
Shamir (1986)	.68	0	0	1	0	6
Shamir (1986)	.60	0	0	1	0	6
Wanberg (1995)	.76	1	0	1	0	9
Wanberg (1995)	.00	1	0	1	0	9
<i>(b) Moving from employment to unemployment</i>						
Graetz (1993)	.26	1	1	0	0	12
Iversen & Sabroe (1988)	.26	1	0	1	1	12
Layton (1986)	.48	1	0	1	1	6
Morrell (1994)	.51	1	1	0	0	12
Morrell (1994)	.71	1	1	0	0	24
Morrell (1994)	.34	1	1	0	0	36
Shamir (1986)	.38	0	0	1	0	6
Shamir (1986)	.42	0	0	1	0	6

^aThree studies yielded two sets of mental health scores.

^bEffect size measure used was 'd', the difference between the group means divided by the standard deviation.

^c1 = GHQ; 0 = other measure.

^d1 = young employees; 0 = mature adult employees.

^e1 = European; 0 = Anglo-Saxon.

^f1 = male; 0 = combined male-female.

10 effect sizes which ranged from 0.00 to 0.76, with a weighted average effect size of 0.54. The standard error of this weighted 'd' was .04 and of the raw 'd' .07. In these studies of unemployment to employment, there was no significant relationship on effect size of whether the GHQ was used, whether the persons studied were young or old, European or Anglo-Saxon, males only or combined males and females. There was no significant correlation between length of follow-up and effect size in these studies ($\rho = 0.08$).

Five studies provided data relevant to the question of moving from employment to unemployment (see Table 2*b*). These studies involved only 616 participants but enabled the calculation of the eight effect sizes which ranged from 0.26 to 0.71 with a weighted average effect size of 0.36. The standard error of the weighted 'd' was .06, and of the raw 'd' .05. In these employment-to-unemployment studies, there was no significant relationship on effect size of whether the GHQ was used, whether the persons studied were young or old, European or Anglo-Saxon, males only or combined males and females. There was no significant correlation between length of follow-up and effect size in these studies ($\rho = .01$).

The effect size information contained in Table 2 suggests that moving from unemployment to employment not only produces a reliable change to mental health, but a change which is 'practically significant' (see Cohen, 1977; Rossi & Wright, 1977).

Conclusions

The primary purpose of this paper was to review the recent (1986–1996) research evidence relevant to the claim that job loss negatively impacts on the mental health of the unemployed. Although there were limitations to the set of studies reviewed (e.g. most of the studies did not adequately consider variation in any effect shown across different economic or labour market contexts) the studies reviewed did have a number of strengths compared with those involved in earlier reviews of this area: for example, there was increased use of the well-established GHQ which has some claims for being regarded as the preferred criterion measure; there were more studies whose respondents included both male and female employees, and respondents drawn from a variety of occupational titles (thus countering the early claim that much of the research in this area is dominated by studies of male unskilled workers); and there was an impressive diversity of origin of the studies so that there is less reliance on studies whose samples were drawn from Great Britain or similar countries. The results from the 16 longitudinal studies suggest that unemployment has reliable (negative) effects on mental health. In reaching this conclusion it became evident that perhaps we should distinguish more prominently between those studies which investigate the effect on mental health of moving from unemployment to employment, and those which investigate the converse (i.e. the movement from employment to unemployment). While we did not emphasize this distinction when reviewing studies investigating the change in mental health following a change in employment status, when we came to address the second aim of this study (to summarize what was known about the effect sizes achieved in the

set of reviewed studies) it was apparent that there were two effect sizes to be calculated because, logically, the size of the effect of moving into employment might be quite different from that of moving out of employment. While there was a disappointing loss of studies whose results were not able to be used in effect size calculations, the nine studies used in the meta-analyses did provide some initial answers to the effect-size question. First, based on 10 effect sizes associated with seven studies, the move from unemployment to employment is associated with improvements to mental well-being which are of such a size (about half a standard deviation) as to suggest they are of real practical significance. If we accept the stability of this finding from our meta-analysis, it provides of course only a part answer to the 'practical significance' question. For the administrator, manager or health service provider working in this area, there is another piece of information needed, and that outstanding information relates to the answer to the following question: 'How does a change in, say, GHQ scores, from mean of 8 to a mean of 11, relate to changed behaviour of individuals or a change in need for particular clinical or vocational services?' Although this latter question was not a focus of this review, it is interesting to note that in some of the studies reviewed in the first part of this paper (e.g. Claussen *et al.*, 1993; Graetz, 1993) this question was addressed quite directly, usually in the form of providing information about the degree of decreased risk of, say, experiencing depression associated with a movement from unemployment to employment. Thus, Claussen *et al.*, 1993 estimated that 'the re-employed were 45% as likely to experience depression as were people who were still unemployed' (p. 16). Similarly, using 'case rates' associated with particular GHQ scores, Graetz found that respondents who were able to gain employment recorded a case rate 23% lower than those of peers who remained unemployed. Results such as these suggest that the effects obtained in studies of the move from unemployment to employment do have substantive significance.

The question of the mental-health effect of moving from employment to unemployment is, perhaps not surprisingly, less clear. The main problem with our knowledge in this area is that we have so few studies with relatively small participant numbers for such a frequent phenomenon. Within the review set, there were only five studies from which effect sizes could be calculated. Furthermore, as these studies involved just over 600 participants, and as some of the studies had effect sizes with large standard errors, our conclusions from our meta-analysis probably should be regarded as initial tentative hypotheses rather than a reliable synthesis of what is actually known in this area. From the limited set of data available it appears that the mental-health effect of becoming unemployed might not be of the same order of magnitude as its converse (being employed, following a period of unemployment). The average effect size of 0.36 represents what Cohen (1977) describes, generally, as a 'small' effect, although it is recognized that effect sizes of this magnitude, i.e. around a third of a standard deviation, can at times be considered to be practically significant (see Tallmadge, 1977). Given the large number of employee redundancies being declared in most Western industrialized nations, the main conclusion that can be drawn from our meta-analysis is that much more research needs to be done to produce a knowledge base of sufficient quality to allow the results of psychological research to inform policy decisions, or service

provision in this important area. At the methodological level, it also seems important to consider the role of 'demand characteristics' in influencing the mental health scores of persons completing self-reports such as the GHQ. Interestingly, only one of the reviewed studies (Dew *et al.*, 1992) discussed in detail how circumstances surrounding the collection of the mental health data may have influenced the pattern of scores obtained. Because community attitudes to unemployment are often strongly held, it does seem especially important for researchers in this area to minimize the possibility that changes in mental health scores are an artifact of the measurement technique used.

In summary, the question about the mental health effects of employment status appears to remain partially unanswered, although the association between improved mental health and a movement into employment seems reasonably clear, even if based on a relatively small number of studies. Future research should as a minimum aim to continue the use of standardized psychological measures, such as the GHQ, particularly as the increased use of such measures should facilitate the development of information about the way that scores on the GHQ translate to actual behaviours or feelings of the individual as he or she moves from unemployment to employment and vice versa, and what these attributes of individuals *imply for the need for specialist clinical or vocational services*. The lack of such information represents an unfortunate gap in the validity claims of instruments such as the GHQ for use in applied studies of mental health and employment status. A major research effort aimed at producing additional GHQ validity information should make it possible, rather quickly, to determine whether unemployment leads to levels of poor mental health that are substantively significant. In addition, if we are to understand the role of economic contextual factors in influencing the mental health of the employed and the unemployed, we may need to design studies which take place in geographic areas which vary with respect to the probability of re-employment among those who lose their jobs. Finally, although this review has eschewed consideration of individual or group moderating variables, age does seem to be one such factor that is worthy of systematic attention as researchers attempt to identify the nature and extent of the relationship between mental health and employment status. One possibility is for researchers to concentrate, as did Shamir (1986), on one or more of the three logically distinct groups of employees; the young (< 25 years) the middle-aged (24–45) and the more mature employee (46+ years). The reason for making this suggestion is that in attempting to more fully understand the mental health effects of losing a job, in particular, it may be useful to avoid confounding the problems of unemployment with those of other correlated events, such as early retirement taken by some older employees. Apart from the need for a great deal more longitudinal research into the two types of employment transfer, if some special attention is given to the questions raised above we may move quickly to reach a more comprehensive understanding of the general effect of employment status on individual mental health.

Acknowledgements

The helpful comments of three anonymous reviewers are gratefully acknowledged.

References

- Arrindel, W. & Ettema, J. (1986). *SCL-90: Manual for a multidimensional psychopathology indicator*. Lisse: Swets & Zeitlinger.
- Bakke, E. (1933). *The unemployed man*. London: Nisbet.
- Banks, H. & Jackson, P. (1982). Unemployment and risk of minor psychiatric disorder in young people. *Psychological Medicine*, **12**, 789–798.
- Beck, A., Ward, C., Medelson, M., Mock, J. & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry*, **4**, 561–571.
- Bolton, W. & Oatley, K. (1987). A longitudinal study of social support and depression in unemployed men. *Psychological Medicine*, **17**, 453–460.
- Bradburn, N. (1969). *The structure of psychological well-being*. Chicago: Aldine.
- Claussen, B., Bjorndal, A. & Hjort, P. (1993). Health and re-employment in a two year follow up study of long-term unemployed. *Journal of Epidemiology and Community Health*, **47**, 14–18.
- Cohen, J. (1977). *Statistical power analysis for the behavioral sciences*. New York: Academic Press.
- Cohn, R. (1978). The effect of unemployment status change on self-attitudes. *Social Psychology*, **41**, 81–93.
- Derogatis, L. (1977). *The SCL-90 administration, scoring and procedures manual for the R(evised) version*. Baltimore, MD: Johns Hopkins School of Medicine.
- Derogatis, L., Lipman, R., Rickels, K., Uhlenhuth, E. & Covi, L. (1974). The Hopkins Symptom Checklist: A self-report symptom inventory. *Behavioural Science*, **19**, 1–15.
- Dew, M., Bromet, E. & Penkower, L. (1992). Mental health effects of job loss in women. *Psychological Medicine*, **23**, 751–764.
- Dierner, E., Emmons, R., Larsen, R. & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, **49**, 71–75.
- Eisenberg, P. & Lazarsfeld, P. (1938). The psychological effects of unemployment. *Psychological Bulletin*, **35**, 358–390.
- Feather, N. (1990). *The psychological impact of unemployment*. New York: Springer-Verlag.
- Feather, N. & O'Brien, G. (1986). A longitudinal analysis of the effects of different patterns of employment and unemployment on school leavers. *British Journal of Psychology*, **77**, 459–477.
- Frese, M. & Mohr, G. (1987). Prolonged unemployment and depression in older workers. A longitudinal study of intervening variables. *Social Science and Medicine*, **25**(2), 173–178.
- Fryer, D. & Payne, R. (1986). Being unemployed: A review of the literature on the psychological experience of unemployment. In C. Cooper & I. Robertson (Eds), *International review of industrial and organizational psychology*. Chichester: Wiley.
- Goldberg, D. (1972). *The detection of psychiatric illness by questionnaire*. Oxford: Oxford University Press.
- Graetz, B. (1993). Health consequences of employment and unemployment: Longitudinal evidence for young men and women. *Social Science and Medicine*, **36**, 715–724.
- Hammer, T. (1993). Unemployment and mental health among young people: A longitudinal study. *Journal of Adolescence*, **16**, 407–420.
- Hartley, J. & Fryer, D. (1984). The psychology of unemployment: A critical re-appraisal. In G. Stephenson (Ed.), *Progress in applied social psychology*, vol. 2. Chichester: Wiley.
- Iversen, L. & Sabroe, S. (1988). Psychological well-being among unemployed and employed people after a company closedown: A longitudinal study. *Journal of Social Issues*, **44**(4), 141–152.
- Jahoda, M., Lazarsfeld, P. & Zeisel, H. (1933). *Marienthal: The sociology of an unemployed community*. (English translation). Chicago: Aldine.
- Kessler, R. (1986). The interplay of research design strategies and data analysis procedures in evaluating the effects of stress on health. In S. Kasl & C. Cooper (Eds), *Stress and health*. New York: Wiley.
- Lahelma, E. (1992). Unemployment and mental well-being: elaboration of the relationship. *International Journal of Health Services*, **22**(2), 261–274.
- Layton, E. (1986). Employment, unemployment, and response to the General Health Questionnaire. *Psychological Reports*, **58**, 807–810.
- Liem, R. & Liem, J. (1988). The psychological effect of unemployment on workers and their families. *Journal of Social Issues*, **44**(4), 87–105.

- Lubin, B. (1967). *Depressive adjective checklist manual*. San Diego: California Educational and Industrial Service.
- Morrell, S., Taylor, R., Quine, S., Kerr, C. & Western, J. (1994). A cohort study of unemployment as a cause of psychological disturbance in Australian youth. *Social Science and Medicine*, **38**(11), 1553–1563.
- O'Brien, G. (1986). *Psychology of work and unemployment*. Chichester: Wiley.
- Osipow, S. & Fitzgerald, L. (1993). Unemployment and mental health: A neglected relationship. *Applied and Preventive Psychology*, **2**, 59–63.
- Payne, R. & Jones, G. (1987). Social class and re-employment: Changes in health and perceived financial circumstances. *Journal of Occupational Behaviour*, **8**, 175–184.
- Rossi, P. & Wright, S. (1977). Evaluation research: An assessment of the theory, practice and politics. *Evaluation Quarterly*, **1**, 5–52.
- Rotter, J. (1966). Generalised expectancies for internal versus external control of reinforcement. *Psychological Monographs*, **80**, 1–28.
- Schaufeli, W. & Van Yperen, N. (1992). Unemployment and psychological distress among graduates: A longitudinal study. *Journal of Occupational and Organizational Psychology*, **65**, 291–305.
- Schwarzwald, J., Weisenberg, M. & Solomon, Z. (1991). Factor invariance of the SCL-90. *Psychological Assessment*, **3**, 385–390.
- Scheier, M. & Carver, C. (1985). Optimism, coping and health. *Health Psychology*, **4**, 219–247.
- Shamir, B. (1986). Self-esteem and the psychological impact of unemployment. *Social Psychology Quarterly*, **49**, 61–72.
- Tallmadge, G. (1977). *The joint dissemination review panel ideabook*. Washington, DC: National Institute of Education.
- Turner, J. (1995). Economic context and the health effects of unemployment. *Journal of Health and Social Behavior*, **36**, 213–229.
- Wanberg, C. (1995). A longitudinal study of the effects of unemployment and quality of re-employment. *Journal of Vocational Behaviour*, **46**, 40–54.
- Warr, P. (1978). A study of psychological well-being. *British Journal of Psychology*, **69**, 111–121.
- Warr, P. (1984). Job loss, unemployment and psychological well-being. In V. Allen & E. van der Ulent (Eds), *Role transitions*. New York: Plenum Press.
- Warr, P. (1987). *Work, unemployment and mental health*. Oxford: Clarendon Press.
- Wolf, F. (1986). *Meta-analysis: Quantitative methods for research synthesis*. Newbury Park, CA: Sage.
- Zung, W. (1965). A self-rating depression scale. *Archives of General Psychiatry*, **12**, 63–70.

Received 2 January 1997; revised version received 13 August 1997