

Youth Unemployment, Labour Market Programmes and Health

A Review of the Literature

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A CIP catalogue record for this book is available from the British Library.

ISBN 0 85374 779 2 ISBN 978 0 85374 856 4 (pdf)

PSI Report No. 869

Typeset by PCS Mapping & DTP, Newcastle upon Tyne

Printed by Athenaeum Press, Gateshead, Tyne and Wear

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Acknowledgements

This work was undertaken by the Policy Studies Institute which received funding from the Department of Health. The views expressed in this publication are those of the authors and not necessarily those of the Department of Health. The authors would like to acknowledge the support of the Department of Health, and the invaluable contributions of James Nazroo and two anonymous referees.

Executive Summary

INTRODUCTION

The government's New Deal for Young People (NDYP) aims to help unemployed young people move back into work. It is one of many non-health programmes that might be expected to have an impact on the health of people who are targeted for help.

This report reviews findings from recent British and international research on the relationship between unemployment and health among young people.

The review was commissioned by the Department of Health in order to inform an evaluation of the health impacts of the New Deal programmes.

HEALTH PROBLEMS AMONG UNEMPLOYED YOUNG PEOPLE

Research shows that unemployed young people experience more health problems than those who are employed. In particular, unemployed young people experience:

- lower levels of general and physical health;
- more anxiety and depression;
- higher rates of smoking; and
- higher suicide rates.

THE RELATIONSHIP BETWEEN YOUTH UNEMPLOYMENT AND HEALTH

Young people with health problems have less success in finding jobs than do their counterparts with good health. They are also more likely to lose or leave their jobs.

Research shows that the experience of unemployment can be detrimental to the health of young people. Various longitudinal

studies of younger and older people link the experience of unemployment with:

- higher mortality rates;
- an increased risk of suicide;
- poorer cardiovascular health;
- reduced self-esteem; and
- poorer mental health.

EFFECTS OF DEPRIVATION DURING UNEMPLOYMENT

Financial stress and material deprivation have been shown to contribute to the causation of health problems among unemployed young people.

The health of young unemployed people has also been shown to suffer as a result of experiential deprivation. Jobless young people may be deprived of key opportunities to:

- take control of their lives;
- make structured and varied use of their time; and
- see themselves as people who are valued.

VULNERABLE GROUPS

Young people who lack support from friends, family members and others appear to be at particular risk of health problems during unemployment.

Young people who have accumulated many negative experiences during the course of their lives may be particularly vulnerable to experiences both of unemployment and of poor health.

Some young people may become caught in a downward spiral of unemployment and worsening health.

EXPLORING THE HEALTH IMPACT OF LABOUR MARKET INTERVENTIONS

The complexity of relationships between unemployment and health means that research into the health impacts of labour market programmes needs to address carefully a number of technical issues, which are described in the full report.

Labour market and health interventions have the potential to make positive inputs which reverse the downward spiral of poor health and unemployment. However, there is currently relatively little research available concerning the specific effects of labour market programmes on participants' health.

Researchers from the Policy Studies Institute are currently analysing data from a longitudinal survey of NDYP entrants, in order to explore the impact of this programme on participants' health.

Introduction

The aim of this report is to review the literature which is relevant to understanding the links between unemployment and health among young people. The review is undertaken as part of a more general programme of research on the potential and actual health impacts of the New Deal programme for this age group. Objectives of the review are:

- to summarise what is already known about health and unemployment among young adults, including inferences which can be drawn from studies of wider populations;
- to identify the limitations in the scope and reliability of existing knowledge;
- to guide and inform the design of health impact research relating to the New Deal programme and other similar initiatives; and
- to refine hypotheses about the potential health impacts of employment status and labour market programmes, including hypotheses about the mechanisms or processes through which health may be affected.

METHOD

The review has been carried out by means of keyword searches on bibliographic databases, specifically the IBSS database of the British Library of Political and Economic Science and the Medline database, and by the cascade method of collecting other relevant

references from the sources generated. Although the focus is on studies of health and employment relationships among young people, much of the research on unemployment has spanned all age groups, rather than focusing specifically on young people. Therefore, the conclusions of the review in some respects depend on the types of inferences that can be made to young adults from wider populations. The review is not limited to the British literature but is international in perspective. The assumption made in much of the literature is that the processes or mechanisms linking unemployment and health are not culturally specific. Nonetheless, care has to be taken in drawing conclusions for Britain from studies conducted under different conditions in other countries.

UNEMPLOYMENT AMONG YOUNG PEOPLE

The International Labour Organisation (ILO) unemployment rate for 18- to 24-year-olds in the UK has been falling for the last six years, from 17.8 per cent in 1993 to 12 per cent in 1998. The proportion of unemployed 18- to 24-year-olds who have been unemployed for more than a year has also fallen over this period, from more than one-third in 1993 to slightly less than one in five in 1998. The unemployment rate for 16- to 17-year-olds has remained fairly stable over the last six years, at just below 20 per cent (Office for National Statistics, 1999). Unemployment rates for young people in deprived areas of the UK would, of course, be much higher than this (Wilkinson, 1995), as would rates for disadvantaged groups, such as young people from some ethnic minorities (Modood et al, 1997: 90). By contrast, the unemployment rate for older adults in the UK was only 5 per cent in 1998, although a higher proportion of older unemployed people had been unemployed for more than a year. Australia and Sweden had similar youth unemployment rates to the UK in 1993; the Netherlands and the USA had lower rates; Ireland and Spain had higher rates (Winefield, 1997).

It is important to place unemployment rates within a broader conception of young people's labour market experiences. Patterns of unemployment vary, with some young people experiencing long periods of unemployment, others experiencing one short period or recurrent periods of unemployment (Joshi and Paci,

1997). Some may be still seeking their first job while others will have experienced one or more job losses. Employment may be long-term or short-term, and high or low quality in terms of the potential for gaining skills and developing long-term prospects, as well as in the levels of pay. It may be temporary or permanent, full- or part-time. Other labour market statuses common to young people include training schemes, community work, and further education. Some groups of young people will be outside the labour markets. They may be long-term sick or disabled, bringing up children, may have become 'discouraged' from seeking work, or may be working in the illegal economy. Unemployment may itself be an indication of wider disadvantage affecting young people's economic and employment position.

HEALTH AMONG YOUNG PEOPLE

As a group, young people tend to be relatively healthy compared with older members of the population. Nevertheless, quite a high proportion experience some kind of physical health problem, with 23 per cent of males and 27 per cent of females aged 16 to 24 years reporting a long-standing illness, and around 11 per cent of young people reporting a limiting long-standing illness (Prescott-Clarke and Primatesta, 1998; West, 1997). Data from the *Health Survey for England* (Prescott-Clarke and Primatesta, 1998) show that 20 per cent of young men and 30 per cent of young women aged 16 to 24 years were taking prescribed medicines. The survey shows that the most common category of illness among young people was respiratory (rates of 111 per 1000 for men and 128 per 1000 for women), followed by musculo-skeletal problems (56 per 1000 for men, 51 per 1000 for women), skin complaints, and problems of the nervous system. Almost one in five young men and women aged 16 to 24 years had been diagnosed by a doctor as suffering from asthma.

Research suggests that chronic illness among children and young people has more than doubled over the past 20 years (Woodroffe et al, 1993, citing data from the *General Household Survey*). Asthma and diabetes are two of the conditions which have increased their prevalence among young people (Anderson, 1989; Burney et al, 1990; Woodroffe et al, 1993).

With regard to psycho-social problems, English health statistics for 1989 to 1990 show that in this year there were 176 per 100,000 hospital admissions for mental illness among young people aged 15 to 19 years (Woodroffe et al, 1993). The *West of Scotland 20-07 Study* (West, 1997) shows that one-third of 18-year-old men and more than two-fifths of 18-year-old women had symptoms of minor psychological ill-health, according to the *General Health Questionnaire* (GHQ), with similar proportions suffering levels of anxiety high enough to cause medical concern.

Suicide and para-suicide are also significant problems for this age group, particularly for young men. Although suicide rates for women have remained fairly constant, the suicide rate for young men has climbed steadily since the mid-1970s; among the explanations that have been put forward are increases in unemployment and divorce rates over the same period. Data from the *West of Scotland 20-07 Study* show that approximately one in six 18-year-old men and one in four 18-year-old women had felt that life was not worth living at some point. Two per cent of 18-year-old men and twice that proportion of 18-year-old women in the survey had made suicide attempts (West and Sweeting, 1996). Although suicide itself remains rare, with an annual incidence of 6 per 100,000 male and 1-2 per 100,000 female 16- to 19-year-olds (NHS Health Advisory Service, 1995), it accounts for quite a high proportion of deaths among young people. Over the period from 1987 to 1990 in England and Wales, suicide accounted for 12 per cent of injury deaths in the 15- to 19-year-old age group, with a further 11 per cent of fatal injuries given an open verdict (Diekstra, 1992).

There are also concerns about young people's involvement in behaviours detrimental to health, such as smoking, alcohol consumption, use and abuse of other drugs, eating disorders, and sexual risk taking. The *Health Survey for England* (Prescott-Clarke and Primatesta, 1998) shows that two-fifths of 20- to 24-year-old men and women were smokers in the period from 1995 to 1997. Nine out of ten young people drank some alcohol, with 17 per cent of young men and 11 per cent of young women being diagnosed as potential problem drinkers. Nearly two-fifths of young male drinkers had been drunk at least once a week during the past three months, as had around one-fifth of young female drinkers.

About one-fifth of young people were overweight, with 6 per cent of young men and 8 per cent of young women diagnosed as obese. Young women were more at risk of eating problems than young men. Nearly half of young women classified as of 'desirable weight' were trying to lose weight as were one in ten of those classified as underweight. Fewer than one in ten young men of desirable weight were trying to lose weight and no underweight young men were trying to lose weight. Most young men were engaging in moderate activity at least five days per week but fewer than two in five young women were doing so. Fifteen per cent of young women and 6 per cent of young men engaged in no moderate or vigorous activity. Annual major accident rates, with major accidents defined as those which received subsequent medical attention, were higher for young men (42 per 100 persons) than for young women (22 per 100 persons). Accident rates were shown to increase with physical activity, so this partly reflects the higher rates of physical activity among young men.

THE NEW DEAL FOR YOUNG PEOPLE

An objective of this report is to summarise research evidence on the way that health problems and risks are associated with unemployment and other negative labour market experiences among young people. We will also examine the kinds of interventions that are being or might be made to address such problems. Recently, the New Deal for Young People has been introduced in recognition that 'youth and long-term unemployment is among the most serious problems facing our society today' (Employment Service, 1997: 2). It may be helpful to provide a brief outline of NDYP to indicate the policy context for the present review.

The New Deal programmes aim to tackle individual and social consequences of unemployment, helping to prevent people from becoming part of 'an underclass, detached from the world of work and from the communities around them', providing a skilled and competent work force to sustain economic growth, and investing in people to help them become 'active and productive members of the work force' (*ibid*). In describing the aims of New Deal for Young People, the operational vision declares that the programme will:

- 'give them a greater chance to take control of their lives, recognising that work is the foundation for independence and a sense of self-worth;
- utilise their talents and energy and equip them with the skills to compete for future jobs;
- contribute to the regeneration of local communities ... directly through environmental and voluntary work by young people on NDYP;
- focus resources to help people move from welfare to work, and so assure those working and paying taxes that their contributions are being used creatively to tackle one of the biggest problems in society' (Employment Service, 1997: 2-3).

The New Deal for Young People starts with a period of intensive help, advice, guidance and counselling known as the Gateway, during which each young person has access to a personal adviser, independent careers advice and other specialist help as needed. The operational vision expects that up to 40 per cent of young people will find unsubsidised work during the Gateway. Those job seekers who need further help can select, or be referred to, a range of four options: a job with an employer, subsidised for six months; work with a voluntary sector organisation, for up to six months; work with the Environment Task Force, for up to six months; or full-time education or training, for up to one year. The first three options also include at least one day per week working for an approved qualification. Those who reach the end of their option without finding or keeping work will be offered further support, guidance or training.

The defining features of the New Deal programme are described as 'quality, continuity and an emphasis on employability' (Employment Service, 1997: 4), with an increase in the choices and options available to young people, partnership with local community organisations, and the availability of a personal adviser to offer continued support.

The operational vision for the New Deal programme outlines its aims but it does not directly make hypotheses as to its effects. However, the following hypotheses might be said to be implied by the document:

- Provision of regular activity for young people (utilising their talents and energy) will help to prevent them drifting into passivity or delinquency.
- Undertaking of work which is seen as useful by young people (on a par with other employees or helping local communities and environments) will serve to bolster his or her feelings of self-worth.
- Recognition from the community, employer (eg in the form of wages), and general public that the work being done by young people on the New Deal programme is useful and productive will also help to bolster feelings of self-worth in the young people involved.
- Regular involvement in work (be it for an employer, voluntary organisation or environmental task force) will positively influence young people's work attitudes and beliefs, so that they recognise work as 'the foundation for independence and a sense of self-worth' (Employment Service, 1997: 2).
- Opportunity to acquire new skills will help to increase the social capital and resources of the young person, thus improving his or her chances of finding work.

It is worth noting that the second, third and fourth of these hypotheses relate most directly to those young people involved in the first three New Deal options (work for an employer, voluntary organisation or environmental task force). Involvement in training or further education may be expected to influence self-worth in a different way (although the young person is acquiring new skills, the usefulness of these still remains to be tested by application in the world of work) and it is not clear how this kind of involvement will change work attitudes and beliefs. We have not attempted to hypothesise the effects of access to a personal adviser. It is clearly intended that advisers will provide individual support and guidance so a general effect of helping more young people into work might be expected, but without knowing more details of the counselling approach it is difficult to hypothesise more specific effects. Later sections of this paper will make suggestions as to ways in which counselling might be used to provide positive psycho-social effects.

Unemployment and Various Measures of Health

Most of the literature covered in our review focuses on individual-level quantitative surveys of unemployment and health. This type of study must of necessity reduce the complex concept of individual health to a number of simple measures focusing on specific aspects. In this section, we describe the types of health measure most commonly encountered in the literature on health and unemployment: measures of mortality, generalised assessments of health, and measures of physical health, psychological well-being, psycho-social functioning, and health behaviour. This section refers to evidence of cross-sectional associations between these measures and experience of unemployment. More detailed discussions of the ways in which health may influence the possibility of unemployment, and unemployment may affect health, are provided in subsequent sections.

MORTALITY AND SUICIDE

There is a large body of evidence indicating associations between unemployment and premature mortality. Much of this is based on aggregate data about unemployment levels and general mortality rates (eg Brenner, 1979, 1983; Gravelle, 1994; Smith, 1987), and about unemployment levels and suicide rates (eg Norstrom, 1995). Associations between unemployment and raised mortality have also been found in analyses of individual longitudinal data, from British census records (Bartley, 1994; Moser et al, 1987, 1990)

and from Danish and Finnish census records (Iversen et al, 1987; Martikainen and Volkonen, 1996). Analysis of British census data has also shown that the wives of unemployed men have a raised mortality risk (Moser et al, 1990).

Census analyses show that the raised mortality rates of unemployed people were apparent across social classes, and that unemployment was particularly likely to be associated with raised mortality rates from cardiovascular disease, lung cancer, accidents and suicide (Bartley, 1994; Mathers and Schofield, 1998). Analysis of the *Census Longitudinal Study* for England and Wales shows that, for younger unemployed men, mortality from injuries and poisoning, including suicide, was particularly high. Unemployed young women were found to have high mortality from coronary heart disease and from injuries and poisonings, including suicide (Bethune, 1997).

Suicide among young people, and young men in particular, is a serious and increasing problem, that has been shown to be associated with unemployment (Charlton et al, 1994). Cross-sectional individual-level studies show that people committing suicide are disproportionately likely to be unemployed (Platt, 1984), and also that unemployed people have a higher probability of parasuicide (attempted suicide), especially if they are unemployed for more than a year (Hawton and Rose, 1986; Platt and Kreitman, 1985). Data from the West of Scotland show that more than half of unemployed 18-year-old women had had suicidal thoughts, compared with less than a quarter of those in work, training schemes or education. Unemployed young men and women were more likely than those in work, training or education to have taken an overdose or injured themselves deliberately. However, the group most likely to have performed a suicidal act was that of young women who were at home and not active in the labour market (West and Sweeting, 1996).

GENERAL HEALTH

Summary measures of general health or morbidity include sickness absence rates, medical consultation rates, hospital admission rates, disability rates, symptom checklist scores, long-standing illness rates and limiting long-standing illness rates

(Blane et al, 1996). These general measures of health are highly correlated with psychological well-being (Prescott-Clarke and Primatesta, 1998) and should thus be distinguished from measures specifically relating to physical health.

The most commonly used measures of general health in labour market research are self-rated general health (where respondents are asked to rate their own health on a scale of categories from excellent to poor or very poor), and measures of limiting long-standing illness or disability (respondents are asked whether they have any type of illness or disability that has lasted for a year or more, and whether or not this affects their ability to work). There is clear evidence of an association between unemployment and poor general health among young people (West and Sweeting, 1996; Mathers, 1996; Montgomery and Schoon, 1997).

PHYSICAL HEALTH

Cross-sectional studies have shown that unemployed people tend, on average, to have poorer physical health than the employed, even after adjusting for the effects of social class and other demographic variables (Arber, 1996; Arber and Lahelma, 1993; Bartley and Owen, 1996; d'Arcy and Siddique, 1985; Janlert et al, 1992; Warr, 1987). Particular associations between unemployment and cardiovascular disease have been found among adult men in general (Mathers and Schofield, 1998), and among young men (Hammarstrom, 1994). A longitudinal study of Irish youth found that young unemployed men were thinner than those who were employed, and that young unemployed women had significantly lower respiratory function than those who were employed (Cullen et al, 1987). On the other hand, the West of Scotland study showed no difference in mean physical symptoms between unemployed 18-year-olds and those in work, training or education (West and Sweeting, 1996).

PSYCHOLOGICAL WELL-BEING

The most commonly used general measure of mental health in studies of unemployment has been the *General Health Questionnaire* or *GHQ* (Goldberg, 1972), particularly in its short,

12-item, form. The *GHQ* is designed to identify minor mental disorders and includes items on the respondent's ability to concentrate, sleep loss, feelings of self-worth, decisiveness, stress and strain, confidence, depression and happiness. The questionnaire items refer to the respondent's feelings over 'the last few weeks', making it a measure of recent mental health. The *GHQ* was included in the recent *Health Survey for England* (Prescott-Clarke and Primatesta, 1998) and has been the main measure of general mental health in numerous studies of health and unemployment (eg Banks and Jackson, 1982; Banks and Ullah, 1988; Clark and Oswald, 1994; Donovan et al, 1986; Finlay-Jones and Eckhardt, 1984; Hannan et al, 1997; Lahelma, 1992; McPherson and Hall, 1983; Mean Patterson, 1997; Warr et al, 1988; West and Sweeting, 1996; Winefield et al, 1991). This makes it possible to draw comparisons between studies undertaken with different groups of the unemployed, in different social, economic and geographical contexts.

The *GHQ* has often been used alongside other items or scales measuring more specific aspects of psychological well-being, such as anxiety, depression, psychosis, loneliness, or happiness. Several studies have shown significantly more depression among young unemployed people, compared with those who were employed. This was the case using the Leeds Depression Scale (Donovan and Oddy, 1982; Oddy et al, 1984); the Beck Depression Inventory (Branthwaite and Garcia, 1985; Feather, 1982; Patton and Noller, 1984); the Rosenberg six-item scale of depressive affect (Winefield and Tiggemann, 1985); and the Malaise Inventory (Montgomery and Schoon, 1997). Our own survey of participants in the New Deal for Young People makes use of the five-item general mental health indicator from the *Medical Outcomes Study 36-Item Short-Form Health Survey* (Ware and Sherbourne, 1992). Like the *GHQ*, this indicator refers to feelings over the past four weeks. The items cover nervousness, depression, anxiety and happiness.

PSYCHO-SOCIAL FUNCTIONING

Whereas the psychological well-being variables described above refer to emotional states, psycho-social functioning variables are

more concerned with cognitive processes. They attempt to measure individuals' appraisals of themselves and their relationships with others. The psycho-social variables most commonly used in studies of unemployment have been fairly generalised measures of self-esteem and locus of control. However, the psychological literature includes a growing number of studies looking in more detail at the way in which unemployment impacts on more specific aspects of the individual self-concept, as well studies that look at the broader impact of social inequalities on psychological health (Wilkinson, 1996).

Locus of control has been defined as a generalised expectancy concerning the extent to which reinforcements, or rewards, are under internal or external control (Rotter, 1966). For example, people with an external locus of control would tend to believe that their unemployment or employment was largely determined by other people, social structures, fate, and luck, whereas those with an internal locus of control would put more emphasis on explanations related to personal initiative, ability and effort. The use of this construct in research on unemployment dates back to the 1930s, when Bakke (1933) showed how workers and unemployed people were pushed towards external control beliefs by their experiences in employment and unemployment. O'Brien (1984) argues that the locus of control concept should also take account of people who are intermediate in control, the 'realists', with the ability to discriminate between situations which are amenable to control and those which are not. The overall research evidence for relationships between unemployment and locus of control is inconclusive. Liem (1988) found that the unemployed internalised blame for their unemployment. On the other hand, Feather and O'Brien (1986) found an increase in externality among those who remained unemployed two years after leaving school. Winefield and Tiggemann (1985) reported a decrease in externality for school leavers in general, whether they became employed or unemployed.

The *self-esteem* construct is concerned with the extent to which people see themselves as worthwhile and valuable. The development of healthy levels of self-esteem is generally seen as an important goal in the transition from adolescence to early adulthood and, for this reason, self-esteem is a widely used construct in research on young people's health and unemployment. The most

frequently used measure of self-esteem is the Rosenberg scale (Rosenberg, 1965) which has been shown to represent global rather than situation-specific facets of this construct (Prause and Dooley, 1997). Using the Rosenberg scale, Feather (1982) found lower self-esteem among unemployed young people compared with employed young people, on both positive and negative items of the scale. Warr and Jackson (1983) found no difference between the employed and unemployed in terms of positive self-esteem, but did find that the unemployed experienced more negative self-esteem. Dooley and Prause (1995) found that both unemployment and unsatisfactory employment were negatively related to self-esteem.

On the other hand, some studies of graduates and professionals (Feather and Bond, 1983; Shamir, 1986) have shown no difference in self-esteem between the employed and the unemployed. A number of studies have shown differences in the relation of self-esteem and unemployment between men and women (Feather, 1990; Gurney, 1980b; Shamir, 1986; Spenner and Otto, 1985), suggesting that the relationship of self-esteem and unemployment depends on the nature of the population being studied (Feather, 1990).

More specific models of the self-concept encompass issues of self-presentation, self-awareness, self-perception, self-consistency, self-efficacy, and self-discrepancy. Kelvin and Jarrett (1984) give much attention to the self-concept in their account of the social psychological effects of unemployment, looking at the ways in which unemployed people see themselves, are seen by others, see other people and perceive themselves to be seen by others, including family, friends, welfare officers, employers, and society in general. They emphasise the vulnerability of unemployed people to the perceptions of others. Employers and welfare officers are seen as having considerable power over the lives of the unemployed, and employers may be seen as trying to exploit them by offering lesser jobs or lower wages.

Self-efficacy may be distinguished from the more global concept of self-esteem by its relation to particular behaviours and outcomes. Efficacy expectations, concerning individuals' beliefs that they can successfully execute a required behaviour, are distinguished from outcome expectations, concerning the appraisal that the required behaviour, if successfully executed, will lead to certain outcomes.

Bandura's model of self-efficacy (1977) proposes that expectations of personal efficacy are derived from four principal sources of information: performance accomplishments, vicarious experience, verbal persuasion, and physiological states. Of these, actual performance accomplishments are the most influential on expectations of personal mastery, with successes raising mastery expectations and repeated failures lowering them, particularly if they occur early on in the course of events. Increases in self-efficacy gained in a particular situation may lead to generalised gains in coping capacity applicable to a broader range of situations. Vicarious experience, such as observing one's peers successfully accomplish a task, may help to enhance self-efficacy, but such experience is likely to have a weaker and less consistent effect than that of personal accomplishment. Similarly, persuasion by others that one is able to accomplish a task may induce expectations that are easily extinguished by disconfirming experiences.

The concept of self-efficacy may be seen as overlapping with other psycho-social concepts, such as mastery and locus of control. The self-efficacy approach emphasises the agency of the individual, pointing to capabilities and power as crucial stress-protecting factors. According to the self-efficacy approach, belief in one's own ability to influence events constitutes a defence against feelings of frustration and hopelessness. High levels of self-efficacy may protect against the damaging effects of adverse circumstances (Elstad, 1998).

Some theories explore the relationships between processes of cognitive appraisal and emotional states (Freund, 1990; Higgins, 1987; Lazarus, 1993). For example, Higgins' (1987) theory of self-discrepancy suggests likely emotional effects from discrepancies between self-concepts (how people currently see themselves) and self-guides, based on the way they would like to be, and the ways that they think others would like them to be. Discrepancies between a person's own self-concept and own ideal self-guide are expected to lead to feelings of dejection, disappointment and dissatisfaction; discrepancies between own self-concept and guides based on others' ideals are expected to lead to feelings of dejection, shame and embarrassment; discrepancies between self-concept and own moral guide are expected to cause agitation, fear and feelings of being threatened; and discrepancies between

own self-concept and the moral guides of others are expected to lead to agitation, guilt, self-contempt and uneasiness.

The symbolic interactionist approach, adopted by Sheeran and Abraham (1994), is based on the proposition that the self-concept develops out of the child's need to anticipate the reactions of others towards the self. Consequently, symbolic interactionism emphasises the importance of three key variables: social structural position, exemplified by characteristics such as occupation or employment status; actual appraisals (how others regard a person); and reflected appraisals (the person's perceptions of how others see him or her). Sheeran and Abraham (1994) found poorer self-evaluation and self-consistency scores among unemployed people relative to the employed, and also found that longer unemployment was significantly associated with poorer self-affection. These relationships were mediated by the unemployed respondents' reflected appraisals of the views of friends, family, employers, other unemployed people and people in general.

Several research studies have examined the way that negative appraisals of the unemployed may lead some people to experience feelings of shame at being unemployed. Experience of a 'shaming environment' has been shown to be associated with a number of other indicators of ill-health (Eales, 1989; Rantakeisu et al, 1997).

HEALTH-RELATED BEHAVIOUR

Much research on health inequalities is concerned with the impact of lifestyle factors, such as smoking, alcohol consumption, drug use, eating habits and propensity to exercise. There is some evidence that unemployment may be associated with changes in the risk of adopting unhealthy behaviours, but the relationships appear to be complex. For example, it might be hypothesised that unemployment would lead to increased self-medication with alcohol as a way of coping with the stress of job loss. On the other hand, work-related stress may put employed persons at greater risk of alcohol abuse. An economic model might predict that unemployment would lead to decreased alcohol consumption through reductions in income. Research among British 26-year-olds shows that heavy drinkers were more likely to be employed

than unemployed (Montgomery and Schoon, 1997). However, there could be an offsetting effect to the extent that non-workers have lower opportunity costs associated with the time it takes to drink or to recover from heavy drinking (Ettner, 1997).

Smoking, on the other hand, shows a more consistent positive association with unemployment. For example, analysis of the 1970 *British Birth Cohort Study* showed that young people who were unemployed or inactive were more likely to be regular smokers than were young people in employment (Montgomery and Schoon, 1997). Evidence of the types of association found between unemployment, smoking, alcohol consumption and drug use is discussed in more detail in subsequent sections.

Selection Processes: Does Poor Health Lead to Unemployment?

The previous section of this paper looked at the range of health measures examined in the literature relating health and unemployment, and examined some of the cross-sectional evidence of associations between unemployment and the various health measures described. However, much of the debate about relationships between unemployment and health has focused on issues of the direction of causation – does ill-health lead to unemployment or does unemployment cause ill-health? This issue can only be addressed with longitudinal data. When such data is available, the research evidence suggests that poor health is both a cause and a result of unemployment. For the sake of presentational simplicity, we discuss selection processes in this section and causation processes in Sections 4 and 5. In reality, this separation is somewhat artificial and the two types of process may interact. Section 6 of this report reviews analyses which examine this interaction between selection and causation processes, taking a life-course perspective on the relationship between health and unemployment.

TYPES OF SELECTION PROCESS

The *direct selection* (or *drift*) hypothesis suggests that people in poorer physical or psychological health have a higher chance of experiencing unemployment by virtue of their ill-health. For

example, health problems may cause them to lose or voluntarily quit their job (differential selection into unemployment), or may prevent them from finding a job (differential selection out of unemployment).

The *indirect selection* hypothesis suggests that similar factors may place some people at increased risk of both unemployment and ill-health, leading to a correlation between them even in the absence of direct selection or causation effects from one to the other (Montgomery et al, 1996; Vagero and Illsley, 1995).

A related possibility is the existence of complex interaction effects between unemployment, health and a range of background variables. Dutch research has shown that children with poor health achieved less educationally if they came from less privileged social groups, but not if they came from more privileged groups (Bartley et al, 1997). It could be the case that unemployment presents a greater health risk for young people from disadvantaged backgrounds, or that disadvantaged young people with health problems face a greater risk of unemployment, compared with those who are more advantaged. The identification of groups which may be at particular risk of health problems as a result of unemployment, or at particular risk of becoming unemployed if they have health problems, is an important task for researchers. It may be that policy makers need to target these groups for particular help and support.

CONTEXTUAL FACTORS

Analyses of direct and indirect health selection into unemployment need to take account of the social, economic and geographical contexts in which individual trajectories are embedded. The strength of selection effects is likely to be related to the state of the economy at a particular time, or in a particular place. This point is particularly important when considering the findings of cohort studies of unemployment and health, since young people entering the labour market at different times are likely to encounter very different conditions. Recent multi-level analysis of census data concluded that there were also geographical effects on the risk of limiting long-term illness which meant that the relationship between patterns of individual disadvantage and the

risk of illness was not the same in all types of local area (Wiggins et al, 1998).

When unemployment is low, the relatively small number of people who fail to obtain a job may be expected to have some personal attributes, such as ill-health, which make them less attractive to employers (Fryer, 1997; Warr, 1987). On the other hand, when unemployment is high and large groups of people lose their jobs in large-scale layoffs, it is less likely that individual attributes will be behind the selection into unemployment. Research suggests that people with health problems experience particular difficulties in finding employment, relative to those with better health, during periods of economic recession (Bartley and Owen, 1996).

Hammarstrom and Janlert (1997a) distinguish between selection *from* the labour force (by employers) and selection *into* the labour force (by potential job seekers), both of which effects are likely to be stronger in times of recession. Strong effects of selection from the labour force are likely to result in an increasing proportion of health problems among the unemployed as the less healthy remain unselected. On the other hand, strong effects of selection into the labour force will tend to have the opposite effect, as those with health problems opt for an alternative non-employed role (eg sick or 'discouraged').

Mastekaasa (1996) suggests that profit-maximising employers should tend to retain the most healthy workers when decisions about layoffs are made, since physical or mental health problems will tend to lead to lower productivity. However, he notes that both legal and social factors limit employers' freedom of action. These legal and social factors, involving such factors as protection against dismissal legislation and trade union strength, will clearly vary from one country to another, and indeed between industries and occupational sectors. Mastekaasa suggests that employers may be less socially constrained in their selection of individuals when they are recruiting than when they are laying off workers, but their opportunity to be selective on grounds of health will be limited by the amount of information available to them.

Another issue is the possibility that health problems will affect job search: on the one hand, people with health problems may be expected to search less efficiently than those without such problems; on the other, people with psychological problems may

find it particularly difficult to be without a job and may therefore be more willing to accept a job that is less satisfactory (Mastekaasa, 1996).

The availability of alternatives to unemployment such as the New Deal for Young People or other training schemes and the ways in which these are allocated is also likely to be an important factor influencing the degree of selection into unemployment among young people. Hammarstrom and Janlert found no selection into unemployment in Sweden among young people aged 16 to 18 and explained this with reference to the availability of youth opportunity programmes randomly allocated to young people of this age. Between the ages of 18 and 21, when access to the labour market programmes diminished and became more competitive, a selection effect was observed (Hammarstrom and Janlert, 1997a).

GENERAL HEALTH

A longitudinal study by Arrow (1996) used data from the German Socio-Economic Panel to test for selection effects from ill-health into unemployment. The study looked at whether workers of all ages with various health problems (subjective health status, chronic illness, disability and long-term sick leave) were at increased risk of becoming unemployed. Arrow found no such effect for German male workers, but found that chronic illness and long-term sick leave did increase the chance of later unemployment for female and foreign workers. He concluded that the difference might reflect reduced levels of employee protection for women and foreign workers, perhaps related to their work status, employment history or labour market niche.

Longitudinal research from the Netherlands (van de Mheen et al, 1999) has found that health problems significantly increased the risk of mobility out of the labour force, and also reduced the chance of entering the labour force.

PHYSICAL HEALTH

Mullahy and Sindelar (1990), looking at the labour supply decision, found that self-reported physical health was a signifi-

cant predictor of labour force participation for both women and men.

PSYCHOLOGICAL WELL-BEING

A study of long-term unemployed 16- and 17-year-olds in Britain found that those with better mental health at the first interview were more likely to find jobs by the second (Mean Patterson, 1997). Swedish research on more than 1000 school leavers from the town of Lulea found that the risk of entering unemployment was increased for men and women with depressive and nervous symptoms (Hammarstrom and Janlert, 1997a).

Other studies which have looked at possible selection of young people into unemployment according to prior mental health include those by Banks and Jackson, 1982; Feather and O'Brien, 1986; Layton and Eysenck, 1985; Mortimer, 1994; O'Brien and Feather, 1990; Tiggemann and Winefield, 1989 and Winefield and Tiggemann, 1985. Banks and Jackson (1982) found no prior differences in the *GHQ* among groups differentiated by subsequent employment status, but their sample was restricted to disadvantaged school leavers. The research by O'Brien and Feather found that young people with lower life satisfaction, less positive attitude, experiencing greater stress and with more depression while in school were more likely than others to be unemployed one and two years later. Layton and Eysenck (1985) showed that young people who scored high on the Eysenck psychoticism scale before leaving school, and manifested such characteristics as immaturity, irresponsibility, troublesomeness, solitariness, hostility, anti-authoritarianism and non-conformism were, perhaps not surprisingly, more likely than others to be unemployed six months after leaving school.

PSYCHO-SOCIAL FUNCTIONING

Three studies (Patton and Noller, 1984; Spenner and Otto, 1985; Tiggemann and Winefield, 1989) found that personal control orientation, measured in the last year of school, did not predict subsequent employment status.

There is conflicting evidence concerning the issue of whether low self-esteem increases a young person's chance of unemployment, other things being equal. A small Australian study by Patton and Noller (1984) found that self-esteem in school did not differentiate students who became employed, unemployed or returned to education five months later. A larger Australian longitudinal study (Winefield and Tiggemann, 1985) concluded that students with lower self-esteem while in school were more likely to be unemployed two years later, but a further investigation by the same authors (Tiggemann and Winefield, 1989) found that self-esteem did not predict employment outcomes when socio-economic background variables and measures of individual academic potential were controlled. A large US panel study (Spenner and Otto, 1985) found that, while self-esteem was not predictive of unemployment for young men, women who had higher self-esteem in high school experienced less unemployment over a subsequent 13-year period. Three more recent studies have found that self-esteem predicted later unemployment: Dooley and Prause (1995) concluded from their research that self-esteem in high school could predict employment status up to seven years later; Fergusson et al (1997) found self-esteem at age 15 years to be predictive of later unemployment; and Mean Patterson (1997) found that young never-employed people with healthy (ie low) levels of negative self-esteem were more likely to find employment subsequently.

HEALTH-RELATED BEHAVIOUR

Excessive use of alcohol has been shown to reduce employment and increase the likelihood of unemployment, through lowering of productivity (Mullahy and Sindelar, 1996).

There are relatively few studies explicitly focusing on smoking and unemployment, but those that exist suggest that smoking may both be predictive of and caused by unemployment (Hammarstrom and Janlert, 1994; Warr, 1984; Westcott, 1985). A study of more than 10,000 Scottish men and women (Lee et al, 1991) found that the proportion of both current smokers and ex-smokers was considerably higher among the unemployed. Swedish research also found evidence that pupils who were

smokers in school had a higher risk than non-smokers of becoming unemployed. However, the authors suggest that this is not conclusive evidence of a selection effect:

As there is a higher probability that those who are unemployed in a study have been unemployed earlier than those who are not, a correlation between smoking and subsequent unemployment also may reflect the effects of an earlier period of unemployment on smoking (Hammarstrom and Janlert, 1994: 1692).

Causation Hypotheses: Does Unemployment Lead to Poorer Health?

Causation (or *exposure*) hypotheses suggest that unemployment causes health problems. Evidence supporting this hypothesis would include information showing that:

- respondents themselves attribute health problems to unemployment;
- health problems are evident after the individual becomes unemployed, but not before;
- problems reduce or disappear with a return to employment; or
- problems increase with the length or ‘severity’ of unemployment (dose–response relationship).

The literature provides evidence of all of these effects, and they are described in the first part of this section. The second part of the section looks at *how* unemployment might cause these health effects. It focuses on the theories outlined by Warr (1987) and Jahoda (1981,1982), who argue that material and other forms of deprivation mediate the relationship between unemployment and ill-health.

CONTEXTUAL FACTORS

Like selection effects, causation effects may vary according to political, social and economic context. For example, people who

become unemployed in times or areas of high unemployment are likely to face a longer and more difficult search for a job than they would have done in circumstances of lower unemployment. As a result, they will be at higher risk of material deprivation and may suffer more from some of the various experiential deprivations known to be associated with decrements in psycho-social functioning. They may, for example, find it more difficult to predict when they might be able to find a job, and their relatively weak labour market position may be associated with feelings of having little control over their future prospects.

On the other hand, generally high rates of unemployment among young people may play a part in reducing levels of stigma associated with youth unemployment. Studies have shown, for example, that when local rates of unemployment are high, or in times of high unemployment, unemployed people may feel less socially stigmatised than in situations where unemployment is less common (Cohn, 1978; Platt and Kreitman, 1985; Sessions, 1994).

MORTALITY AND SUICIDE

Clearly it is not possible for mortality to predate unemployment. The issue for studies of mortality and unemployment is one of whether unemployment contributes to premature mortality or whether there are background factors which increase both the likelihood of unemployment and the risk of mortality.

A British study (Moser et al, 1987) used a 1 per cent sample of census records from 1971 and 1981 to analyse mortality in unemployed men aged 15 to 64. The unemployed had higher mortality rates in both these samples. Those unemployed with a pre-existing illness showed the highest mortality rates but even those unemployed who were not ill at the time of the census showed a 37 per cent excess mortality over the following 10 years. If underlying ill-health was instrumental in people entering unemployment, one would expect higher mortality rates at the beginning of the follow-up period together with subsequent falls in mortality, as individuals either died or recovered from their illness (Bartley, 1994; Mathers and Schofield, 1998). This was the case for those who were chronically ill at the first sample point,

but not for those who did not declare themselves to be ill. Similar results have been found with Danish and Finnish census data (Iversen et al, 1987; Martikainen and Volkonen, 1996).

As discussed earlier, research has found particular associations between unemployment and mortality as a result of suicide. Aggregate time-series studies from the USA have regularly found positive associations across years between suicide frequency and undesirable economic change, such as high unemployment rates, although European studies have provided more conflicting evidence on aggregate level effects (John, 1985; Platt, 1984; Schwefel et al, 1984; Stack and Haas, 1984; Yang, 1995). A recent Swedish study (Norstrom, 1995) triangulated three types of data: ecological, time-series and individual-level. The ecological data did not show a significant correlation between suicide and unemployment rates in the different areas of Sweden, but time-series data did show a positive coefficient for unemployment. Individual-level data also showed a small effect of unemployment on suicide.

Although interviews with parasuicide survivors rarely point to unemployment as a major precipitating factor (Platt, 1984) it is argued that by exacerbating or adding to other difficulties, such as those in personal relationships, unemployment might be considered to play a causal part in suicide and suicide attempts (Warr, 1987). Depressive reactions to joblessness may also play a part (Pritchard, 1992).

A recent study in New Zealand (Beautrais et al, 1998) found that men and women who made serious suicide attempts were more likely than members of a control group to be unemployed. The risk of suicide was significantly reduced after adjustment for antecedent childhood, family and educational factors. When psychiatric morbidity was also taken into account the relationship between unemployment and suicide was no longer significant. The authors concluded that much of the association between unemployment and suicidal behaviour reflects common factors that predispose to both types of risk. However, a large Swedish study of suicides over a period of 11 years (Johansson and Sundquist, 1997) concluded, after controlling for sex, age, marital status, form of tenure and health status, that unemployment remained associated with increased suicide risk. Since the range of background variables included in this model was more limited

than that of the New Zealand study (Beautrais et al, 1998) we cannot rule out the possibility that unobserved variables were responsible for the correlation.

West and Sweeting carried out loglinear analyses of suicidal thoughts and acts at age 18 years, controlling for prior mental well-being (*GHQ*) at 15 years and other background variables (social class, economic position, and sex). The existence of a highly significant association between unemployment and suicidal thoughts and acts, even when controlling for prior mental health, suggests that unemployment does make young people more vulnerable to suicidal thoughts and behaviour. Further evidence for this interpretation was provided by similar loglinear analyses controlling for mental well-being at age 16 years, and analyses of 21-year-olds controlling for mental well-being at 15, 16 and 18 years. The authors also carried out analyses showing that the proportion of young people reporting suicidal thoughts and acts increased significantly with the number of periods of unemployment they experienced. The proportion experiencing suicidal thoughts rose from 18 per cent among young people with no periods of unemployment to 44 per cent among those with three or more periods of unemployment, and the proportion reporting suicidal acts rose from 2 per cent among those with no unemployment to 12 per cent among those with three or more periods of unemployment (West and Sweeting, 1996).

GENERAL HEALTH

There is evidence to suggest that unemployment is associated with changes in sick-role behaviour. Linn et al (1985) found that American middle-aged men unemployed for up to six months made more visits to the doctor, spent more sickness days in bed, and took more medications than comparable employed individuals, although there was no change in the number of diagnoses of disorders made. Similarly, a British study by Beale and Nethercott (1985) found increased medical consultations among workers subjected to factory closure, starting at the time when closure was first threatened, but no increase in actual illness episodes. The *National Health Survey of Australia, 1989-90*, found that unemployed people made more use of medical and pharmaceuti-

cal services and that these differences were largely accounted for by variations in reported health status (Mathers, 1994). We have found no studies looking specifically at the sick role behaviour of young people.

PHYSICAL HEALTH

Several studies provide evidence suggesting that unemployment may lead to decrements in cardiovascular health. Janlert (1992) found that Swedish construction workers who had been unemployed for two years showed greater increases in blood pressure than did similar workers laid off at the same time but re-employed within two years. Other studies of large-scale layoff and plant closures have also found increased levels of cardiovascular disease and risk factors, such as high serum cholesterol levels and high blood pressure (Mattiasson et al, 1990). Longitudinal studies by Kasl et al (1975) and Kasl and Cobb (1980) showed no evidence of significant decrements in physical health associated with the transition from employment to unemployment, but the durations of unemployment in these studies were brief: up to 15 weeks of unemployment in two years. Previous research by the same authors showed higher blood pressure among workers subject to plant closure, with the most marked increases in the anticipatory period before actual job loss (Kasl and Cobb, 1970). Cobb also reported higher levels of stress hormones among the unemployed workers compared with controls who remained employed (Cobb, 1974). Similar evidence of physiological symptoms of stress was found among the unemployed by Baum et al (1986), in a study where employed and unemployed individuals were asked to perform a number of conceptual tasks. These researchers also found that persistence and performance at the tasks were impaired for the unemployed subjects.

A Swedish longitudinal study of school leavers has shown similar cardiovascular effects of unemployment on young men who were long-term unemployed, compared to those with short-term or no unemployment. There was no significant effect for young women (Hammarstrom, 1994).

PSYCHOLOGICAL WELL-BEING

Several British studies of young unemployed people provide evidence of unemployment causing decrements in mental health. For example, in a British longitudinal study of unemployed young people from eleven urban regions (Banks and Ullah, 1988), which found extremely poor mental health among this group, there was evidence that psychological symptoms occurred after the start of unemployment and roughly half were specifically attributed to unemployment.

A reduction in mental distress on entering employment was found by Banks and Jackson (1982) in their study of disadvantaged British school leavers. Young people who became unemployed suffered higher levels of distress than other young people, adjusting for background variables including sex, ethnicity and level of schooling, but distress was alleviated for those who subsequently entered employment or training. A more recent British study of long-term unemployed 16- and 17-year-olds also found improvements in mental health (as measured by *GHQ*) for those who found jobs between the two interviews (Mean Patterson, 1997).

A number of Australian studies suggest a coexistence of positive effects of employment for young people, and negative effects of unemployment. Some school-leaver studies have found improved well-being among those who gained employment after leaving school but no change in those who became unemployed (Gurney, 1980b; Tiggemann and Winefield, 1984); others have shown no change in those who gained employment but a decline in those who became unemployed (Feather and O'Brien, 1986; Patton and Noller, 1984).

The *Australian Longitudinal Survey* of youth aged 16 to 25 years, conducted in the mid- to late 1980s, included only participants who had been employed formerly, had no pre-existing psychological morbidity or physical illness and reported no life event or situation other than unemployment to account for their psychological disturbance (Morrell et al, 1994). Previously well young men who became unemployed reported unhappiness and depression, young women reported loss of confidence, and both young men and young women felt they did not have a useful role in their lives. Young unemployed people who subsequently found

a job were more likely than those remaining unemployed to recover from their mental health problems.

Cross-sectional analysis of a Norwegian longitudinal study of around 2000 young people aged 17 to 20 years showed a higher frequency of nervous problems among those with more unemployment. Longitudinal analysis showed a weak adverse effect of unemployment experience on mental health (Hammer, 1993). Swedish research (Hammarstrom and Janlert, 1997a) found clear evidence of a dose-response relationship between unemployment and mental ill-health. Young men and women who experienced unemployment subsequently had increased rates of nervous complaints and depressive symptoms, with the long-term unemployed suffering the highest rates of these complaints. The Christchurch study (Fergusson et al, 1997) also found a consistent dose-response relationship between duration of unemployment and risk of anxiety and substance use disorders.

Although there is clear evidence suggesting causative links between unemployment and mental distress among young people, the magnitude of such effects seems to be lower for younger than for older unemployed people (Broomhall and Winefield, 1990; Clark and Oswald, 1994; Payne et al, 1984; Rowley and Feather, 1987; Warr and Jackson, 1984). Analysis of the *British Household Panel* data (Theodossiou, 1998) showed that joblessness was associated with a marked rise in anxiety, depression and loss of confidence and a reduction in self-esteem and the level of general happiness. Younger people experienced smaller increases in anxiety, depression and unhappiness than did older people, but age did not have a statistically significant effect on loss of confidence or self-esteem. A Dutch longitudinal study found that the relationship between unemployment and mental health differed depending on the level of education, with unemployed school leavers suffering from poor mental health compared with those who were employed or continued to study, whereas unemployed college graduates appeared to suffer no decrement in mental health (Schaufeli, 1997).

PSYCHO-SOCIAL FUNCTIONING

People who become unemployed may be seen as losing a socially approved role and the positive self-evaluations which go with it (Warr, 1987). There are indications that young people may suffer less than older people from the loss of social position associated with unemployment. For young people, the problem may be failure to gain valued social position and the self-esteem which results from this, rather than one of losing such a position. For example, some school-leaver studies have found that young people who found employment gained self-esteem whereas the unemployed showed no change or a smaller gain (Bachman et al, 1978; Donovan et al, 1986; Dooley and Prause, 1995; Gurney, 1980b; Tiggemann and Winefield, 1984). This result, it is suggested, reflects the effect of unemployment in delaying the developmental process of these young people, who are 'stalled in their normal acquisition of increased self-confidence and autonomy by their lack of opportunity for positive engagement in the world of work' (Dooley and Prause, 1995: 178).

Other studies have found that school leavers who became unemployed did suffer decrements in self-esteem (Feather and O'Brien, 1986; Patton and Noller, 1984), or that both patterns were operating, with employed young people gaining and unemployed young people losing self-esteem (Banks and Jackson, 1982; Patton and Noller, 1990). In a study of young people who had never been employed, Mean Patterson (1997) found no effect of subsequent employment upon self-esteem. Analysis of the American *National Longitudinal Survey of Youth* has found that being jobless injures self-esteem and creates feelings of externality and helplessness among young people (Darity and Goldsmith, 1996).

HEALTH-RELATED BEHAVIOUR

Investigations into alcohol consumption among the general working age population have shown a general pattern of no change or reduced consumption after job loss (Forcier, 1988; Warr, 1987). However, there is some evidence of a polarised pattern of consumption with heavy drinkers, or those already

using alcohol as a coping mechanism, consuming increased amounts when faced with the stress of unemployment (Fruensgaard et al, 1983; Hammer, 1992), while moderate or light drinkers are more likely to reduce consumption in line with their reduced available income (Crawford et al, 1987; Iverson and Klausen, 1986; Smart, 1979). Ettner (1997) used econometric techniques to examine evidence for the association of alcohol consumption and dependence with non-employment and involuntary unemployment outcomes. She concluded that non-employment reduced alcohol consumption and dependence, probably due to an income effect, but involuntary unemployment had a mixed effect, being associated with slightly increased alcohol consumption overall, but with reduced dependence symptoms among single respondents. Individual and macroeconomic-level studies of increases in available income have tended to find them associated with higher alcohol consumption (Caetano et al, 1983; Godfrey, 1989; Plant et al, 1988; Ruhm, 1995).

Research on alcohol consumption and unemployment among young people has also produced conflicting results. Research on school leavers in the USA (Bachman et al, 1984) showed that young men tended to have more frequent episodes of heavy drinking after leaving school, but that this increase was smaller for those **who** became unemployed, compared with those moving into jobs. In contrast to this study, a Swedish longitudinal study of school leavers (Hammarstrom et al, 1988) showed that those going into unemployment or youth programmes had relatively high use of alcohol, as well as higher rates of psychological problems. Follow-up research five years later (Janlert and Hammarstrom, 1992) showed that unemployment duration over a five-year period significantly raised alcohol consumption for young men and women (controlling for motherhood).

A Norwegian study (Hammer, 1992) found that young unemployed men had higher alcohol consumption, on average, than employed men of the same age, but when longitudinal data were used to control for pre-unemployment use of alcohol there appeared to be no significant increase in consumption related to unemployment. This research found no evidence to support the stress hypothesis that those who reported more nervous symptoms or had little social support used alcohol as a coping strategy. The author noted that individual expectancies of the

effect of alcohol in reducing stress depended upon previous experience and social influence. However, Rantakeisu et al (1997) found that unemployed young men living in a more shaming environment were more likely to have increased alcohol consumption after unemployment than were those living in a less shaming environment, a result which the authors interpreted as evidence for stress theory. Research among Scottish young people (Peck and Plant, 1986) concluded that similar risk factors led both to unemployment and heavy drinking, but, like Hammer, they also found that loss of income constrained heavy drinking among young people.

Swedish longitudinal research on young people (Hammarstrom and Janlert, 1994) found that, after controlling for initial smoking at age 16 years, parents' socio-economic group, own education, and economic conditions, there was a significantly higher risk of an increase in smoking or start in smoking among those with more than 20 weeks of unemployment between 1981 and 1986, compared with those experiencing less unemployment. The effect was somewhat stronger for young women than it was for men. Evidence for a stress effect has been put forward by Rantakeisu et al (1997) who found that increases in smoking after unemployment were associated with experience of a more shaming environment.

A number of studies of young people have found associations between unemployment and cannabis use (Hammarstrom et al, 1988; Hammer 1992; Hammer and Vaglum, 1990a, 1990b; Peck and Plant, 1986). The authors suggest that this effect may have occurred through the tendency of unemployed young people to join marginalised groups. Hammer (1992) points out that, since use of cannabis may be financed by buying and selling in an illegal market, loss of income may not affect consumption in the same way as it does with alcohol.

Recent analysis of young male respondents to the British *National Child Development Study (NCDS)* has looked at the effect of unemployment on health capital, operationalised by a combination of scores on body mass index, leisure time exercise, frequency of eating fresh fruit and of smoking (Wadsworth et al, 1999). After controlling for pre-labour market socio-economic and health factors, the researchers found that prolonged unemployment resulted in a significant reduction in both socio-

economic and health capital by the age of 33 years. They concluded that experience of prolonged unemployment in youth was likely to have a persisting effect on men's future health and socio-economic circumstances.

How Does Unemployment Impact on Health?

Jahoda (1981, 1982) distinguished between the material or *manifest* functions of employment in providing an income, and its *latent* psycho-social functions. These latter she described as:

the imposition of a time structure, the enlargement of the scope of social activities into areas less emotionally charged than family life, participation in a collective purpose and effort, the assignment by virtue of employment of status and identity, and required regular activity (Jahoda, 1982: 59).

She predicted that loss of these categories of experience would negatively affect psychological well-being, by removing sources of self-esteem, social support and opportunities to practise competence.

Warr's 'vitamin model' of the 'jobless environment' (Warr, 1987) expands the framework of ideas outlined by Jahoda. Warr identifies nine elements which are likely to be affected by the presence or absence of employment, as well as by the quality of employment or unemployment. By means of numerous references to research studies, he shows that unemployed people tend to experience deficiencies of these elements. Two of the elements – availability of money and physical security – are similar to Jahoda's 'manifest' functions of employment, and are predicted to affect health via the experience of material deprivation. The other seven: opportunity for control, opportunity for skill use, externally generated goals, variety, environmental clarity, opportunity

for interpersonal contact and valued social position, are predicted to have more direct impact on psycho-social functioning. The nine elements represent distinguishable but not separate aspects of the unemployed environment. For example, shortage of money may be, for an unemployed person, one of several factors leading to a diminished sense of being in control of life.

Qualitative research by Hutchens (1994) points to a similar range of factors as being correlated with depression, loneliness and boredom among unemployed young people. His research identifies factors such as stigma, rejection, lack of status, lack of money, day time separation from working friends, lack of opportunities to meet people at work, the lack of a time structure for the day, and difficulties in seeing future progress as leading to poorer psychological well-being.

Fryer (1986) also draws attention to the psycho-social problems that may result from unemployment. His theory of agency emphasises the attempts of individuals to make sense of what goes on and to act in accordance with their interpretations. The kinds of problems which Warr describes, such as lack of information about the future (environmental clarity), are predicted to result in 'frustration of agency' and consequent psychological problems.

MATERIAL DEPRIVATION

The role of material deprivation as a mediating factor in the relationship between unemployment and poor mental health was clearly established in the seminal 1930s study of Marienthal, an Austrian village suffering mass unemployment. This research showed a clear connection between a family's attitude (unbroken, resigned, in despair, apathetic) and its economic situation (Jahoda et al, 1933/1972; Neurath, 1995). Bakke's study of 'the unemployed man' (1933) also mentions symptoms of distress and frustration caused by comparison of current financial standards with previous standards, problems in supporting the family, and changes in social relations due to lack of money.

Studies of unemployed adults have consistently shown that shortage of money is viewed as the greatest source of personal and family problems (Warr, 1987). Mental distress may be a result

of debt (White, 1985), difficulty in meeting basic needs (Whelan, 1992), and limitations on activity and social contact (Frohlich, 1983).

Money problems during unemployment have been shown to be particularly salient for adults with children and there has been some debate about their importance for young people. It has been pointed out that, for teenagers, the income differential between unemployment and employment may be small; some young people have historically found themselves financially better off when moving from school into unemployment; money and other material assistance is provided by families; and that young people have fewer financial responsibilities than adults (Schaufeli, 1997; Warr, 1987).

However, there are several research studies which do suggest a link between financial problems and mental distress among unemployed young people (White, 1991). Ullah et al (1985) found that unemployed British teenagers who did not have 'someone to turn to for help with money' were significantly more likely than those with such sources of help to experience elevated distress, depression and anxiety, controlling for other potentially important factors.

A Norwegian longitudinal study of 17- to 20-year-olds (Hammer, 1993) found that negative effects of unemployment on well-being were particularly strong for those who did not receive unemployment insurance but relied instead on temporary jobs and personal savings. On the other hand, a Swedish longitudinal study of young unemployed people (Korpi, 1997) found no clear association between compensated versus uncompensated unemployment and mental distress. A Swedish study of young unemployed people and those on training schemes found that unemployed people with poor finances had lower well-being than those with good finances (Hagquist and Starrin, 1996). A Norwegian study of the connection between financial situation and mental health in a sample of 213 unemployed adults aged 20 to 66 years (Underlid, 1997) found that the young unemployed experienced substantial financial problems, related to their lower levels of savings and lower benefit-qualifying income. Men's mental health was closely and negatively related to reduction in income, few leisure facilities and many financial adjustments. Women who experienced that their income was substantially reduced compared with that of neighbours and

friends and women who had carried out many financial adjustments were in poorer mental health than other women.

There is some debate over which measures of the 'availability of money' are most likely to be associated with mental health in unemployment. Some studies using objective measures of income suggest that it does not strongly predict mental health (Finlay-Jones and Eckhardt, 1984; Hannan et al, 1997; Warr and Jackson, 1985, 1987), but perceived financial strain has generally been shown to be a significant mediator of the unemployment-mental health relationship (Halford and Learner, 1984; Kessler et al, 1987; Warr et al, 1985). A study of Australian young people designed to investigate the psychological impact of reduced income during unemployment found that the subjective level of financial strain experienced, but not the actual amount of income received, was independently associated with psychological well-being (Ullah, 1990).

Recent analysis of data from the *British Household Panel Survey*, on 7726 adults, found that poverty and unemployment were associated with the maintenance but not the onset of mental disorder, as measured by the *GHQ*. Financial strain was associated with both onset and maintenance of such disorders, even after adjusting for objective indices of standard of living. However, the authors note that the financial strain variable may represent aspects of the personality such as proneness to pessimism or worry (Weich and Lewis, 1998). To the extent that this is the case, it is possible that, for a given income, the direction of causality runs, not from financial strain to mental distress, but from mental distress to financial strain.

Whelan's (1992) analysis of the association between unemployment, money and psychological distress in the Republic of Ireland uses a measure of objective economic deprivation at the household level, in addition to a subjective measure of financial strain. His results show that deprivation of basic necessities, such as food, clothes and heating had the most striking effect on psychological health, although financial strain had an additional modest effect. Similar results concerning the effects of diminishing household resources on mental health have been found in British studies (Bradshaw et al, 1983; Heady and Smyth, 1989). Whelan emphasises the importance of measuring income and deprivation at the household level, showing, for example, that the

relationship between husband's unemployment and wife's psychological distress is mediated entirely by the objective economic deprivation variables. The needs of young people entering the labour market are often met by their families, who provide homes, food and warmth (Allatt and Yeandle, 1992). For those young people who do not obtain such physical and material protection from their families, provision for these needs depends critically upon 'the availability of money'. If they become unemployed, their risk of material deprivation is likely to be greater than that of young people who receive more family protection. Employment may help to provide physical security by keeping such young people at a distance from the dangers and health risks of life on the streets (Baron and Hartnagel, 1997; O'Mahoney, 1988).

EXPERIENTIAL DEPRIVATION

The non-material functions of employment were described by Warr (1987) as providing: opportunity for control, opportunity for skill use, externally generated goals, variety, environmental clarity, opportunity for interpersonal contact and valued social position. Warr hypothesised that deficiencies in these functions could help explain the poorer mental health of unemployed people.

Job seeking is a key area in which unemployed people may lack control by definition, since they have been unable to influence employers to take them on. Dependence on welfare and shortage of money may also lead to a sense of lack of control in unemployment (Warr, 1987).

The importance for well-being of opportunities to use skills was tested in research by Arnold (1994). The research hypothesis was that time spent, by graduates, in involuntary unemployment would be negatively associated with skill requirements of their current jobs and with psychological well-being, and that opportunities for skill use would explain the association between time in unemployment and well-being. However, the second of these hypotheses was not supported, a finding attributed to the relatively low incidence of unemployment among those studied. Opportunities for skill use and acquisition may be less important

for graduates, who might be assumed already to have quite high levels of skill, compared with poorly qualified young people leaving education at an earlier age.

Lack of environmental clarity, or uncertainty about what the future holds and about the likely consequences of one's actions, is closely related to reduced opportunities for control. Warr argues that the unemployed are often unsure what behaviours or attributes would lead to a job offer and find planning for the future difficult in view of uncertainty about their likely occupational and financial positions. Evidence of lack of environmental clarity leading to mental distress has been provided by a study comparing experiences of unemployed and temporarily laid-off men in similar occupations (Fryer and McKenna, 1987). The researchers found significantly better mental health among those temporarily laid-off, who experienced time to be passing more quickly and were more likely to exhibit self-initiated goal-directed activity. However, Warr (1987) notes that the men who became unemployed suffered a deterioration in valued position in addition to lack of environmental clarity. The effects of uncertainty for young people would warrant further examination. It is possible that judgement about the likely consequences of their actions is a skill that young people are in the process of acquiring. They may need opportunities for experimentation (Erikson, 1968), and also support in gaining and processing feedback from their attempts to find work.

Both Warr and Jahoda drew attention to the role of employment in providing externally generated goals, opportunities for interpersonal contact and a valued social position. The extent to which unemployment generates psychological distress through deprivation of these categories of experience has been tested for adults aged 20 to 60 years, with data from the *Social Change and Economic Life Initiative* (Gershuny, 1994). Five statements were used to operationalise Jahoda's categories of experience: I had time on my hands that I did not know what to do with; Most days I met quite a range of people; I was doing things that were useful for other people; I had certain responsibilities at particular times most days of the week; and I felt respected by the people I met. Results led to the conclusions that these categories were strongly associated with paid employment and that access to the categories of experience did correlate significantly with levels of psycholog-

ical adjustment, although they only explained a small proportion of the variance in the *GHQ* score. The effect of access, or lack of access, to these categories of experience was more important for unemployed than employed people. A study of young unemployed people (Banks and Ullah, 1988) also found that the ability to fill time and amount of day-to-day variety maintained a significant contribution to well-being scores, controlling for a range of other variables.

Allatt and Yeandle's (1992) ethnographic study of unemployed young people from 40 working class families in Newcastle also draws attention to many of the categories of experience listed by Warr and Jahoda. These authors show how young people in poor jobs (under-employed by the definition of Prause and Dooley, 1997) shared some of the problems of the unemployed, such as uncertainty about the future, but they also emphasise the particular deprivations which were specific to unemployment:

for unemployed young people and those in temporary, low-paid, and insecure jobs, futures were uncertain. But those who were unemployed were also thrust outside those patterns and routines of the everyday world which foster belonging. They not only lacked an externally imposed structure to their day but were in the way of those who had to conform to such structures. ... Descriptions of their condition and the language used to express it revealed the subservient status and lower order of citizenship to which they felt they had been consigned and which was reflected in others' behaviour towards them (Allatt and Yeandle, 1992).

A number of research studies show unemployed people to have difficulties in filling their time, or to spend more time in passive activities such as sitting around, sleeping or watching television (Fagin and Little, 1984; Frohlich, 1983; Kilpatrick and Trew, 1985; Turtle and Ridley, 1984; Warr, 1984; Warr and Payne, 1983). Research has also shown that lower levels of variety in the lives of unemployed teenagers were significantly correlated with anxiety, depression and general distress, controlling for a range of labour market attitudes and job-seeking behaviours (Warr et al, 1985).

A number of studies show the importance of social contacts and social support in alleviating psychological distress associated

with unemployment (Bolton and Oatley, 1987; Donovan and Oddy, 1982; Kilpatrick and Trew, 1985; Miles et al, 1984; Warr, 1984; Warr et al, 1985). The availability of such support may help to explain why individuals facing the same stressful event often experience different health outcomes:

Epidemiologists and social epidemiologists, focusing on the person, have tended to view social support in terms of an individual's embeddedness in social networks or the perception of having a confidante or someone to turn to in times of need. The risk of depression or depressive symptoms has been found to be related to having smaller social networks, fewer close and less supportive relationships, and deficient intimate relationships (Rodriguez et al, 1997: 603).

Looking at the availability of social support among unemployed British teenagers, Ullah et al (1985) asked whether their respondents had someone who could suggest interesting things to do, someone to talk with about day-to-day problems, someone to turn to for cheering up when feeling low, and someone to provide information about jobs and benefits. They found that only the first of these forms of social support was significantly associated with well-being. Clark and Clissold (1982) found that unemployed young people who felt they were receiving support from family, friends and their community were likely to have a more positive and optimistic orientation toward the future. Hammer (1993) found that social support and contact with close friends had a moderating effect on nervous symptoms for young unemployed women but not for men.

Although there appears to be general agreement that social contacts may serve as a coping resource, there is less agreement over the issue of whether and in what way unemployment may involve deprivation in terms of social contacts, particularly where young people are concerned. Compared with older people, teenagers are more likely to carry forward from school a network of friends and established leisure patterns, rather than being reliant on the social relationships they have formed at work. Some studies show increases in social interaction among young people after losing a job (Frohlich, 1983; Warr, 1984 (for males only); Warr and Payne, 1983). Martin and Wallace (1985) found that young unemployed British women reported similar amounts of

interpersonal contact before and after job loss, though older women reported a reduction in contacts after becoming unemployed. Results of a study by Miles et al (1984) concurred with Jahoda's theory in showing that employed people met a broader range of people in everyday life than did the unemployed. Other research shows that, although more free time is available for socialising during unemployment, young unemployed people tend to become more socially isolated, with a home-centred, privatised kind of leisure pattern (Coffield et al, 1983; O'Brien and Kabanoff, 1979). Research on relations within the families of young unemployed people suggests that they may sometimes experience decreased familial social support and increased conflict during unemployment (Allatt and Yeandle, 1992; Fagin and Little, 1984; Hendry and Raymond, 1986).

With regard to the importance of the social status associated with employment, Warr states that 'on becoming unemployed a person loses a socially approved role and the positive self-evaluations which go with it. The new position is widely felt to be one of lower prestige, deviant, second-rate, or not providing full membership of society' (1987: 224).

Studies relating to the issue of valued social position include the self-esteem analyses cited earlier, a number of studies of the 'shaming' aspects of unemployment, and studies of the ways that unemployed people perceive others as seeing them. Eales (1989) found that one in four adult unemployed men had experienced feelings of shame that could be related to unemployment. Half of them had changed social activities to avoid shame. Feelings of shame were strongly related to depression, anxiety and minor affective disorders that had started during unemployment.

A Swedish study of unemployed young people (Rantakeisu et al, 1997) explored the issue of shaming elements in the unemployed environment and the effects of these on various aspects of health. The concept of shame was operationalised by six questions on respondents' experiences of other people's attitudes towards them because of their unemployment. It asked whether people had: been annoyed with the unemployed person, spoken about them in disparaging terms, avoided them, regarded them as less competent, regarded them as lazy, or taken no notice of what they had said or done. The researchers found that experience of a more shaming environment was significantly associated

with headaches, sleeping disorders, powerlessness, depression, restlessness, nervousness and anxiety, tiredness, lack of strength, and difficulties in relaxing. It was also associated with a number of deteriorations in health and social life after unemployment including deteriorations in the general state of health, in mental well-being, in psychosomatic health, increased alcohol consumption (men), increased smoking, less exercise (men), fewer recreational activities, less contact with friends, more brooding, more anxiety, less self-confidence and a more dismal outlook. Men and the longer term unemployed were more likely than women and the shorter term unemployed to experience shaming elements in their environment.

Rantakeisu and colleagues suggest that unemployed young people may be more sensitive than unemployed adults to shaming attitudes, as they are at a crucial stage in their identity formation. Their research suggests that the wish to avoid shame may lead to social withdrawal, and that theories of shame (eg Scheff, 1990) can provide a deeper understanding of the importance of social support and social networks for health.

Sheeran and Abraham (1994) examined the extent to which lower scores on self-concept variables among unemployed people might be attributed to perceptions of negative views from socially significant others (reflected appraisals). These others were defined as friends, family, employers, other unemployed people and people in general. Results showed that unemployed people believed that they were more negatively evaluated by each of the societal groups than did employed people. They perceived the views of people in general to be significantly more positive than views of other sources, suggesting that unemployed people may be concerned to conceal their status with people they don't know. Friends were believed to have significantly more positive views than family, employers and unemployed people, supporting findings of previous research showing that unemployed people feel misunderstood by their families (Hayes and Nutman, 1981).

Reflected appraisals of the unemployed women were significantly more negative than those of unemployed men. Negative reflected appraisals were associated with poorer self-evaluation, self-involvement and self-consistency, and, among the longer term unemployed, also with poorer self-affection. Reflected appraisals

entirely mediated the relationship between employment status and the self-concept dimensions examined in the research.

THE DURATION OF UNEMPLOYMENT

Physiological and psychological reactions to the experience of unemployment might be expected to change over time, along with personal and financial circumstances, and perceptions of the chance of finding a job. Consequently, a number of researchers have developed 'phase models' of the relationship between unemployment and health, showing how psychological impacts change with the length of unemployment. Influential early exponents of such a model were Eisenberg and Lazarsfeld, who described it as follows:

First there is shock, which is followed by an active hunt for a job, during which the individual is still optimistic and unresigned; he still maintains an unbroken attitude. Second, when all efforts fail, the individual becomes pessimistic, anxious, and suffers active distress; this is the most crucial state of all. And third, the individual becomes fatalistic and adapts himself to his new state but with a narrower scope. He now has a broken attitude (Eisenberg and Lazarsfeld, 1938: 378).

A similar model was used by Harrison (1976). Other authors have conceptualised the loss of employment as experientially similar to bereavement, characterised by emotions such as anger, denial, grief and depression with a gradual move towards some acceptance and recovery from the loss (Hayes and Nutman, 1981). Longitudinal research on a sample of 38 newly unemployed men, aged 25 to 55 years, offered some evidence for the applicability of a grief-process approach (Archer and Rhodes, 1995).

Critics of models denoting various stages of unemployment argue that they do not account for the variety of individual responses to unemployment, that they provide little information about the processes underlying the assumed changes, and that ready acceptance of such models could easily lead to misleading stereotypes of unemployed people's behaviour (Feather, 1990; Fineman, 1983). Such models are generally based on the experiences of older unemployed people, whereas research among

younger unemployed people appears to conclude that unemployment duration is not in itself associated with increases in psychological distress or decreases in employment commitment (Banks and Ullah, 1988; Finlay-Jones and Eckhardt, 1984; Jackson and Warr, 1984; Warr et al, 1985), although it is associated with reductions in job-seeking effort (Banks and Ullah, 1988; Feather, 1982). A recent Swedish longitudinal study of around 700 unemployed young people found robust evidence of the negative effects of current unemployment on mental well-being, but previous unemployment did not seem to matter, suggesting that the depressive effects of unemployment on young people may be transitory rather than cumulative (Korpi, 1997).

STRESS AND SOCIAL INEQUALITIES

So far, we have looked at individual-level explanations for the relationship between unemployment and poor health. The work of Wilkinson (1996) takes a macro-social perspective, arguing that the degree of income inequality in a society has a direct impact on its average health. Wilkinson cites international comparative data showing that across industrialised countries, average mortality is more closely related to the level of income inequality within countries than to differences in average income between countries. His model suggests that inequalities lead to raised levels of psycho-social stress which, in turn, have a negative effect on immunological and endocrine processes (Smith, 1999). Social cohesion and the quality of social relations are key factors in this process (Elstad, 1998).

A Life-course Perspective

In recognition of the many possible influences on relationships between unemployment and health, researchers are increasingly arguing the case for taking a 'life-course perspective' towards the explanation of associations between these variables (Bartley et al, 1997; Fergusson et al, 1997; Montgomery et al, 1996; Power et al, 1996; Ronka and Pulkkinen, 1995; West, 1998). Social distributions of mortality and morbidity by class and occupation have been shown to be so finely graded that, it is argued, they could only be explained with reference to patterns of exposure to physical and psycho-social hazards over the longer term (Bartley et al, 1997).

The life of any individual is likely to be marked out by particular salient health events and economic events, which might include periods of unemployment. The cumulative stress of repeated adverse life events, such as unemployment, is thought to have a negative impact on health. Research has shown that mortality risks are higher in people who have experienced cumulative socio-economic disadvantages (Davey Smith et al, 1997). The *British Birth Cohort Study* of 1946 provides compelling evidence of the effects of early life events on adult health (Wadsworth and Kuh, 1997).

Analysis of the Dutch *Longitudinal Study of Socio-Economic Health Differences* found that the relation between adult socio-economic status and adult health was influenced by childhood socio-economic conditions. The researchers reported an independent effect of childhood socio-economic conditions, partly explained by unhealthy behaviour, personality characteristics and

cultural factors. Childhood health also helped to explain socio-economic health differences in early adult life. There was no apparent effect of adult health problems on downward social mobility in adult life (van de Mheen et al, 1998).

A particular feature of the life-course perspective is its consideration of the accumulation of factors that, on the one hand, may shape an individual's vulnerability to the potential consequences of adverse events, or, on the other, may provide protection against their potentially negative effects. For example, accumulation of 'social capital', in the form of material, educational, psychological and cultural assets, is likely to protect individuals from unemployment (Montgomery et al, 1996). It may also protect them from the health risks of unemployment.

Life-course accumulation of 'health capital' has also been proposed as a protective factor against later health and socio-economic risks. Low birthweight babies have been shown to have an increased risk of socio-economic disadvantage in childhood and adolescence, compared with others in the same social class, and to have an increased risk of chronic disease in middle age (Barker, 1992). Height at age seven years has been shown to be inversely related to experience of unemployment in adulthood (Montgomery et al, 1996). Psychological development during childhood has also been shown to be a source of risk and protection against adverse events in adulthood (Montgomery et al, 1996; Ronka and Pulkkinen, 1995).

Analyses undertaken from a life-course perspective often provide rich data with which to examine relationships between unemployment and health. For example, young people included in the *Christchurch Health and Development Study* (New Zealand) were studied every year from birth to 16 years and again at 18 years. Variables included maternal age and education, changes of parents, parental conflict, parental offending, parental drug and alcohol problems, child's intelligence at 8 years, conduct problems at 8 years, and self-esteem, parental attachment, affiliations with delinquent peers, prior psychiatric disorder and substance use, measured between 14 and 16 years. The attrition rate was very low, with the final sample representing 92 per cent of original cohort members still alive and resident in New Zealand at the age of 18 years.

Results of the survey showed that with increasing duration of unemployment between 16 and 18 years of age, there were significant tendencies towards increase in rates of major depression, anxiety disorders, conduct disorders, substance use and attempted suicide. However, after controlling for a number of individual factors measured before age 16 that appeared to render people vulnerable to later unemployment (mood disorders, conduct disorder, alcohol and other substance abuse, poor parental attachment, affiliation with delinquent peers, low IQ, low self-esteem, low family socio-economic status and problems in family functioning), only anxiety disorder and substance abuse remained significantly associated with unemployment. This suggests that much of the association between unemployment and psychiatric disorder in young people arose from selection processes in which those predisposed to adjustment problems were at greater risk of becoming unemployed. The research concludes that

it seems reasonable to assume that much of individual vulnerability to psychiatric disorder is well established by the time of school leaving and that, as a consequence, experiences that occur following school leaving such as unemployment are likely to play only a relatively minor role in determining variations in risks of disorder (Fergusson et al, 1997: 380).

Similar research from Finland also examined the relation of unemployment and psycho-social risk factors from a life-course perspective (Ronka and Pulkkinen, 1995). The pathway leading to an unstable career, such as one marked by considerable periods of unemployment, was, for men, characterised by such factors as aggressiveness at age 8 years, problems within the family and at school at age 14 years, and subsequent criminal arrests and drinking problems. The relationship between career lines and these variables was less clear for women. The authors suggest that various problems in social functioning are probably linked by a common set of vulnerability factors (Jessor et al, 1991), including problem behaviour, low parent and friend support and controls, and low value set on academic achievement. Similar vulnerability factors, including poor parental supervision, early school failure, low self-esteem, peer rejection, lack of educational qualifications and deviant peer group, have been identified in the UK as impor-

tant in the development of an antisocial career (Farrington, 1986). Analysis of the British *National Child Development Study* (NCDS) also found that poor social adjustment at age 11 years was predictive of later unemployment (Montgomery et al, 1996).

Potential Health Impacts of Labour Market Policies

The previous two sections of this report have examined ways in which poor health may lead to unemployment and unemployment may adversely affect health. In reality, these effects are not so clearly separated. Indeed, they may work in tandem to produce vicious circles of unemployment and health deterioration. Individuals who become unemployed as a result of mental health problems are at risk of having their problems exacerbated or compounded by the material and psycho-social deprivation associated with the unemployed environment. The previously mentally healthy, who become unemployed and suffer, in consequence, a deterioration in mental health, are at risk of remaining unemployed because of their socially caused problems (Acheson, 1998; Fryer, 1997). Recent research from the Netherlands has found that such downward spirals of ill-health and socio-economic disadvantage are likely to be particularly significant when they occur during childhood and youth (van de Mheen et al, 1998).

The upside of this is that beneficial policies should have the potential to reverse cycles of disadvantage, turning them into cycles of improvement. If young people with health problems are helped to find and keep appropriate employment, the benefits of being employed may have a positive effect on their health, which, in turn, makes their employment position more stable. Similarly, interventions which are successful in improving the physical, psychological or psycho-social health of young people could be

expected to produce additional benefits through enhancing their labour market position.

This section examines the potential of a number of different types of labour market policy to affect health outcomes positively for young unemployed people. It also examines the ways in which young people's own actions to improve their employment position, by means of job search, may have an impact upon their health, commenting on how job search support could be provided in ways that would be beneficial to health.

JOB CREATION

At the simplest level, one might infer that if unemployment is causally related (through various mechanisms) to health disorders, then a labour market policy or programme which reduced unemployment would, other things being equal, also reduce health disorders. There are however several limitations on this inference, which have been revealed in the review. Negative effects of unemployment on health or mental well-being appear to be concentrated in a sub-group of the unemployed. Achieving a positive impact on health from a labour market programme depends on improving the employment prospects of the group which is most adversely affected. Also, the net effect on health would depend not only on removing the adverse impact of unemployment, but also on the extent to which employment itself was unassociated with health disorders. If the employment obtained involved adverse working conditions (possibly leading to injuries or occupational diseases), or if it was highly stressful (possibly leading to psychological disorders, cardiovascular disease, etc), then the net health benefit of moving from unemployment to employment could be in doubt.

Research evidence suggests that the value of employment for psycho-social development is conditional on job quality (Mortimer et al, 1992). For example, Prause and Dooley (1997) found that the important dichotomy in terms of self-esteem was not between employed and unemployed young people but between the adequately employed and the underemployed. They note that underemployment is rising in countries such as the USA and Australia and that the risk of underemployment is rising faster

for recent school leavers than for older workers. Despite this phenomenon, there have been few studies of the psychological effects of underemployment (an exception is Beiser et al, 1993), and hardly any in the school-leaver literature.

Looking at data from the UK *Social Change and Economic Life Initiative*, Burchell (1994) found that adult men in insecure employment at the disadvantaged end of the labour market suffered approximately the same level of psychological disadvantage as the unemployed. However, an analysis of the *British Household Panel Survey* (Theodossiou, 1998) found that adults employed in low-paid jobs had higher well-being than the unemployed. Research on Australian school leavers (Winefield et al, 1991) found that unemployed and dissatisfied employed groups displayed poorer psychological well-being than satisfied employed and student groups in terms of depressive affect, locus of control and negative mood. The results suggested that, for males, unemployment was worse than unsatisfactory employment but, for females, unsatisfactory employment was worse than unemployment.

If improved health for young people is designated one of the aims of labour market policy, and job creation is seen as one of the solutions, working conditions and job quality would need to be considered as integral parts of the policy.

LEVELS OF BENEFIT

Since some of the difficulties of unemployment arise from lack of income, increases in benefits could have a positive impact on health, although there are formidable fiscal and economic obstacles to such a policy. The form in which a given level of financial support is provided may also have implications for health. For example, means-tested assistance has been shown to be associated with higher levels of depression among patients, compared to benefit receipt based on insurance entitlements, even when controlling for total household income and the individual's previous employment history (Rodriguez et al, 1997).

TRAINING AND WORK EXPERIENCE PROGRAMMES

The models of the psychological value of employment put forward by Jahoda and by Warr, among others, suggest that labour market programmes which act as a substitute for employment may be directly beneficial. Research from Sweden (Hagquist and Starrin, 1996) provides detailed evidence of how young people experience training programmes. Negative aspects of unemployment were described by young unemployed people as boredom, idleness, inactivity, loss of adult social contact, not having a place to go every day, loss of self-confidence because 'you do not achieve very much', having no money and having too much leisure time. Positive aspects of youth training as described by participants on youth training schemes included feeling needed, doing something meaningful, having people pay attention to you, boosts to self-confidence, the opportunity to learn new skills, and having somewhere to go (Hagquist and Starrin, 1996). The study showed improved mental health outcomes for the training participants compared to unemployed young people. On the other hand, there were also some negative aspects in the experience of youth training in Sweden: primarily feelings of exploitation, and low financial compensation. Similar negative opinions of some training schemes have been expressed by young people in the UK (Wilkinson, 1995).

Evidence from Canadian and US programme evaluations suggests that the biggest pay-offs for disadvantaged young people come from early interventions, reaching back even to the pre-school period (Martin, 1998). These studies have generally focused on earnings and employment rather than health outcomes, but analyses of socio-economic disadvantage and health undertaken from a life-course perspective (eg van de Mheen et al, 1998) suggest that we might expect to find a similar pattern for effects on health.

The health impact of training and other labour market programmes for the unemployed may depend upon participants' qualitative judgements about those programmes. Such programmes offer the potential to ameliorate the negative experiences of unemployment, by providing some of the categories of experience that tend to be lacking in the unemployed environment. The British New Deal for Young People, for example, aims

to provide outlets for the talent and energy of young people, to give them opportunities to undertake socially useful work and to receive recognition for such work.

Health-related support may also have a role to play in tackling the range of problems associated with young people's unemployment. A major youth programme which has an explicit and formal element of health counselling is the USA's Job Corps. Although we have not been able to find any health impact assessment from this programme, it is widely regarded as one of the most effective youth programmes to be developed in the USA, in terms of outcomes such as increased earnings and reduced crime rates (Mallar et al, 1982). Several countries, including Australia, the Netherlands, the UK and the USA, have procedures and systems whereby the public employment service refers clients to specialist health services (eg relating to drug dependency). This can be seen as part of a movement towards a more holistic type of counselling and support service, often referred to as 'case management', which was originally developed to deliver increasingly complex social and care services.

JOB SEARCH ASSISTANCE

For most unemployed people, job search is a primary element in the experience of unemployment. How job search is conducted, and the kinds of support given, may well be important for health impacts.

A number of studies show that commitment to work remains high among unemployed people even after long durations of unemployment. This is the case for young people (Banks and Ullah, 1988; Feather and Bond, 1983; Feather and Davenport, 1981; Jackson et al, 1983; Tiggemann and Winefield, 1980) and older adults (Gallie and Vogler, 1994). However, translation of the desire for a job into active job-seeking behaviour appears to depend on individual appraisals of the likelihood of obtaining a job. The relationship of job-search behaviour, expectancies and psycho-social variables has been modelled in a number of ways.

The *economic approach* to job-seeking behaviour tends to be based on a single model of the rational job seeker:

The canonical model of job search involves an unemployed individual facing a fixed known distribution of wages and receiving a sequence of job offers with wages that are random draws from this distribution. The individual seeks to maximise the value of lifetime income. He/she may choose to reject the current wage offer, even if it is attractive relative to being unemployed, in the hope of receiving a better offer in the future. The optimum strategy is easily seen to be characterised by a reservation wage (McFadyen and Thomas, 1997: 1462).

This approach tends to focus on the potential financial gain that would be obtained from employment, but some economists have argued in favour of expanding the scope of utility definitions to include psychological variables, such as happiness (Clark and Oswald, 1994). Unemployment theories such as 'real business cycle theory' assume that the unemployed have the same or higher levels of happiness as those who are employed (Björklund and Eriksson, 1998). However, Darity and Goldsmith (1996) hypothesised that levels of unemployment are likely to affect the well-being and productivity of those at work as well as the well-being of the unemployed, for example, through the stress of worry about anticipated unemployment.

Economic models rarely encompass explicit considerations of the motivational aspects of job seeking, such as expectancies of success and perceived behavioural control. However, economic models of the effects of unemployment duration on job search may include motivational variables. Most empirical observations suggest that duration and re-employment probability are negatively correlated, but there is debate over the explanation for this result. Proponents of the 'search theoretic' model argue that, as unemployment progresses, individuals are likely to broaden their search and reduce their reservation wage, increasing their chance of finding a job. This model explains the negative correlation between duration and re-employment probability as the result of 'unobserved heterogeneity', that is, personal characteristics which reduce the probability of employment but are not measured by the investigator. On the other hand, proponents of the 'scared worker' model suggest that, as employment progresses, individuals become less employable due to their loss of factors such as motivation and morale (Baum et al, 1986; Björklund and Eriksson, 1998). Such demotivation may affect the rational capac-

ity to arrive at the clearest solutions for problems which is assumed in the economic model (McFadyen and Thomas, 1997).

Psychologists have developed a number of models applicable to the study of employment commitment and job-search motivation. For example, the expectancy–valence approach, developed within the psychology of motivation (Feather, 1990), suggests that actions taken are related to the expectations held by the individual and to the value he or she places on outcomes that might follow from the action. Expectations encompass beliefs about whether the individual can perform the action sufficiently well to achieve the desired outcome (self-efficacy).

Banks and Ullah (1988) found that, although commitment to work among long-term unemployed young people was equal to that among the shorter term unemployed, longer unemployment was associated with less effort in job seeking, a lowering of expectations about obtaining a job, increasingly negative attitudes towards looking for a job, and an increasing likelihood of withdrawal from the labour market. As in the expectancy–valence model, prolonged unemployment led to decreased expectations and a reduction in the motivation to seek employment.

A recent Dutch longitudinal study of 232 young unemployed people (Taris et al, 1995) also supported the hypotheses of the expectancy–valence model. In this study, the expected advantages of employment were operationalised to reflect the categories listed by Warr and Jahoda (see Section 5). They included the amount of money one could spend, variation in life, the feeling of being appreciated by others, sense of purpose in life, contacts with friends and acquaintances, appreciation received for the things one does, feelings of security, ability to do things that match one's capabilities and knowledge, and order in life. Respondents were asked to show how these features would change if they found a job, and responses were weighted by the importance given to each factor.

Despite a clear correlation between perceptions of the current situation of unemployment, perceptions of the chances of finding a job, the expected advantages of employment, job-search intentions and job-search behaviour, the model only explained a small proportion of variance in job-search behaviour, and none of the variables systematically affected finding a job. This may suggest the operation of other influences on individuals' job-search

actions, such as habit, situational constraints, or group pressures (Feather, 1990). Some economists have questioned the usefulness of the expectancy–valence approach, by suggesting that beliefs about the probability of succeeding in job search are likely to have an ambiguous effect on search intensity. Those individuals who are confident of getting work may put in fewer applications or even delay their search (McFadyen and Thomas, 1997).

A factor analysis of data on Australian school leavers (Feather, 1986) found two dimensions relevant to future employment success: a value factor, encompassing appraisals of the importance of work, interest in work, job need and job want; and an unemployment disappointment factor, encompassing helplessness or pessimism about job prospects, lack of confidence in finding a job, difficulty of finding a job, the time that it was expected to take to find a job, and a general sense of helplessness or loss of personal control regarding employment outcomes.

Learned helplessness theory focuses on the unemployment disappointment factor. The central feature of the learned helplessness model is the individual's expectation that outcomes are uncontrollable or independent of a response. If unemployed people find that, whatever they do, they cannot manage to find a job, they may shift to a condition of helplessness, with associated feelings of depression (Feather, 1990).

In reality, the research evidence is contradictory on this issue. A Norwegian study (Hammer, 1993) found that active job seeking appeared to moderate mental health problems among a representative sample of unemployed young people. On the other hand, British research among disadvantaged young people found that greater efforts to find a job were associated with poorer psychological well-being and, specifically, higher levels of depression (Banks and Ullah, 1988). Similar negative effects of job seeking on the mental health of unemployed people have also been reported in other studies (Leana and Feldman, 1992; Warr et al, 1988).

A recent US study (Wanberg, 1997) found that situation-specific control, a self-efficacy type variable assessed by the item 'What are the chances that you will obtain another job if you look?' interacted significantly with search behaviour. Proactive job search behaviour was associated with decreased mental health among individuals with low situational control but not among individuals with high situational control.

These studies appear to support the learned helplessness hypothesis, by suggesting that job seeking has a particularly negative impact on mental health when individuals continue to search without success. Greater depression and lower self-efficacy as a result of failed job search may lead to a decrease in motivation and effectiveness in finding a job, and a reduction in the capacity to persist with an activity in the face of setbacks or adversity (Creed, 1998).

Although reducing levels of job seeking in such circumstances might have beneficial health impacts in the short term, a resultant lowering of the chances of re-employment could give rise to more negative long-term consequences (Leana and Feldman, 1992). While depression was lower among young people undertaking less job search in Banks and Ullah's (1988) study, the researchers found that lower levels of job search were associated with higher anxiety levels, suggesting that worry about the decreased chance of employment was affecting these young people.

According to Weiner's 'attribution theory' (1986), a person who loses a job will undertake a causal search to determine why this happened. The cause chosen will be related to past events. For example, loss of the job may be attributed to personal deficiency if the individual has a record of losing jobs in the past while other people have retained theirs. If many other people have lost their jobs, the cause selected may be related to poor economic conditions (Feather, 1990). Different attributions for outcomes are hypothesised to give rise to different emotional states. For example, job search failure ascribed to the controllable actions of others may give rise to feelings of anger, whereas failure ascribed to uncontrollable causes may bring feelings of self-pity. Changes in the expectancy of success following an outcome are influenced by the perceived stability of the cause of this outcome (Weiner, 1986). For example, 'failure to get a job following a job interview might not result in a lower expectation of success for future job interviews if the unemployed person believed that the failure was due to the fact that he or she was inappropriately dressed – a cause that can easily be changed in the future' (Feather, 1990: 68). A further assumption is that expectancy and affect together determine action: 'an unemployed person whose expectation of finding a job is low and who feels ashamed of being unemployed and perhaps also depressed, may be less likely to look for a job than

one who is more hopeful and whose self-esteem is higher' (Feather, 1990: 70).

Brickman et al (1982) proposed that a distinction should be made between attribution of responsibility for a problem and attribution of responsibility for a solution. A study of nearly 200 Australian unemployed and employed young people from a disadvantaged urban area supported this theory, finding that attributions of responsibility for solutions were clearly related to depression and loss of behavioural and emotional control. The authors concluded that young people who feel blamed for their unemployment and who have adopted fatalistic attitudes could be encouraged to take responsibility for finding their own solutions (Heubeck et al, 1995: 306).

In self-efficacy theory (Bandura, 1977, 1982, 1997) the concept of self-efficacy is developed in a way that is applicable across many of the social-cognitive theories that are described above:

This theory states that psychological procedures, whatever their form, alter the level and strength of self-efficacy. It is hypothesised that expectations of personal efficacy determine whether coping behaviour will be initiated, how much effort will be expended, and how long it will be sustained in the face of obstacles and aversive experiences (Bandura, 1977: 191).

In the field of employment, then, an individual might have a set of expectations concerning the likelihood of obtaining a job in his or her local labour market and about the rewards that would be likely to follow if a job was obtained. In addition, expectations about self-efficacy would relate to his or her own ability successfully to execute the actions necessary to get a job, such as gaining information about vacancies, completing application forms, giving interviews and impressing employers. Qualitative research on the experiences of unemployed disabled people trying to re-enter the labour market shows clearly how success in finding a job, or completing a training place and gaining confidence about future job prospects, was related to higher self-efficacy, operationalised as expectancies that personal effort would lead to successful performance, that performance would lead to desired rewards, and that rewards would meet personal needs (Lakey and Simpkins, 1994).

The various models of social cognitive appraisal processes which mediate the relationship between unemployment and health suggest a number of policy approaches which could be helpful in contributing to the well-being of unemployed young people, as well as to their personal efficacy in finding and keeping jobs.

According to the economic model, assistance should focus on providing the best possible information about available jobs. Assistance with the calculation of in-work and out-of-work benefits could also be provided, in order to help the job seeker arrive at the most rational solutions to the problem of which jobs to apply for and which offers to accept. The 'scarred worker' model suggests a loss of motivation and morale as the duration of unemployment increases. To the extent that this is the case, it suggests the need for particular policy efforts to improve the morale of people who are long-term unemployed.

The expectancy-valence approach suggests that job seekers could be helped by the provision of counselling to enhance their expectations of success in job search. This, according to the model, would stimulate the intensity of their job search and thus lead to the increased likelihood of finding a job. However, the learned helplessness model sounds a note of caution concerning this approach. There is evidence that experience of repeated failure may undermine both mental health and personal efficacy. This has led some researchers to argue that it may not be sensible to motivate young people to look intensively for a job in the absence of a sufficient demand for labour (Taris et al, 1995). Alternatively, it could be argued that the findings point to the need for continuous counselling and support services during the process of job search, which help to minimise or control the strains involved.

Attribution theory suggests the importance of reviewing the process of job search on a regular basis. Advisers may help the job seeker to make rational and detailed attributions for the success or failure of job-search attempts, and may suggest ways of modifying the job-search approach in future. The theory also draws attention to the emotional consequences of attributions, suggesting the importance of advisers' sensitivity to the emotional state of job seekers and the impact that this is likely to have on their job-search success. Brickman's models of attributions for solutions to problems suggest that there are benefits to be gained

by the adoption of a facilitating approach rather than one in which the adviser is seen to be finding jobs for the client.

The self-efficacy model (Bandura, 1997) suggests that attempts at verbal persuasion may well be ineffective if the young person's experience provides contradictory messages. This indicates the need, especially for disadvantaged young people with a history of failure, for a carefully phased programme which permits people to learn from success with intermediate goals.

Researchers at the Michigan Institute for Social Research (Vinokur et al, 1991) devised a programme based on the self-efficacy approach, to 'immunize laid-off workers against the debilitating effects of job loss and to restore their efficacy to secure reemployment in quality jobs' (Bandura, 1997: 189). They were taught through role play how to carry out effective job searches, identifying potential obstacles and developing problem-solving strategies. They also received 'resilience training' by anticipating potential barriers and setbacks in job search and developing strategies to enhance their persistence in coping with these. Social support was provided by staff and other participants. In assessments conducted shortly after the programme and several years later, the programme participants had a higher sense of job-seeking efficacy, found jobs more quickly, obtained better quality jobs and earned higher wages than those who did not receive the programme. Further analysis (van Ryn and Vinokur, 1992) found that the effect of this re-employment programme on job-search behaviour was entirely mediated by perceived self-efficacy.

Implications for Health–Unemployment Research

Previous sections of this review have examined research on health and unemployment from a number of different countries, including the UK, the USA, Canada, Sweden, Norway, Finland, Ireland, the Netherlands, Germany, Australia, and New Zealand. They have attempted to meet the first objective set out in the introduction: to summarise what is already known about health and unemployment among young adults. They have also addressed the fourth objective, attempting to refine hypotheses about the potential health impacts of employment status and labour market programmes, including hypotheses concerned with the mechanisms or processes through which health might be affected.

This section addresses the second and third objectives of the review, identifying limitations in the scope and reliability of existing knowledge, and making suggestions for the design of health impact research.

THE SCOPE OF EXISTING KNOWLEDGE

The review has shown that most of the work on the health–unemployment relationship, especially among young people, has focused upon mental health. One reason for this may be the availability of well-tried scales, such as the *GHQ* for overall psychological well-being or distress, and others of a more specific nature measuring depression, anxiety, self-esteem, mastery and so

on. These scales are reliable and provide opportunities for comparisons with other studies. It is also plausible that psycho-social processes have a particular importance for youth (Rutter and Smith, 1995).

Future research in Britain could pay more attention to physical health and health behaviour. Adoption of and increases in negative health behaviours, such as smoking, alcohol and drug use, have been shown to be associated with unemployment among young people, but much of the high-quality research on these issues has been undertaken in Scandinavian countries. A practical issue here is the high cost of tracking health behaviour over long periods.

We have stressed the advantages and attractions of the well-established measures of psycho-social health. However, the review indicates that when comparisons are made across research studies, there are sometimes contradictory results with these measures. Such variation in results possibly reflects different circumstances, which trigger different mechanisms that research has failed to distinguish. This points to the need for future research to focus on the processes and variables which mediate the relationship between unemployment and health for young people, in order to arrive at a more specific understanding of the ways in which health effects vary.

Another issue highlighted by the review is that the dichotomy between employment and unemployment is too simplistic. Understanding of the health-related mechanisms involved in employment status may well be advanced by identifying what is in common, and what is different, across employment statuses. This is indeed a clear implication of the seminal theories of Jahoda and Warr. There is a need to broaden the perspective to take in relationships between health and various forms of underemployment, low-quality employment, and precarious employment (eg Benavides and Benach, 1999; Darity and Goldsmith, 1996), as well as between health and unemployment.

Relatively little research attention has been paid to the issue of non-employment and the health of those young people who adopt this status. Non-employed youth (that is, those not employed, in education or training, or registered as unemployed) are likely to be a heterogeneous group, including young people who have assumed a sick or disabled role, young parents (predominantly women) who have opted to stay at home and care for their children, and young

people who have, for one reason or another, simply dropped out of or given up participation in the formal labour market.

One would expect that the first of these groups would have significant physical or psychological problems affecting their ability to find or undertake a job. Nonetheless, the decision to adopt a sick or disabled role is known to be influenced by labour market as well as health factors (Haynes et al, 1997). Young people who adopt such a role may be considered to be at the extreme end of an overall distribution of young people with health problems potentially affecting their employment. By leaving them out of analyses examining such issues as the effect of joblessness on health, we are limiting our perspective on this issue.

It is generally assumed that young women who leave the labour force for a child-rearing role are 'out of the picture' as far as research on unemployment goes. However, research suggests that the kinds of early life experiences that lead to labour market problems, drop-out and antisocial behaviour among young men (Fergusson et al, 1997; Ronka and Pulkkinen, 1995; Sampson and Laub, 1993; Wilkinson, 1995) are similar to those associated with becoming a young parent (Kiernan, 1997). The decision to adopt a child-rearing role, like the decision to adopt a sick role, has been shown to relate to experiences in the labour market. For example, young women have been shown to be more likely to disengage from the labour market in favour of child-rearing if they cannot find a job (Banks and Ullah, 1988).

There is some evidence to suggest that women with young children *and* full-time jobs may be at higher risk of mental disorder than either unemployed women with children or employed women without children, particularly if they are single parents (Rosenfield, 1989). Young women who have opted to leave the labour force in order to bring up young children may suffer many of the environmental deprivations associated with lack of employment, but they may receive compensatory positive reinforcements from their parental role. Research on their psycho-social and physical health would complement that carried out so far on the health of unemployed young people.

Studies of the health of young people who drop out of the labour market for reasons generally termed 'discouragement', and the aspects of health that might influence their selection into this role, also have relevance for understanding the relationship

between health, unemployment and employment among young people in general. Boundaries between the discouraged and unemployed statuses are, in reality, blurred. For example, people who are registered as seeking work may flout the 'actively seeking' requirements in a number of ways. Again, the problems of this group of young people may be seen as one end of a continuum rather than as those of a totally separate group. A study of 250 young people, aged 16 to 21 years and attending an advice centre dealing with accommodation problems (Wilkinson, 1995), found that three-quarters of them were either officially unemployed or not seeking work. One in five had never applied for any jobs. The researcher describes how early emotional experiences of insecurity and failure appear to be of profound importance in the dropping-out process.

One of the most under-researched areas until now has been health change *within* labour market programmes. Since young disadvantaged people may spend considerable periods in such programmes, this is an important issue in its own right. In addition, the specific environmental changes which programmes introduce provide a potentially valuable opportunity for refining research into the relationships between health and employment status. It is relevant to note that in the current New Deal programme for Young People, deliberate attempts are being made to provide categories of experience that may usually be missing in unemployed environments. For example, the New Deal programme (according to its prospectus) attempts to provide opportunities for taking control, for developing skills, for using talents in an active way, and for taking on a valued role which boosts self-worth. The aims of New Deal for Young People also include intermediate steps on the path towards employability. These intermediate steps can to some extent be interpreted in terms of psychosocial well-being or self-efficacy.

There have recently been calls for a refocusing of research to look in more detail at the intervening processes in the relationship between health risks and social structural variables, such as unemployment (Macintyre, 1997). Our review points to the considerable scope which exists for development of research on the cognitive factors mediating the unemployment-health relationship, including the role of expectancies, self-efficacy, self-appraisals, shame, and models of attribution. Research on these aspects, as well as directly testing hypotheses about mechanisms

involved in the unemployment–health relationship, could yield practical guidance for the development of effective employment counselling and health counselling of young disadvantaged people.

At several points in the review we have noted that potential differences between sub-groups of young unemployed people have been inadequately investigated. Lack of sub-group comparisons has also been a general limitation in the evaluation of labour market programmes. This is perhaps one of the most straightforward ways in which research in this field could be developed in future, although the ability to conduct sub-group analysis depends upon sample size and so is not without cost.

There is an obvious need to study the unemployment–health relationship separately for young men and young women. For example, it is known that young women are more likely than young men to experience problems in many of the areas of psycho-social functioning that have been linked to employment outcomes (Mortimer, 1994). They generally have lower self-esteem (Simmons and Blyth, 1987), higher levels of depressive affect (Rutter, 1986) and a weaker sense of self-efficacy (Gecas, 1989). In general, men are more prone to problem behaviour, whereas women are more likely to experience psychological distress (Gove, 1985). Research on unemployment and health suggests that the relationship is different for young women and young men, but full explanations for the differences are still being sought (Hammer 1997; Ronka and Pulkkinen, 1995).

Another important area for sub-group analysis is that of ethnic group. Nazroo (1997a, 1997b) has demonstrated with nationally representative data that there are important differences in the physical and mental health experiences of ethnic minorities. It is of course also well established that unemployment is unequally prevalent by ethnic group (Modood et al, 1997). The extent to which unemployment has differential relationships to health experiences, by ethnic group, has yet to be investigated.

THE RELIABILITY OF EXISTING KNOWLEDGE

In summarising and discussing the evidence so far, we have not laid great stress on technical issues although some have been

referred to in passing. Further development of research on the unemployment–health linkage must address key technical issues. These include the representativeness of the samples used, the choice of variables to be included in analysis, and the problem of endogeneity between the two key variables, health and (un)employment.

Representativeness

The issue of representativeness relates to the type of sample chosen, and the adequacy of response among that sample. British studies of young people's unemployment and health have tended to focus on selected groups, such as poorly qualified young people (Banks and Jackson, 1982) or those living in disadvantaged areas. They have also tended to focus on samples of the unemployed rather than comparing health effects for young people with various positions within the labour market. This is in contrast with the position in the USA, Sweden, Norway and Australia where representative longitudinal samples of all young people of a certain age have facilitated the analysis of broader relationships between labour market participation and health, including the association of health and drop-out or non-employment, and various forms of under- or unsatisfactory employment.

On the other hand, studies focused on specific groups of young people may be particularly helpful for exploratory analysis of the complexities of the relationship between unemployment, health, and mediating variables. This point has been made by Mean Patterson (1997), who argued that studies using general representative samples are likely to miss the effects of mediators which are only relevant for particular sub-groups. Such an argument is all the more weighty when the sub-group in question is a focus for policy.

Choice of sample is a form of intended selection of the population to be studied, but all research studies face the additional issue of unintended selection, or response bias. As noted already, some longitudinal studies in this field have managed to obtain extremely high response rates (most notably, the studies by Hammarstrom and Janlert, 1994, 1997a, 1997b, which achieved a 98 per cent overall response rate in a five-year

longitudinal study, despite dealing with sensitive issues such as drug use and sexual risk taking). For other longitudinal surveys, sample attrition has been a serious problem. For example, the longitudinal study of Adelaide school leavers by Winefield and colleagues suffered progressive attrition each year (each follow-up only contacted respondents to the previous sweep) until in 1988 the achieved sample represented only 15 per cent of the original three cohorts. High drop-out rates are expected to lead to underestimates of the effects of unemployment on health, as those in the poorest health are more likely to drop out:

Survey researchers typically have difficulty in obtaining access to unemployed people, with large numbers of those approached preferring not to be interviewed. It is not known whether unemployed people who decline to take part differ substantially from those who do, but it seems very likely that they will in general be of poorer mental health ... Particularly low levels of affective well-being and unusually large impairments in subjective competence, aspiration, and autonomy are expected to discourage acceptance of an invitation to be interviewed (Warr, 1987: 207).

Underlid (1997) discussed the issue of drop-out in a survey of mental health and personal financial situation during unemployment. Registered grounds for dropping out, together with qualitative observations made during data collection, led to the conjecture that individuals with extreme emotional, social, financial, practical or somatic problems were over-represented among the survey dropouts. Some were aggressive, others depressive, and others clearly under the influence of alcohol. However, individuals who did not have or did not admit to having problems related to unemployment also appeared to be over-represented among the dropouts, as were individuals who considered themselves as atypical or out of the labour force. Drop-out among these latter two groups would be less likely than that among the first group to lead to underestimation of problems related to unemployment, and might even result in an overestimation of such problems.

Another source of bias leading to conservative estimation of negative health effects occurs when unemployed people who experience the highest levels of mental or physical disorder are the

most likely to leave the labour force, assuming definitions of 'sick' rather than unemployed (Kieselbach, 1988; Warr, 1987).

Choice of health variables

Recent reviews suggest that knowledge about social class differences in health is most secure using the outcome of mortality from all causes combined (Blane et al, 1996). There is uncertainty about the extent to which class differences in the assignment of cause of death may distort class gradients in cause-specific mortality (Davey Smith et al, 1994). Similar problems would affect research on the relationship between unemployment experiences and mortality.

Summary measures of morbidity, such as medical consultation rates, long-standing illness rates and self-assessments of general health are related to individual expectations – of the sick role, the demands of everyday life, the quality of health care, and subcultural expectations of health. Since these expectations are likely to differ between social groups, the measures themselves may be affected by social position and may provide unreliable estimates of variations in health. The recent review by Blane et al (1996) points to the need for clear targeting of questions, consideration of the use of standardised instruments, and examination of the role of social variations in illness behaviour when interpreting results using these measures. For example, recent Dutch longitudinal research found that neuroticism appeared to explain much of the relationship between childhood social conditions and self-reported adult health. The authors surmised that self-reported health might be systematically over-reported by people with high neuroticism scores (van de Mheen et al, 1998).

Many labour market surveys include definitions of physical health status which are related to labour market status. For example, the UK 1991 census included 'unable to work because of long term sickness or disability', and similar measures are included in the *Labour Force Survey*. However, research has shown that 'limiting long term illness and permanent sickness measures may reflect a tendency for higher positive response in difficult labour market conditions', casting doubt, for example, on their usefulness as indicators of objective health-care needs (Haynes et al, 1997: 283). To the extent that sick or disabled people access a different

set of benefits to those of the unemployed, it is likely that individuals' definitions of their health or disability are likely to relate to the advantages they perceive in competing in the labour market, as opposed to withdrawing into a non-employed role. Research has shown that the potential social security benefit level strongly and positively influences the proportion of male workers who report that they have health problems (Parsons, 1982). Another problem with this type of measure is that, in an analysis in which employment variables are being used as explanatory factors, a degree of circularity is introduced if the dependent variable also depends in part on an employment concept (this is known technically as 'simultaneity bias').

It seems preferable, then, to use a health measure which includes no reference to capacity for employment. Since health conditions are difficult to define and measure quantitatively, most surveys use subjective reports as health indicators, usually with categorical responses. Econometric work on the validity of subjective health indicators of this type was carried out in the USA by Stern (1989). Using two national surveys relating to disability and health, he found that the self-reports of general health status were strongly correlated with medical conditions diagnosed by a physician and recorded in the database.

Most of the evidence concerning the adverse health impacts of unemployment on young people relates to psychological or psycho-social health. Measurement here is generally in a stronger position than in the case of physical health self-reports, since it draws upon the psychometric tradition. There is an extensive literature on the definition and measurement of psychological concepts such as well-being, depression, self-esteem, locus of control, mastery, and so on, which we have not space to discuss here. There are self-report scales, scales designed for administration by lay interviewers and others designed for the use of medical professionals. The most commonly used items and scales for measuring psychological variables have been subjected to extensive testing for their validity and reliability.

Choice of explanatory variables

Issues concerning choice of explanatory variables relate both to

the comprehensiveness of the list, and to the definition of these variables. The former issue is implicated in problems of 'unobserved variable bias', where differences, correlated with rates of health and unemployment, are not controlled for in the analysis. For example, longitudinal birth cohort studies have shown that employment outcomes may be predicted from data on psycho-social and emotional factors at a young age (Fergusson et al, 1997; Ronka and Pulkkinen, 1995) and that controlling for these early life factors substantially reduces estimates of the effects of unemployment on mental health. Most studies, however, do not collect information on these childhood characteristics.

The problem of incomplete information on the backgrounds of individuals can be addressed through panel designs, that is, a series of periodically repeated observations on the same individuals. These designs make it possible, through the repeated observations, to estimate and control for unobserved influences on outcomes. To give a simple illustration, suppose that there were two people, whose outcome measures were consistently different from each other at every observation, but for whom there were no known differences to explain the outcomes. In this case, one would naturally assume that one or more unobserved influences were at work, and the more consistent the outcomes across time, the more convinced one would be that some systematic influence was involved. This is the type of reasoning which underlies the estimation of unobserved influences in panel data analysis. Because of the numerous variables potentially involved in the study of youth unemployment and health, there should be an important role for panel data analysis, and the results of Björklund (1985) indicate that these could modify results considerably. As yet, however, few studies have adopted this approach (even when longitudinal data have been available).

On the other hand, being able to control for the role of unobserved influences through panel data does not reduce the value of improving the explanatory variables. Having a wide range of intervening explanatory variables is particularly important if one wishes to develop understanding of mechanisms linking unemployment with health in young people. Although there is now quite a substantial body of research describing correlations between unemployment and various facets of health, a number of authors argue for the need for more research on the mediators of

this relationship (Björklund and Eriksson, 1998; Fryer, 1997; Hammarstrom and Janlert, 1997a). Early life experiences are probably of importance in this context. Wilkinson (1995) emphasises the importance of young people's school experiences, such as truancy, and relationships with teachers, as factors affecting their subsequent labour market experiences and appraisals of their own employability. Similar arguments are made by Bandura (1997) with regard to the development of young people's self-efficacy and the effects of this on their employability. Life-course data are particularly valuable for the light they shed on the processes linking unemployment and psycho-social problems. More qualitative research would be particularly useful 'in order to explore still not fully understood phenomena, to search for deeper mechanisms and mediating factors, and to try to suggest explanatory theories, which are rare within the field of unemployment health research' (Hammarstrom and Janlert, 1997a: 296).

Some of the psycho-social variables which have already been considered above as potential outcome measures can also serve as intervening variables in analysis of global health outcomes. These include such concepts as depression, self-esteem, or locus of control. The availability of familiar, validated scales for these well-tried concepts can however act as an obstacle to further development. It is important for research studies to explore new ways of conceptualising psychological variables and the ways in which they are related to experience, appraisal and behaviour. Exploratory studies such as those of self-conception (Sheeran and Abraham, 1994) and feelings of shame associated with unemployment (Rantakeisu et al, 1997) help to deepen understanding of the way in which effects are produced.

Endogeneity problems

Comparisons between the employed and the unemployed regularly show that employed people are on average more healthy than those out of paid work (Warr, 1987). However, such comparisons leave unclear the pattern of causal influence underlying the correlation between unemployment and ill-health (Hammarstrom and Janlert, 1997a). Establishment of the causal direction between employment status and health functioning has been called the 'key

methodological challenge' for research in this area (Dooley and Prause, 1995: 178). Other researchers have been more sceptical about the amount of attention that has been paid to this issue (Fryer, 1997; Hammarstrom and Janlert, 1997a).

While this issue is widely acknowledged in the literature on health-unemployment linkages, there has been less apparent concern about the technical issues which are raised for an analysis. In econometrics, the technical problem is usually referred to as endogeneity bias. If one simply estimates the influence of (say) unemployment on health, without considering that health also influences unemployment, one will generally get an inflated estimate of the relationship. Strictly speaking, two equations have to be solved simultaneously to get the true answer. Other econometric techniques can be used instead, with the intention of 'purging' the analysis of endogeneity bias. Of these the most popular is two-stage instrumental variable estimation, but this technique in the past has also imposed considerable restrictions on the analysis (for example, the outcome variables in two-stage estimation by the ordinary least squares method need to be continuous and approximately normally distributed: health measures generally do not meet this requirement).

An example of a recent study which uses a more rigorous econometric approach is that of Hamilton et al (1997). This study used a survey of Montreal residents to estimate the relationship between employment and mental health, taking full account of endogeneity. To do so the authors solved simultaneous non-linear equations for employment status and mental health, by maximum likelihood estimation method. Their findings were that mental health significantly increases employability, and that employability significantly increases mental health. They also found that the residuals (unexplained variance) in the equations were correlated, which they interpret as evidence of the assumed endogeneity. This interpretation is however a disputed area within econometrics.

A somewhat different approach was adopted by Stern (1989). He used a two-stage procedure originally justified by Mallar (1977) to produce separate estimates of the effect of disability on employment and of employment on disability. He then used model specification tests to assess endogeneity bias in the estimates. His conclusions were that disability affected employment in the

expected way, that employment had little effect on disability (and if anything, increased disability), that endogeneity bias though present was slight, and that its effect was (if anything) to understate the effect of disability on employment. These results suggest that the problem of endogeneity may have been over-emphasised in regard to disability and employment. But they cannot be generalised to mental health, where endogeneity may be much more of an issue. For example, psychological states may be more sensitive than physical disorders to the economic and social conditions of life, and hence to employment status.

DESIGNING HEALTH IMPACT RESEARCH

The central issues for policy-related research in this area are the extent to which employment status affects the health of young people, and the extent to which any adverse effects can be reduced through interventions such as support services or labour market programmes. What research designs will most reliably provide an assessment of these issues?

An advantage for examination of the causal processes involved in the health–employment nexus is the availability of longitudinal data. Cross-sectional comparisons are valuable for showing differences between the health of employed and unemployed individuals, but leave unclear the extent to which these differences result from selection or causation effects. Longitudinal studies, on the other hand, facilitate the measurement of changes in mental or physical health, which may then be regressed against unemployment, unemployment duration and various control variables. This type of research can handle the problem of time invariant determinants of health and unemployment by including them as control variables. For example, an analysis with change of mental well-being as the dependent variable will not show a significant effect of unemployment unless the mental well-being of unemployed persons has changed relative to that of the employed, after taking account of observed background characteristics.

Because of the likely presence of unobserved factors which affect both health (physical or mental) and employment, it is desirable to extend the longitudinal design to a panel design with

multiple observations. The cost of collecting suitable data, however, is likely to be a practical constraint on this ideal. This is particularly the case if the longitudinal or panel study is to provide information about the impact of labour market services and programmes, since only a minority of an initial sample will subsequently become unemployed and a still smaller minority will take part in programmes.

Mortimer (1994) proposes three alternative longitudinal strategies for unravelling the causal relationships between health and unemployment:

- (i) The first of these is to take a sample of students, either about to leave or recently left school or college, and follow them over time (see, for example, Bachman et al, 1978; Banks and Jackson, 1982; Donovan et al, 1986; Feather and O'Brien 1986, 1987; Gurney, 1980a; O'Brien and Feather, 1990; Patton and Noller, 1984, 1990; Spenner and Otto, 1985; Winefield et al, 1993). The investigator attempts to predict, on the basis of data collected before entry to the labour market, who becomes employed or unemployed some months or years later.
- (ii) The second strategy is to take a sample of a broad age range of workers, including both employed and unemployed individuals (see, for example, Cohn, 1978; Payne et al, 1984; Warr and Jackson, 1984). Using psychological data on those who are employed at the first data collection point, the investigator can examine the extent to which these variables predict who becomes unemployed later in the work career; using similar data on the unemployed, predictions about re-employment may be made.
- (iii) The third strategy is to take a sample of unemployed individuals only and monitor their work status over time, or examine their characteristics in relation to duration of already experienced unemployment (Hui, 1991).

While these design examples refer to the effect of health on employment status, it is evidently possible to apply them equally to the reverse effect.

Clearly the first of these strategies is close to the ideal study of youth unemployment and health which we have already referred to. Because of the high costs of a special-purpose longi-

tudinal study, the design becomes more practicable given prior availability of baseline information on young people, before they leave full-time education. This has been the case with many of the studies on health and employment relationships which focus on this age group (Fryer, 1997).

In Britain, the main sources of longitudinal information which include health measures during individuals' childhood and schooling are the birth cohort surveys of 1946, 1958 and 1970. The 1958 cohort (the *National Child Development Study*, or *NCDS*) has been used to investigate the health–unemployment link. However, the sample had entered the labour market somewhat before the rise in youth unemployment at the end of the 1970s, and has had little participation in labour market programmes for the unemployed, so that it has limited relevance to recent conditions. Its value has also been reduced by the infrequency of follow-up interviews (in 1974, 1981, and 1991 only), so that much of the information on labour market experience and health experience relies on recall over quite long periods. Although the sample for the 1970 birth cohort study would have experience of more relevance to current conditions, and has been used to examine associations between unemployment and health (Montgomery and Schoon, 1997), this study collected less extensive background data than the *NCDS*, and less labour market information. It also suffers from the same problem of infrequent follow-up.

The *West of Scotland 20-07 Study* is a birth cohort study specifically designed to investigate the social processes producing or maintaining differences in health. Three cohorts, aged 15, 35 and 55 at first contact in 1987/88 are being followed up periodically by detailed home-based interviews and postal questionnaires. The study includes extensive measures of physical and mental health and well-being. The youngest cohort has been followed up on four occasions (at age 16, 18, 21 and 23 years) and has been used to examine relationships between young people's health and their experience of unemployment (West and Sweeting, 1996).

Another source of longitudinal data is the *Youth Cohort Survey* (*YCS*) series, which provides an annual national sample of school leavers. However, this series is conducted solely by postal questionnaire, hence its content is limited and it contains very little information about the young person's social and health

background. Its main purpose is to study early educational transitions and transitions from school to work.

The remaining source of British longitudinal data is the *British Household Panel Survey (BHPS)*, which has been interviewing the members (aged 16-plus) of 5,000 households annually since 1991. As the BHPS includes questions on general health, disability, psycho-social health, and use of health services, as well as extensive questions on employment and income, it is a potentially important resource for researching the health–unemployment linkage (see Theodossiou, 1998). Unfortunately, the sample size is rather small for a study focusing on the effects of unemployment on young adults. For example, in a given year one would find about 1,500 aged 18 to 24, of these some 150 to 250 might experience some unemployment, and only 50 to 100 would experience long-term unemployment giving access to labour market programmes. Nonetheless, the *BHPS* comes closest among existing British data sets to the ideal panel design and, as the series is extended, it may become increasingly useful for health impact research.

At present, then, it seems unlikely that a full panel data set can be constructed for health impact assessment among young unemployed people in Britain. Panel designs however are not the only route by which health impacts may be assessed in relation to labour market policies and programmes. As earlier noted, the introduction of labour market programmes for young disadvantaged people itself creates new opportunities for assessing the health impact of unemployment, of re-employment, and of intermediate statuses. Designs used in labour market evaluation studies may be applied to health impacts, although they will doubtless need to be modified in various respects.

The simplest programme evaluation design is the ‘before and after’ or own-control method. Outcome measures are taken at some initial point and again at a later stage after some event (eg re-employment) or intervention (eg training programme) has taken place. The hypothesis is that the intermediate event or intervention is responsible for any observed change in the outcome. Of course, in its simplest form such a design is unconvincing because other circumstances, in addition to the one of interest, may have changed over the study period, and one or more of these other changes may have influenced the outcome. The design can

be greatly strengthened by the addition of a comparison group which does not experience the intermediate event or intervention, but is in other respects exposed to the same conditions.

In the case where the outcome measure is obtained both before and after the critical event or intervention, this is the 'differences in differences' design which has been widely used in evaluation research in the USA. It is also the design underlying the study by Hagquist and Starrin (1996) which has been referred to at various points in this report. The label 'differences in differences' indicates that differences in outcomes between the groups are calculated at two or more points in time, and the measure of impact used is the change in the difference score. This is a very flexible design which does not require the two groups to be closely similar in composition, although they should be sufficiently similar to offer sensible comparisons. Statistical details are provided by Heckman and Robb (1985).

In the case where outcome measures are available only after the event or intervention in question (a retrospective sample design), the treatment and non-treatment groups must be closely similar in composition. Where the two groups are formed by a process of random allocation, one has an experimental design. Where the group experiencing the programme is non-randomly selected (eg through own choice or administrative decisions), then the comparison group should be formed by matching on those characteristics which influence participation. The statistical advantages and limitations of the two methods are discussed in Heckman and Smith (1996). Although both are highly cost-effective, there are often practical obstacles to using these methods. For example, random assignment experiments often cannot be used because they interfere with the individual's freedom of choice, or even if they can be used, they are only effective when outcomes can be obtained from administrative records rather than from follow-up surveys. Similarly, matched comparison samples cannot be constructed either if there is a lack of prior information about sample characteristics, or if all members of a certain group enter the treatment, leaving no sampling pool for the comparison group.

To conclude, there are various practical difficulties in the way of carrying out the 'ideal' study of the relationships between health and unemployment. Nonetheless, there is considerable

scope to advance understanding of these relationships, and to provide useful information for developing policy. The research reviewed in this report provides a range of illuminating theories, concepts and measures which can be applied and further developed in future work on the health–unemployment linkage among young people. The advent of extensive labour market services and programmes for disadvantaged young people itself offers opportunities for fresh data and new tests of the linkage. A variety of designs used in programme evaluation might be applied to exploring labour market impacts on the health of young people.

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