Unemployment is a Health Hazard: The Health Costs of Unemployment

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Abstract

Unemployment is a health hazard. There is increasing Australian and international evidence that people who are unemployed are more likely to have higher rates of mortality, morbidity (illness) and use of health services. The large numbers of people who are unemployed mean that the impacts of unemployment are just not felt at individual or family level but across the population as a whole. This paper outlines the evidence of the impact of unemployment on health and discusses some of the ways in which these health problems could be addressed through reorientation of health services, developing the skills of people who are unemployed, strengthening community action, creating environments that support people who are unemployed and their families, and the development of public policy. It discusses some of the difficulties in undertaking research in this area and calls for a more systematic approach to understanding the cost of unemployment.

1. Introduction

Australians are among the healthiest people in the world with a national health care system envied by many of the other industrial countries. How-

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ever health and health care services are not equally shared. Factors such as, ethnicity, occupation, education, and geographical location are strongly associated with level of health and health service use. Also strongly associated with, although less well recognised, is the negative relationship between unemployment and health and the health inequalities experienced by those without a job or those whose job is under threat.

Research findings indicate that unemployed people suffer increased mortality and substantially poorer mental and physical health. They have greater prevalence of mental disorders such as anxiety, depression and psychosomatic disturbances (Warr 1987; Fergusson et al 1997) which are often maintained throughout the period of unemployment (Weich and Lewis 1998). Job loss is also accompanied by negative lifestyle changes such as problems associated with the use of alcohol (Catalano et al 1993; Lahelma et al 1995) and the increase use of nicotine and other substances. People who are unemployed also have increased incidences of medical conditions, including cardiovascular, respiratory and gastrointestinal diseases, which contribute to increased mortality rates. Furthermore they experience far greater incidents of accidents, violence and suicide (Lewis and Sloggett 1998; Catalano et al 1997).

People who are unemployed are more likely to visit their general practitioners, with a wider variety of illnesses, take increased amounts of medications, and are admitted more often to outpatient services and general hospitals than people who are employed (Yuen and Balarajan 1989; Mathers 1994). They tend to make less use of preventative care services (National Health Strategy, 1992) and develop chronic health problems that further prevent them returning to work (Mathers and Schofield 1998; Smith 1987; Mastekaasa, 1996).

Unemployment is without argument a health hazard. It effects the health of people who are both unemployed and those who think they might become unemployed, their families, and the society generally. The health costs of unemployment are often not recognised, as health data is not routinely analysed by employment status. However costs are significant. At the individual level there is the increased incidence of illness and disease and the greater use of health and disability services. On a broader level there are the social and economic costs, both direct and indirect, that impact across all of society. Attention needs to be directed to the impact unemployment has upon health and the costing of unemployment should be a priority issue for public health researchers.

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2. Unemployment in Australia

Currently Australia is experiencing a period of strong economic growth and a falling unemployment rate, and some may argue that now is not the time to make the issues of unemployment and health a priority. However the unemployment rate is not falling uniformly across all groups or all areas and there remain groups of people experiencing an unemployment rate as high or higher than at any other time in the preceding two to three decades (Australian Council of Social Service, 2000).

Of particular concern is the increased incidence of long-term unemployment, and the 'marginally attached' or 'hidden unemployed'. Over the past 10 years the number of long term unemployed has tripled from just over 148,000 to 457,700 and now make up 60% of people receiving unemployment income support. Over ten percent of those who have been unemployed for over two years report ill health and disability as the significant barrier to employment (ABS July 1997) and may never work again.

The 'marginally attached' or 'hidden unemployed' are those people who are not officially unemployed but want and are available to start work should a job become available. The very fact that these people are not linked to, or recognised in the official unemployment figures makes estimating their numbers and commenting on trends within the group, difficult. Nevertheless in September 1997 (ABS) the marginally attached were numbered at approximately 880,000, which is a similar number to those who were officially unemployed. Included in this group are the 'discouraged worker' – those workers who have given up looking for a job, and who are numbered to be approximately 118,000. The level of 'discouragement' experienced and the very likely health related problems associated with this group have yet to be explored. Further to the marginally attached there are also those who when without a job register as sick (or disabled), and there are also those who retire prematurely.

3. Health Effects of Unemployment

Debate remains as to why unemployed people have poorer health outcomes than those who are employed. Some have proposed that people who are sick are more likely to become unemployed and that they (the sick or unwell) self-select into unemployment ('selection bias'). Others have argued that unemployment impacts upon aspects of a person's life, such as the loss of income and poverty, low socio-economic status, poor education, housing etc ... which results in poorer health. Although these explanations are likely to be at least partly true there is evidence that it is unemployment in and of

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it-self that causes ill health (Mathers and Scholfield 1998). That is, the most recent studies, and the majority of those quoted below have reported on the health effects of unemployment while taking into consideration prior illness, socio-economic factors and the effects of poverty.

Unemployment and Mortality

Evidence of a causal relation between unemployment and mortality, came from a British longitudinal study in the mid 1980s (Moser et al 1987). The study showed that those who were unemployed and had a pre-existing illness or disability had mortality rates over three times higher than the average. But most astonishingly those unemployed but not ill at the time of the census had a 37% excess mortality over the following 10 years. The mortality rate was particularly high for deaths from cardiovascular disease, lung cancer, accidents and suicide. Furthermore the wives of the unemployed males experienced a 20% excess of mortality (Moser, Fox, Jones, 1984) which has been cited as an acknowledgment to the detrimental effect unemployment has on the family (Starrin and Larson 1987).

These results were supported by later research in Denmark (Iversen et al 1987), Sweden (Stefansson 1991) and Finland (Martikainen 1990) which found significant increases in the mortality rate, even after controlling for age, previous health, and socio-economic factors. In Australia, Morell et al (in this issue) have shown that suicide rates are related to unemployment levels, mainly in men and particularly in young men.

Unemployment and Physical Health

Illness and poorer self-reported health have also been evidenced in unemployed people after adjusting for socio-economic factors. A British 1991-1992 population study found the unemployed had twice the odds of a limiting chronic illness and over 60% higher odds of reporting poor health. Factory closure studies (which minimise health selection effects) in Sweden (Mattiasson et al 1990; Brenner and Starrin 1988) the USA and Scandinavia have found increased levels of medically diagnosed health problems, particularly cardiovascular disease and its risk factors, such as high serum cholesterol levels and high blood pressure. In Australia the unemployed are found to be about twice as likely to report poorer health, report more serious chronic health illnesses, more recent health problems (Mathers 1994), and use health services more widely (Studnicka et al 1991; Yuen and Balarajan 1989) when compared to their employed counterparts.

Last year in an address to the London School of Economics, England's health secretary spoke of the cost of illness. In Britain it was estimated that

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47,000 work years, per year, were lost due to coronary heart disease in men alone, and that a quarter of a million work years, per year, is lost due to all illness (Malcolm 2000). He stated that in the unemployed population illness "accounted for 119 million days of certified incapacity, consumed 12 million family doctor consultations and 800,000 in-patient hospital days" (Malcolm 2000:1081). In Australia total health system costs for 1993-94 was estimated at $ 31.4 billion (AIHW 1998). This was a measure of direct health care expenditure (no so called in-direct costs were included) and the proportion of this cost due to, or related to, the effects of unemployment is not known.

Unemployment and Mental Health

Studies have also consistently found poorer psychological or mental health in unemployed people when compared with employed people (Vinokur et al 1996). Furthermore their increased incidence of mental ill health effects physical health by encouraging risk behaviours such as increase cigarette smoking (Hammarstrom 1994) and weight gain (Morris et al 1992). British and US studies clearly show that men who became unemployed have higher levels of depression and anxiety than those who remained employed with one study suggesting an increase of 15-20% of clinical cases (Warr 1987). It is not unreasonable to suggest that the mental health problems are causally linked to the higher mortality rate previously described, particularly in regard to deaths by accident and suicide. Unemployed German men over the age of 45 years also had higher levels of psychological distress, which subsided with re-employment and/or retirement (Frese and Mohr 1987).

There is evidence to suggest that lower levels of psychological distress is found among men and women living in areas of chronically high unemployment compared to areas of low unemployment (Jackson and Warr 1987; Perrucci and Targ 1988). It is thought that this reflects better acceptance of their employment status and adaptation through social networks, community supports and so on and highlights the importance and role of the 'environment' and community in moderating health effects.

Long term Unemployment and Disability

Whiteside (1988) argues that during periods of high unemployment hidden levels of sickness and disability among those who would otherwise be working are forced into the public arena. His argument is supported by Jackson and Warr (1987) who when undertaking a longitudinal study of long term unemployed men found that those with a chronic health impair-

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ment faired poorer when unemployed, particularly in regard to mental health. A two year follow-up on long term unemployed showed a psychiatric diagnosis was associated with a 70% reduction in the chance of securing employment (Claussen et al 1993) and in a ten year study of retrenched workers there was a substantial reduction in the amount of time spent in successive employment and an increased in disability pensions (Westin 1990).

In Australia the number of people on a disability support pension (DSP) has doubled in the past ten years (Newman 2000). There are now almost 600,000 people who are unemployed due to a disability. The most common disabilities being musculo-skeletal problem and psychological and/or psychiatric conditions. Two thirds of those on a DSP are older (between the ages of 45-65) and about 20 percent of them have been receiving a DSP for over 10 years, the majority of whom are likely to remain on the payment for the rest of their life.

4. Why is Unemployment a Social and Public Health Issue?

The health effects of unemployment are generally viewed in terms of illness and death. However heath is more than the absence of illness and disease. Health, on the broader level, needs to be seen in terms of quality of life and sense of well-being for both the individual and the group or community. While the burden of unemployment weighs disproportionately on the individual and the family, society also bears a heavy cost. This paper has not the scope to detail the multitude of direct and in-direct, the financial and non-financial health costs of unemployment, however some observations can be made.

Very often unemployment translates to social exclusion, alienation and marginalisation. There is an emphasis on the individual and those who are unemployed tend to be personally blamed and held fully responsible for their situation. They are closely scrutinised and are increasingly required to prove legitimacy to receive what has been shown to be insufficient social security and welfare benefits (Jamrozik 1995).

Unemployment results in family disharmony and breakdown, and increased incidences of separation, divorce, violence and child abuse (Stack 1981; Steinberg et al 1981) often as a result of poor mental health and in particular depression (Grant and Barling 1994; Liem and Liem 1988). Children of the unemployed experience increased incidence of mortality and sickness (Mathers 1995; Lobo and Watkins 1995) and there is emerging evidence of an inter-generation effect with young people who have grown

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up with parents who are long-term unemployed becoming or remaining unemployed themselves.

High unemployment rates results in increased levels of poverty, and with that, social unrest and greater levels of violence and crime (Catalano et al 1997). Poverty impacts directly upon the health of the unemployed due to their inability to obtain adequate nutrition, suitable and safe housing and appropriate health care (Jones 1991/92; Brief et al 1995). Estimates of poverty in 1989-90 derived by the Australian Institute of Health and Welfare (AIHW 1993) reveal an overall poverty rate of 13.8%. The most dominant factor that determines poverty status was found to be whether the head of the family was employed and that access to full time employment entirely removes the risk of poverty (Saunders 1994).

Society bears the cost of unemployment with the lost of income taxes, a slow-down in income growth and loss of productive capacity. Furthermore, society is burden by the need to provide income support for those who are unemployed, as well as providing other welfare and community supports not the least being increased health care resources.

Most governments acknowledge that unemployment is intrinsically linked to poverty and attempt to minimise its effect with social security payments. However a social security payment does not provide anywhere near a comparable standard of living for an individual (or their family) when compared to a full time wage. This is particularly true in Australia's current political climate of public sector cost cutting and the increasing expectation of individuals to be financially responsible for services such as health, education, housing and childcare. Social security payments as they stand today are not able to offset the financial impact of unemployment, especially long-term unemployment, nor can they replace the non-financial advantages resulting from healthy employment rates and fair working conditions.

5. Is there anything we can do?

Despite the evidence that unemployment results in ill health there have been no government inquiries into the costs of unemployment. Furthermore there has been a failure from policy makers to address the association between health and unemployment. Some have even forwarded the view that full employment, or even anything like it is not a desirable goal, and that high unemployment is the 'price one pays' for low inflation and a competitive labour market.

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If unemployment is to remain a feature of our society (and all evidence would suggest this is to be the case) we need to develop strategies to curtail the resulting health and social problems. People who are unemployed require a 'living wage'. They need public support and the tendency of questioning their morality and blaming the individual for their unemployment status needs to be addressed. They need access to a wide range of services and resources including, although not restricted to, financial planning advice, vocational assistance and help with personal problems.

Structural problems that prevent certain groups of individuals (ie, Aboriginal and Torres Strait Islander communities, those from non-English Speaking Backgrounds, people with disabilities etc.) achieving employment need to be removed so at least equity of opportunity exists. Until these structural problems are removed there will continue to be pockets of society characterised by unemployment, ill health, poverty, crime and poor education. As a society we need to fully explore the effects that unemployment has on health and the contribution health workers and policy makers can make in reducing the burden of ill health on the unemployed.

There has been some hesitation from the health system to become involved in the issue of unemployment. Perhaps they believe that there is little that they can do and/or possess a hesitation to 'medicalise' and further stigmatise the unemployed. Health professionals may not feel equipped to effectively intervene in political and economic matters and even if they did they may not see unemployment and its effects as a legitimate issue to undertake.

Governments can be wary of research in this area as unfavourable findings may make the implementation of economic policies difficult. It would be difficult for government to justify the restructuring of the manufacturing industry and/or introduce tariff reduction policies if it was widely known that the resulting unemployed would not only suffer the financial consequences of unemployment but also what could be quite devastating health problems. It is one issue to contribute to someone's financial downfall quite another to make him or her unwell. Furthermore, the issues of unemployment and health cross so many boundaries that even if there was political interest in undertaking research it would be difficult to know which department or institutions (ie, employment, training, health etc.) could be given the responsibility, and whether the 'agency' selected would have the autonomy to undertake objective and meaningful research and have their results reported.

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6. Addressing the Health Costs of Unemployment through Action

A health promotion framework to assist in understanding and re-address the health costs of unemployment is the Ottawa Charter. The framework first developed in 1986 by the World Health Organisation (WHO) is used extensively in areas that address inequalities in health and proposes five areas of action. These areas of action include:

- *Reorientating Health Services*, examples of this action would be ensuring accessible services, such as utilising GP Standards (Harris et al 1998) and removing cost barriers to treatment.
- *Developing Personal Skills or Building Capacity*, examples of this action could be creating new opportunities for the unemployed through training and education, or developing a formal organisation for the unemployed, not unlike a workers party or a 'federation of workers'.
- *Strengthening Community Action*, this could include advocating for unions to refocus commitment to the unemployed, providing opportunity for the unemployed to mix or integrate more fully into the wider community, and/or actions to create local employment opportunities.
- *Ensuring Supportive Environments*, examples would include advocacy for investment in employment and support groups, the provision of local government community health centres particularly in 'high risk areas', or areas of high unemployment and/or provision of employment agencies and/or addressing the stigma of unemployment, and
- *Health Public Policy*, would include addressing policies that withdraw or unfairly complicate income support for the unemployed, providing incentives for organisations to recruit from the unemployed ranks, maintaining a universal public health care system, and/or to define partnerships between various areas and levels of government, community and the individual.

Urban Janlert, an internationally recognised researcher in the area of unemployment and health, attended a Sydney workshop to discuss the development of a National R&D Agenda on Unemployment and Health (April 1999) and offered a further framework that can be used in conjunction with the Ottawa Charter. This framework conceptualises action through primary, secondary and tertiary prevention, at the national, local and individual level. Primary prevention at a national level would focus on

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reducing the incidence or occurrence of unemployment and could include advocating for the government to make employment a priority and promote political and economic policies espousing full employment. Primary prevention at a regional and local level would continue to focus on decreasing the incidence of unemployment by increasing work and educational opportunities both in and outside the workplace. Primary prevention at the individual level would encompass actions such as improving education/literacy and implementing job share and/or job rotation programs.

Table 1. Examples of actions that could be undertaken at the individual, local and national levels*

	Primary Prevention	Secondary Prevention	Tertiary Prevention
Individual	Increase levels of literacy and numeracy	Retraining and rehabilitation programs	Training GPs to manage health impact on employment
Regional/Local	Regional development programs	Commitment to work experience programs by local groups	Accessible support services for families
National	Full employment policies	Labour Market Programs to reduce length of unemployment	Funding for rehabilitation services

* As presented by Janlert, April 1999

The focus of secondary prevention would be at reducing the prevalence or minimising the extent of unemployment. On a national level this could involve the development and implementation of labour market policies that reduce the time people spend unemployed. A course of action on the regional or local level could involve the institution of vocational programs or community based support networks to find people work. At the individual level, retraining and rehabilitation programs and/or re-location assistance could be offered.

The focus of tertiary prevention would be to facilitate a satisfactory quality of life for those who are unemployed. On a national level this could encompass the implementation of social policy that challenges current attitudes to people who are unemployed or providing quality health care that recognises the impact of unemployment on presenting health problems. On a regional or local level the development of helpful local community structures has been suggested. And on the individual level the implementation of programs that ensure that unemployed people have enough in-

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come, social support, and access to services that can strength their abilities to cope with their current predicament.

7. Conclusions

In Australia there is currently no systemic attempt to address the cost of unemployment on health. To make a significant impact on the health consequences of unemployment we need to fully understand the links between unemployment and health. We need to build a constituency for action at several levels – local, regional and national that is informed by data, adequately resourced and strongly networked. Until we build this infrastructure, progress particularly in regard to interventions, will at its best been good heartedly intended and directed towards local issues, at worst piecemeal, ineffective and lacking any theoretical foundation. To effectively address the issues of unemployment and health there will no doubt need to be an increase in public health spending – it is now time for to us to realise that this spending is an economic investment not just a social one.

References

Australian Bureau of Statistics (1997) Australian social trends 1997. *ABS*, Canberra.

Australian Council of Social Service (2000) Overview of Employment and Unemployment 1999-2000. *ACOSS INFO* 214, August.

Australian Institute of Health and Welfare (1993) Australian's Welfare 1993. Services and Assistance, AGPS, Canberra.

Australian Institute of Health and Welfare (1998) Australian's Health 1998. The sixth Biennial Health Report of the Australian Institute of Health and Welfare, AIHW, Canberra.

Brenner, S-O and Starrin, B. (1988) Unemployment and health in Sweden: Public Issues and private troubles. *Journal of Social Issues,* Vol 4, 125-44.

Brief, A.P., Konovsky, M.A., Goodwin, R. and Link, K. (1995) Inferring the meaning of work from the effects of unemployment. *Journal of Applied Social Psychology,* Vol 25, 693-711.

Catalano, R., Dooley, D., Wilson, G. and Hough, R. (1993) Job loss and alcohol abuse: A test using data from the ECAP. *Journal of Health and Social Behaviour,* Vol 34, 215-225.

Catalano, R., Novaco, R. and McConnell, W. (1997) A model of the net effect of job loss on violence. *Journal of Personality and Social Psychology,* Vol 72, 1440-1447.

Claussen, B., Bjorndal, A. and Hjort, P.F. (1993) Health and Re-employment in a Two Year Follow up of Long Term Unemployed. *Journal of Epidemiology and Community Health* 47; 14-18.

https://doi.org/10.1177/103530460101200103 Published online by Cambridge University Press

Fergusson, D.M., Horwood, L.J. and Lynskey, M.T. (1997) The effects of unemployment on psychiatric illness during young adulthood. *Psychological Medicine,* Vol 27, 371-381.

Finlay-Jones, R. and Eckhardt, B. (1981) Psychiatric disorder among the young unemployed. *Australian and New Zealand Journal of Psychiatry,* Vol 15, 265-270.

Frese M. and Mohr G. (1987) Prolonged unemployment and depression in older workers: A longitudinal study of intervening variables. *Social Science Medicine,* Vol 25, 173-178.

Grant, S. and Barling, J. (1994) Linking unemployment experiences, depressive symptoms and martial functioning: A mediational model. In G.P. Keita and J.J. Hurrell, Jr (eds) *Job stress in a changing work force: Investigation gender, diversity and family issues,* Washington, DC: APA, pp. 311-327.

Hammarstrom, A. (1994) Health consequences of youth unemployment – review from a gender perspective. *Social Science and Medicine,* 38, 699-709.

Harris, E., Webster, I., Harris, M. and Lee, P. (1998) Unemployment and Health: the Healthcare system's role. *Medical Journal of Australia,* Vol 168, 16 March.

Iversen, L., Andersen, O., Andersen, P.K., Christoffersen, R. and Keiding, N. (1987) Unemployment and Mortality in Denmark, 1970-80. *BMJ,* Vol 295, 878-884.

Jackson P. and Warr P. (1987) Mental health of unemployed men in different parts of England and Wales. *BMJ*, Vol 295: 525.

Jamrozik, A. (1995) Unemployment and Social Justice: Do the Unemployed Carry the Burden of Society's Guilt? In Hicks, R., Creed, P., Patton, W. and Tomlinson, J. (eds), *Unemployment: Developments and Transitions,* Australian Academic Press, Brisbane.

Jones, L. (1991/92) Specifying the temporal relationship between job loss and consequences: Implications for service delivery. *Journal of Applied Social Science*, Vol 16, 37-62.

Lahelma, E., Kangas, R. and Manderbacka, K. (1995) Drinking and unemployment: Contrasting patterns among men and women. *Drug and Alcohol Dependence*, Vol 37, 71-82.

Lewis, G. and Sloggett, A. (1998) Suicide, deprivation, and unemployment: record linkage study. *British Medical Journal*, 317: 1283-1286.

Liem, R. and Liem, J.H. (1988)Psychological effects of unemployment on workers and their families. *Journal of Social Issues*, Vol 44, 87-105.

Lobo, F. and Watkins, G. (1995) Late career unemployment in the 1990s: Its impact on the family. *Journal of Family Studies*, Vol 1, 103-113.

Malcolm, D. (2000) London: Health Spending is an Economic and Social Investment, *The Lancet*, Vol 355 (9209), 1081.

Martikainen, P.T. (1990) Unemployment and mortality among Finnish men, 1981-5. *British Medical Journal*, Vol 301, 407-411.

Martikainen, P.T. and Valkonen, T. (1998) The effects of differential unemployment rate increases of occupation groups on changes in mortality. *American Journal of Public Health,* Vol 88, No 12, 1859-1861.

Mastekaasa, A. (1996) Unemployment and health: Selection effects. *Journal of Community and Applied Social Psychology*, 6, 189-205.

Mathers, C.D. (1994) Health differentials among Australians aged 25-64 years. *AIHW (Health Monitoring Series No.1),* Canberra.

https://doi.org/10.1177/103530460101200103 Published online by Cambridge University Press

Mathers C.D. (1995) Health differentials among Australian children. *AIHW (Health Monitoring Series No. 3),* Canberra.

Mathers C.D. and Scholfield D. (1998) The health consequences of unemployment: the evidence. *Medical Journal of Australia,* Vol 168, 178-182.

Mattiasson, I., Lindgarde, F., Nilsson, J.A. and Theorell, T. (1990) Threat of unemployment and cardiovascular risk factors: Longitudinal study of quality of sleep and serum cholesterol concentrations in men threatened with redundancy. *BMJ*, 301 (6750), 461-466.

Morrell, S., Taylor, R. and Kerr, C. (1998) Unemployment and young people's health. *Medical Journal of Australia,* Vol 168, 2 March.

Morris, J.K., Cook, D.G. and Sharper, A.G. (1992) Non-employment and changes in smoking, drinking and body weight. *BMJ*, Vol 304, 536-541.

Moser, K.A., Fox, A.J. and Jones, D.R. (1984) Unemployment and mortality in the OPCS Longitudinal study 197. *Lancet*, Vol 2, 1324-1329.

Moser, K.A., Fox, A.J., Jones, D. R. and Goldblatt, P.O. (1987) Unemployment and Health: Further evidence from the OPCS Longitudinal study 1971-81. *Lancet*, Vol 2, 365-366.

National Health Strategy (1992) Enough to make you sick: how income and environment affect health. Melbourne: National Health Strategy, (Research Paper No.1).

Newman, J. (Minister for Family and Community Services) (2000) *The Challenge of Welfare Dependency in the 21st Century.* Discussion Paper.

Perrucci, C.C. and Targ, D.B. (1988) Effects of a plant closing on marriage and family life. In P. Voydanoff and L. Majka (eds), *Families and economic distress: Coping strategies and social policy.* Newbury Park, CA: Sage, pp. 55-71.

Saunders, P. (1994) *Welfare and inequality. National and International Perspectives on the Australian Welfare State*, Cambridge University Press, Melbourne.

Smith R. (1987) Unemployment and Health: a disaster and a challenge. Oxford: Oxford University Press.

Stack S. (1981) Divorce and suicide: A time series analysis, 1933-1970. *Journal of family issues.* Vol 2, 77-90.

Starrin, B. and Larson, G. (1987) Coping with Unemployment – A Contribution to the Understanding of Womans' Unemployment. *Social Science and Medicine,* 25 (2), 163-171.

Stefansson, C.G. (1991) Long-term unemployment and mortality in Sweden, 1980-86. *Social Science and Medicine,* 32, 419-423.

Steinberg, L. Catalano, R. and Dooley, D. (1981) Economic antecedents of child abuse and neglect. *Child Development,* Vol 52, 260-67.

Warr P. (1987) *Work Unemployment and Mental Health.* Oxford: Oxford Science.

Warr, P.B. and Jackson, P.R. (1987) Adapting to the Unemployed Role: A Longitudinal Investigation. *Social Science and Medicine,* Vol 25 No. 11, 1219-1224.

Weich, S. and Lewis, Glyn. (1998) Poverty, Unemployment and common mental disorders: population based cohort study. *BMJ*, Vol 317, 115-119.

Westin, S. (1990) The Structure of a Factory Closure: Individual Responses to Job Loss and Unemployment in a 10 Year Controlled Follow-Up Study. *Social Science and Medicine,* 31 (12), 1301-1311.

https://doi.org/10.1177/103530460101200103 Published online by Cambridge University Press

Whitside N. (1988) Unemployment and Health; a historical perspective. *Journal of Social Policy,* 17, 177-194.

Yuen P. and Balarajan R. (1989) Unemployment and patterns of consultation with the general practitioner. *BMJ,* Vol 298, 1212-1214.

https://doi.org/10.1177/103530460101200103 Published online by Cambridge University Press