Improving the Health of People who are Unemployed through the Job Network

A study of a brief CBT intervention in South Western Sydney

Centre for Health Equity Training Research and Evaluation
Unemployment & Health Project, 2001

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Centre for Health Equity Training Research and Evaluation (CHETRE)

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Part 1: Overview

1.1 Preamble

When the Unemployment and Health Project began in 1992, Australia was still in a recession and the unemployment rate in South West Sydney was as high as 10.7% [1]. Over the past nine years, the Australian economy has boomed and unemployment has fallen, but levels of unemployment in South West Sydney have still remained higher than the NSW average and many other regions nationwide. In June 2001, 29 600 people were looking for work in the South West Sydney area, representing 9.9% of the workforce [2]. Amongst some groups of people who live in this area, such as those who reside in the disadvantaged suburb of Claymore, the unemployment rate is as high or even higher than at any other time in the preceding two or three decades.

The persisting high level of unemployment in South West Sydney is related to a number of factors including; structural problems within the economy, the changing nature of the workforce, inadequate infrastructure support, large numbers of recently arrived migrants who have difficulty entering the workforce, and the high levels of socioeconomic disadvantage experienced by people living in four out of the seven local government areas that make up this region. Increasingly, unemployment in South West Sydney is being characterised by second generation unemployment and long-term unemployment. It is of particular concern in this area that levels of long-term unemployment have not fallen in proportion to the change in overall unemployment rates. Long-term unemployment constituted 27.7% of all people who were unemployed at the end of the last financial year and 63% of this group had been out of work for two years or more [3].

The health costs of unemployment are now well-known - mental health problems, alcohol and other substance misuse, greater instances of medical conditions, and increased mortality - and these problems can be magnified for people who are out of the workforce for extended periods of time. The challenge for the Unemployment and Health Project has always been to identify and develop practical ways to reduce and/or prevent the health impacts of unemployment. This report examines one approach to improving the health and employment outcomes of people who are long-term unemployed: a brief cognitive behavioural training program implemented through the Job Network employment structures.

The SWSAHS-based Unemployment and Health Project is part of a wider international effort to reduce the impact of unemployment on health. In 1999 the European Union began a two-year Unemployment and Mental Health Project designed to describe the myriad links between unemployment and mental health and identify best practice models in intervention. The report from this initiative has just been published and is available on-line at www.umph.org. Key findings from the project include:

- unemployment has a negative effect on the mental health of most of the affected people and their family members.

- effective means to counteract the negative impact exist, but they have to be disseminated more widely.
- unemployment means different things to different groups of people, e.g. young persons, the elderly, women and immigrants; measures have to be applied accordingly.
- more solidarity with unemployed people is needed; it is most important that the unemployed are not treated as responsible for or guilty of their situation.
- co-operation between the different actors (the unemployed and his/her family, employers, trade unions, service providers, professionals, political decision makers and NGOs) is of utmost importance in reducing the negative impact of unemployment on mental health.

The health system has an important role in redressing the negative health effects of unemployment and this involves both providing appropriate and quality care to individuals as well as developing broad-based interventions to assist people back into the workforce. This intervention to improve the mental health and job outcomes of people who are unemployed was developed to address a major health and social problem in South Western Sydney. The project represented an innovative model for improving the health of people who are long-term unemployed that if successful, could potentially be disseminated Australia-wide.

1.2 Background

The Unemployment and Health Project has been active within SWSAHS for close to ten years. The project began life as a joint initiative of the School of Community Medicine at the University of NSW, and the SWSAHS General Practice and Health Promotion Units, and is now managed by the Centre for Health Equity Training Research and Evaluation (CHETRE).

In 1995-1996 the Unemployment and Health Project began a series of initiatives with SkillShares, the national labour market program developed to provide training and education programs to long-term unemployed and other disadvantaged jobseekers. Project activities included:

- a health needs assessment of people who are unemployed attending SkillShares;
- a seminar to discuss the possible roles for SkillShares in promoting the health of people who are unemployed;
- development of a "Psychological Well-Being Program" based on the principles of Cognitive Behaviour Therapy (CBT) for people who are unemployed;
- development and provision of a health promotion program for SkillShare clients;
- involvement of local GPs in SkillShare activities.

During 1997-1998, the Unemployment and Health Program piloted the 3-day "Psychological Well-Being Program" with long-term unemployed people attending the Macarthur Training and Learning Centre SkillShare at Campbelltown. Results from this pilot were encouraging. Whilst the program did not produce any significant health changes - a not unexpected finding from a sample size of twelve – 50% of the long-term unemployed people who had participated in the course found work in the following three months. Because the pilot was not a controlled study the researchers were unable to determine the extent to which the "Psychological Well-Being Program" had been a crucial factor in this encouraging employment outcome.

In February 1998, the Unemployment and Health Project received funding from the South Western Sydney Ingham Research Foundation to conduct a thorough evaluation of the "Psychological Well-Being Program" and its effects upon health and employment using a controlled trial design, and long-term follow-up of intervention and control groups.

The EU Unemployment and Mental Health Project had as one of its main goals the identification of best practice models in intervention. Over fifty model interventions designed to impact upon the relationship between unemployment and poor mental health were identified across the European Union member countries. One of these best practice models, developed in the UK, was based upon the principles of cognitive behaviour therapy (CBT). Of the small number of interventions that had been developed and evaluated when this research was planned in 1997, those based on the principles of CBT appeared to show positive and more lasting benefits for participants.

Unemployed people who completed CBT-based courses reported reduced depression, improved well-being, and higher self-esteem. They were more satisfied with their lives, felt confident when looking for employment, and were more motivated to work. They were also more likely to be working full-time or part-time than people who had not been trained in CBT techniques. Importantly, most of these benefits were evident up to four months and twelve months after training, perhaps because group training of CBT techniques teaches self-help skills that enable the person to manage their own thoughts and behaviour well after the life of the course.

This study evaluated a CBT-based training program that aimed to improve the health and employment outcomes of people who were long-term unemployed. The CBT intervention had been developed for dissemination through SkillShares, building on the strong links that had been established by the Unemployment and Health Project through previous activities. With the defunding of SkillShares in 1997 and the advent of the Job Network, the project had to adapt to a system with structures that did not emphasise training as a route to employment. After consultation with local Job Network members, more piloting of the program and some changes to the training structure and content, the research project began in October 1998. Participants were recruited by employment consultants or direct recruitment through Job Network agencies in the South Western and Central areas of Sydney. All participants were identified by Job Network members as requiring intensive assistance to help them back into the workforce. After completing a health and employment survey by telephone, recruits were randomly assigned to the CBT-based training intervention or a comparison course in first aid provided by the Australian Red Cross. A wait-list control group was abandoned after recruitment was found to be unexpectedly difficult. At the end of three months, participants in the project were again surveyed to determine whether they had experienced any changes in health or employment status.

1.3 Study Aims

The study aimed to:

- improve the psychological health and employment outcomes of people who are long-term unemployed through brief CBT training;
- evaluate the impact of the intervention on the health and employment status of unemployed participants and compare outcomes to those achieved by a control;
- evaluate the effectiveness of the intervention in comparison to a non-psychological control group;
- train people who are unemployed in psychological self-help skills to manage poor health through a brief CBT intervention;
- replicate the findings of other CBT-based training studies with a sample of long-term unemployed people in South Western Sydney; and
- establish links between health services and other services that are employment-focussed.

It did this by attempting to answer the following questions:

- What is the health status of people who are unemployed and attending Job Network employment agencies in South West Sydney?
- How does the health status of people who are unemployed change after a brief CBT training intervention?
- Does brief CBT training improve the health of people who are unemployed relative to a time-matched program without a psychological component?
- Can CBT training interventions be transferred across populations? Is brief group CBT training appropriate for people who are long-term unemployed living in a disadvantaged area of Sydney?
- Can brief training interventions be successfully disseminated through the Job Network?

Part 2: Methods

2.1 Literature Review

Introduction

This literature review is of selected articles from the medical, psychological and social services literature and relevant reports that have addressed the impact of unemployment on health status, including interventions based on psychological skills or therapies, and the role of the health system in improving the health of people who are unemployed.

Method

A literature search was conducted using MEDLINE and PSYCINFO databases. A combination of search terms that focussed on unemployment (eg. job loss), intervention (eg. training) and CBT (eg. psychological therapy) were used.

The health impact of unemployment

In Australia, people who are unemployed are twice as likely to report that they are in fair or poor health than people who are employed [4]. They report more health problems, including poor mental health and psychological distress [4-9], more at-risk health behaviours, such as substance abuse and smoking [5 10] more serious chronic illness, including higher levels of disease and disability [4], and are the victims of excess mortality rates, from cardiovascular deaths, lung cancer, accidents and suicide [11]. Not surprisingly, people who are unemployed place more burden on the health system than people who are employed. They are more likely to visit GPs, access and receive a variable quality of care [12 13], attend outpatient clinics, and be admitted to hospital than people who are employed [5 14-16]. Whilst health selection effects do occur and some people become unemployed because of poor health, longitudinal studies in Australia and overseas provide convincing evidence that unemployment actually causes ill health [5 17].

The official unemployment rate – 6.9% at the time of publication [18] - does not accurately reflect the distribution of unemployment across all Australian communities or regions. In some areas, such as South West Sydney, and within some population groups, such as Aboriginal or Torres Strait Islanders, the unemployment rate is as high or higher than at any other time in the preceding two to three decades [Service, 2000 #2224]. In addition, long-term unemployment has tripled from 148, 000 to 457, 000 over the past 10 years meaning that the number of long term unemployed now make up 60% of people receiving unemployment income support.

The increased incidence of long-term unemployment is troubling because a substantial proportion of people who have been unemployed for over two years report ill health and disability as a significant barrier to employment [19].

The number of Australians receiving a disability support pension has doubled in the last 10 years and this rise has corresponded with a decrease in unemployment figures[Service, 2000 #2224]. Whilst it is unclear whether this change in the balance of welfare benefits reflects need, better detection or political necessity, the receipt of disability or sickness benefits can act as a barrier to returning to work, trapping the person who is unemployed in a cycle of poverty and dependency [20]. Many people who are unemployed, and particularly those who are long-term unemployed or 'second-generation unemployed', live in circumstances that have both an independent and interactional effect upon health. Poverty, a lack of social support networks, limited education, and living in deprived areas can influence the mental health of people who are unemployed [20]. In fact, for significantly deprived individuals these broader social issues may be indistinguishable from mental health issues [21]. Mathers and Schofield conclude in their 1998 paper, 'The health consequences of unemployment: the evidence', that "unemployment generally impacts most strongly on the already disadvantaged, and the health effects of unemployment compound underlying health inequalities in our society and in turn entrench socioeconomic disadvantage" [5]. This has important ramifications for both the development and dissemination of interventions to reduce the impact of unemployment on health within areas of high disadvantage, such as those that exist in some districts in the south west Sydney region.

Interventions in unemployment and health

The recently published Unemployment and Mental Health Report [20] provides brief descriptions of fifty-five programs for people who are unemployed that represent best practice in program development across the member states of the European Union. Programs range from business enterprise initiatives where people who are unemployed learn skills for self-employment to more informal community-run job clubs where people who are unemployed meet to search and talk about work in a supportive environment. Unfortunately, there are too many programs presented in this report to identify key principles or 'best buys' for intervention and the vast majority of programs listed are either poorly evaluated or do not report any outcome data. This review focuses on evaluated programs that have been published in journals or reports.

Another distinction involves the purpose and design of interventions. Many interventions that have been shown to have a positive impact on the relationship between unemployment and mental health were not designed for this purpose. For example, federal government initiatives, such as social welfare payments to the unemployed in the US, and Work-for-the-Dole in Australia, were designed to improve the standard of living, or expose the unemployed person to new skills. Both of these programs have measurable psychological effects in terms of improved self-esteem [22 23]. However, neither of these

programs include active psychological components that are designed to systematically change psychological processes. Reported improvements in mental health related variables in non-psychological studies may transpire to be short-lived artifacts of other factors, such as being followed and measured, or mixing with peers in a supportive environment. This review then highlights interventions that have used psychological strategies in attempting to reduce the health impact of unemployment.

Seven studies were found between the years 1992 to 2000 that used psychologically oriented interventions in attempting to reduce the impact of unemployment on health and/or promote employment opportunities for unemployed people (Table 2.1). This suggests that whilst researchers continue to publish data establishing the relationship between unemployment and health, interventions to mediate this relationship, particularly those of a publishable quality, are relatively rare, averaging about one a year. The exception is the University of Michigan JOBS team [24-29] who have been prolific in publishing long-term follow-up data from their JOBS I and JOBS II programs. The JOBS programs mesh behavioural components, such as job search training with cognitive strategies in preparing to cope with set-backs when seeking employment. JOBS I and JOBS II have been successful in reducing depression and promoting re-employment and earnings for graduates of their programs. It is not clear however whether this benefit extends only to people at high-risk for depression or those who have been unemployed for relatively short periods of time.

In general, the psychologically-based interventions have been implemented with groups of unemployed people who have achieved a high level of education or worked in professional-level employment [30 31 32 33] and/or have been short-term unemployed [27 29 31 32]. These groups of unemployed people are probably easier to engage than more disadvantaged job-seekers and may find it easier to learn within an intensive learning environment. Studies such as these, with encouraging results, need to be generalised to different groups of people who are unemployed to determine their possible use as a broad-based intervention. Muller (1992) demonstrated improved mental health and a 70% employment rate for long-term unemployed women returning to the workforce in a one-week personal development course [34]. Despite the encouraging results this study has not been replicated.

Spera et al, (1994) reported favourable results from a low-cost and seemingly simple writing intervention, which involved participants writing about their feelings associated with retrenchment and how unemployment had affected their lives. At the end of the five-day intervention, and having written for twenty minutes each day, sixty-eight percent of the intervention group found employment [31]. This intervention has important implications for the wide dissemination of early intervention strategies for people who become unemployed, although again these results must be tempered by the use of unemployed people of a professional class.

The most recent psychologically-based interventions have been based on the principles of cognitive behaviour therapy. CBT interventions are discussed in the next section.

CBT interventions

Cognitive behaviour therapy (CBT) has received a great deal of attention in scientific journals and forums and even the mass media over the past ten years. CBT was initially developed for use by people experiencing symptoms of depression and anxiety but is now used with a broad array of psychological and physical health problems including, eating disorders, sexual problems, hypochondriasis, cardiovascular disease, drug and alcohol problems, chest pain, psychosis, chronic fatigue syndrome, unexplained physical symptoms, and symptoms due to malignant disease such as cancer [35]. CBT studies have reported favourable outcomes in mental health in comparison to traditional psychopharmacological interventions for people suffering from depressive illness [36 37]. CBT is often purported to be more effective than other psychological therapies, although some recent research suggests that this may not be the case [38].

Table 2.2: Core techniques of CBT

Technique	**Purpose**
Thought-catching	Teaching the person to become aware of negative thoughts as they occur
Task assignment	Encouraging behaviours that the person has been avoiding
Reality testing	Selecting tasks to test the truth of negative thoughts or beliefs
Cognitive rehearsal	Recounting the stages of an activity that has been avoided, along with thoughts and feelings, to find the "roadblocks" that are preventing successful behaviour
Alternative therapy	Encouraging the person to imagine a difficult situation and generating strategies for coping
Dealing with underlying fears and assumptions	Investigating how dysfunctional schemata and assumptions have been built up over a lifetime and how they impact on everyday thought

(Adapted from McManus, 1997).

A major benefit of CBT is that it has demonstrated long-term treatment effects. For example, CBT has been found to prevent relapse after the termination of therapy and prevent the development of depression and anxiety in people at-risk for these disorders [37]. CBT is a synthesis of cognitive and behavioral therapies that focuses on the attributions or explanations that people use to explain events. It aims to help people better understand how they view themselves, the world, and the future by assisting them in developing new ways of thinking and behaving [39]. By learning to think differently about events in their lives, for example unemployment, people can minimise negative emotions and respond more favourably to job opportunities. Table 2.2 displays the core techniques of CBT.

Whilst unemployment may be the result of social and political structures rather than psychological processes, CBT is appropriate for intervention with people who are unemployed because of the high rates of depressive and anxious symptomotology that are

reported by this group. To date, there are two known research teams worldwide that have reported success using CBT with people who are unemployed.

Judith Proudfoot and associates at the University of London in the UK published results from their Occupational Training Program in the Lancet in 1997 [33]. This program used CBT techniques, such as eliciting and testing the validity of thoughts, reattribution, behavioural modelling and experimentation, to help long-term unemployed professionals identify and modify their attributional style. At the end of the seven week training program, the CBT group reported improvements in self-esteem, job-seeking self-efficacy, attributional style, motivation for work and life satisfaction in comparison to recruits who participated in a matched social support comparison program [33]. This study was also successful in promoting employment outcomes for people who were long-term unemployed. Almost three times as many CBT group participants than comparison group participants had found full-time work by four months after training, representing a 91% improvement in Employment Department statistics for a standard government program for unemployed professionals. Given that employment itself has been shown to improve mental health [40], broad-level CBT interventions such as this may be of huge public health benefit.

There are however a number of limitations to Proudfoot et al's study. Participants in the CBT group who did not find employment reported GHQ scores comparable to baseline levels three-months after training. This finding is in contrast to studies that have reported sustained improvements in functioning using CBT with people who have depressive illnesses. According to McManus (1997) this discrepancy may be accounted for by the unchanged adverse social factors associated with unemployment which maintain poor health. Another limitation involves the high rate of loss to follow-up in the CBT group compared to the social support program. Participants in the CBT program were 14.2 times more likely to be lost to follow-up, although the possible explanations for this discrepancy, or what effect it may have had on the results, are not explored by the authors in their paper. Finally, Proudfoot's et al's study used unemployed people of professional class, meaning that this group was educated to a high level, and this may have played a significant role in the success of the CBT intervention. It is not known how this intervention would fare with people of less advantaged educational backgrounds.

In Australia, work in CBT interventions for people who are unemployed has been led by the team of Peter Creed at Griffiths University in Queensland and Anthony Machin at the University of Southern Queensland [41]. The Cognitive-behavioural-based Training Course (Creed et al, 1999) aimed to improve the mental health and general psychological functioning of long-term unemployed youth and provide them with coping skills that would facilitate lasting and measurable benefits. Training was delivered over three-days in brief sessions which met CBT exposure guidelines indicated by Seligman (1990) [42], and matched the expected concentration span and interest levels of long-term unemployed youth. At the end of training, participants in the CBT group reported improvements in psychological distress, self-esteem, positive affect, negative affect, and

coping in comparison to a wait-list control group [41]. Unlike the Proudfoot et al study there were no reported improvements in employment outcomes.

The Creed et al (1999) study demonstrates limitations similar in nature to the UK Occupational Training Program. Whilst significant differences between the CBT and wait-list control groups on the psychological wellbeing variables persist at follow-up, 14-16 weeks after the course, close inspection of the data shows that the CBT group's scores were returning to baseline levels. Further, follow-up analyses were conducted on small participant numbers: 22 for the CBT group and 10 for the wait-list control. Like the Proudfoot et al study, there was a higher loss to follow-up in the CBT group (n = 21), than the control group (n =12), although these recruits did not appear to differ from those who completed the study requirements. Because the Creed et al study was based on a small sample size and limited to young people, the results should be interpreted with caution when attempting to generalise the effects of CBT training to other groups of people who are unemployed.

The role of the health care system

The role of the health care system in reducing the impact of unemployment on health is greater than simply managing the health problems of the person who is unemployed. The healthcare system should both actively promote employment and reduce the impact of unemployment upon health [17]. Health care provided to people who are unemployed should address existing health problems, focus on prevention and anticipatory care, and ensure that health problems do not act as barriers to returning to work. Harris et al (1998) have identified six key strategies for the healthcare system to address the health impact of unemployment (see Box 1).

Box 1: Key strategies for the health system in addressing the impact of unemployment on health:

- providing accessible, appropriate and high quality preventive care and management of health problems for people who are unemployed;
- developing skills and capacity within the health service to address the health impact of unemployment;
- working with other agencies to reduce the impact of unemployment and increase the chances for unemployed people finding work;
- acting as advocates for people who are unemployed to government and the wider community;
- providing training, work experience and employment within the healthcare system for people who are unemployed.

Table 2.1: Psychological-based interventions in unemployment and health

Author (year), country	Aim	Study details	Results
Price et al, 1992; Caplan et al, 1989; Vinokur et al, 1991; Van Ryn et al, 1992; Vinokur et al, 1995 Vinokur & Schul, 1997 Vinokur et al, 2000 USA	To assess the impact of a job search intervention on depression among the unemployed (JOBS I) at high risk of depression (JOBS II).	Participants: recently unemployed people from Michigan Employment Security Commission. **JOBS I** **I**: 8 x 3hr group sessions over 2-weeks of job search skills training, mutual support, inoculation against set-backs. **C**: self-instruction materials **I**: *n* = 606 **C**: *n* = 322 Follow-up = 2.5 yrs JOBS II is a replication study stratified by risk of depression. **I**: *n* = 552 **C**: *n* = 1249 Follow-up: 6 mths	Reduction in incidence of depression over 2.5 years. Benefit confined to high-risk group. Positive effects on re-employment: by 2.5 yrs the net average gain in income for those in intervention group was $4 400. Attrition: 87% in JOBS II Intention to treat analysis. Not clear if generalisable to long-term unemployed.
Muller, 1992 Australia	To assess the effect of a self-development course on the unemployed.	Participants: long-term unemployed women returning to the workforce. **I**: one week training covering personal development issues. **C**: no-training group **I**: *n* = 39 **C**: *n* = 7 Follow-up: 1 wk, 2 mths & 6 mths	Improvements in depression & self esteem at 2 mths & 6 mths were greater in the I group, 70% of whom found employment. Attrition: ? Not clear if generalisable to unemployed males.

Table 2.1 continued

Author (year), country	Aim	Study details	Results
Eden & Aviram, 1993 Israel	To assess the impact of a self-efficacy program on unemployed workers.	Participants: volunteer unemployed vocational workers > high school education. **I**: 8 self-efficacy workshop sessions over 2.5 weeks **C**: no-training group. **I**: *n* = 66 **C**: *n* = ? Follow-up: post-intervention	Improvements in general self-efficacy, job search activity & re-employment. Benefit confined to people with low self-efficacy at baseline. Attrition: ? Not clear of generalisable to other groups of unemployed.
Spera et al, 1994 USA	To assess the effects of a disclosive writing intervention on the re-employment success of unemployed.	Participants: volunteer retrenched professionals unemployed for 5 mths. **I**: writing for 20mins over 5 days on feelings associated with retrenchment **C1**: writing for 20mins over 5 days on daily plans & job-search activity **C2**: non-writing group **I**: *n* = 20 **C1**: *n* = 21 **C2**: *n* = 22 Follow-up: post-intervention	Full-time employment more likely for I group. Across all employment types, 68% of I group, 48% of C1 group, & 27% of C2 group found work. Attrition: ? Not clear if generalisable to long-term unemployed.
Maysent & Spera, 1995 USA	To assess the impact of a stress management program on the unemployed.	Participants: clients from outplacement firm for the unemployed. **I**: 2 or 3hr workshops over a one week period **C**: no-treatment group **I**: *n* = 76 **C**: *n* = 37 Follow-up: post-intervention	Maintenance of stress levels associated with job search for I group. C group reported increased stress. Attrition: ? I group but not C group consisted of unemployed professionals.

Table 2.1 continued

Author (year), country	Aim	Study details	Results
Proudfoot et al, 1997 UK	To assess the effects of CBT on the long-term unemployed.	Participants: volunteer professional people unemployed > 12 mths. **I**: 7 x 3hr weekly seminars on CBT **C**: 7 x 3hr weekly seminars on social support **I**: *n* = 134 **C**: *n* = 110 Follow-up: 3-4 mths post-intervention.	Improvements in motivation for work, attributional style, job-search self-efficacy, and mental strain (GHQ) were greater in the I group, more of whom also found employment. Attrition: I = 30% C = 19% Not clear if generalisable to other groups of unemployed.
Creed et al, 1999 Australia	To assess the effects of CBT on long-term unemployed youth.	Participants: young people unemployed > 12 mths. **I**: 3 x 5hr seminars over 3-days on CBT **C**: wait-list control group **I**: *n* = 43 **C**: *n* = 22 Follow-up: 14-16 weeks post-intervention	Improvements in psychological distress, self-esteem, positive & negative affect, & coping were greater in the I group & persisted at follow-up. No effect on employment outcomes. Attrition: I = 51% C = 45% Small sample sizes especially at follow-up.

2.2 Definitions and Ethics Approval

2.2.1 Definitions

Unemployed

Unemployed refers to a person who does not currently have a job but is actively looking for work. This definition differentiates people who are unemployed from people who do not work and are not looking for work, or people who are not working due to illness. Long-term unemployed refers to a person who has been unemployed for more than 12-months. Both definitions are based on those used by the ABS in the National Health Survey.

English speaking background

English speaking background refers to a person who was born in a predominately English-speaking country. All other countries of birth listed by participants are defined as non-English speaking.

Intensive Assistance

Intensive Assistance (IA) or 'Flex-3' is a job-seeking category, associated with the Job Network, that aims to help job seekers who are most disadvantaged in the labour market to obtain and maintain employment.

Job Network

Job Network is a nationwide network of private, community and government organisations that provide job-search and job placement services for people who are unemployed.

South Western Sydney

South Western Sydney refers to the geographical area covered by Bankstown, Fairfield, Liverpool, Campbelltown, Camden, Wollondilly, and Wingecarribee Local Government Areas.

2.2.2 Ethics Approval

Ethics approval was granted by the SWSAHS Human Research Ethics Committee. Participants were provided with an information sheet that outlined the aims of the research and requirements for participation before signing the consent form.

2.3 Research Instruments

Enrolment Form

The "Enrolment Form" was developed for a dual purpose: to register the job-seekers intent and consent to participate in the study and to collect general information such as demographic data, employment status, and information on other issues related to unemployment.

Demographic questions were adapted from the ABS National Health Survey and Unemployment and Health in General Practice study. Employment status questions were developed by the research team or adapted from previous CHETRE studies including the SkillShares Project.

A number of questions were included to inform future work with people who are unemployed in South West Sydney. These questions were both closed and open-ended and were concerned with:

- confidence in job-seeking (eg. How confident are you in looking for a job?)
- employment predictions (eg. How likely is it that you will have work in the next
- 3-months?)
- problems with unemployment (eg. What are your 3 main problems being unemployed?)
- barriers to work (eg. Do you have any barriers to getting a job? If yes, are they psychological or physical barriers?).

Health and Employment Survey

The "Health and Employment Survey" comprised five standardised psychological and health measures:

The Short-Form 36 (SF-36)

The SF-36 is a 36 item, generic measure of health status that was constructed to satisfy minimum psychometric standards necessary for group comparisons involving generic health concepts. The eight health concepts were selected from 40 included in the Medical Outcomes Study (MOS) (Stewart and Ware, 1992) to represent those hypothesized to be most frequently measured in widely-used health surveys and those most affected by disease and treatment (Ware, 1996). The Physical Health Component summary score measures levels of physical function and limitation, energy, bodily pain and general health perceptions. The Mental Health Component summary score indicates an individual's level of social functioning, and general emotional and mental health. Scores ranged from 1 (poor health) to 100 (good health).

The SF-36 has been validated for adult age groups in the United States, the United Kingdom, Australia and in some Non-English speaking countries. It is suitable for self-administration, computerized administration, or administration by a trained interviewer in person or by telephone, to persons age 14 and older. The SF-36 has been shown to be sensitive to changes in health in general populations (Hemingway, Stafford et al1997). Content and construct validity of the SF-36 appears to be satisfactory. Item intercorrelations and Cronbach alphas were used to assess internal consistency of the scales yielding an average of 0.8 or above (McCallum, 1995).

The Beck Hopelessness Scale (BHS)

The BHS is a 20-item scale for measuring the extent of negative attitudes about the future as perceived by adolescents and adults (Beck & Steer, 1993). Each of the 20 true-false statements is scored 1 or 0. Of the 20 statements, 9 are keyed false and 11 are keyed true to indicate endorsement of pessimism about the future. The item scores are summed to yield a total score that can range from 0 to 20, a higher score indicating greater hopelessness. Beck and Steer (1993) state that extensive reliability and validity testing has been undertaken revealing internal consistency across 7 clinical groups producing a Kuder-Richardson (KR-20) value of between .82 to .93 while for college students or a non-clinical group the KR-20 is .65 (Beck & Steer, 1993). Test-retest reliability was reported as a Pearson product-moment correlation of between .66 and .69 (Beck & Steer, 1993).

The Job Search Self-Efficacy Scale

The Job Search Self-Efficacy Scale is a 6-item measure designed by Vinokur, Schul and Price (1997) of the University of Michigan specifically for their JOBS intervention project. Respondents are asked to rate on a 5 point likert scale how confident they are with specific job seeking behaviours such as making the best impression and getting points across in an interview, completing a good job application and résumé and three questions investigating confidence in speaking with various contacts regarding job openings. The scale categories range from “not at all confident” through to “a great deal confident”. Scores are summed and a mean score obtained to create a job search self-efficacy index with a higher mean indicating greater personal confidence in gaining employment. The Job-Search Self-Efficacy Scale has a recorded Cronbach alpha coefficient of .87 (Vinokur & Price, 1995).

The Rosenberg self-esteem Scale

The Rosenberg self-esteem Scale is a 10-item measure of the self-acceptance aspect of self-esteem (Rosenberg, 1965). The scale provides a measure of global attitudes about the self and consists of 5 negatively worded items and 5 positively worded items. Using a 5 point likert scale, participants rate their degree of agreement to statements such as, “I am able to do things as well as most other people”, “I feel that I do not have much to be proud of”, “I am inclined to think that I am a failure”, and “I am satisfied with myself”. Guttman scoring of the Rosenberg self-esteem Scale uses a 5-point likert scale from Strongly Agree to Strongly Disagree. In this administration, scores range from 0 to 50

with higher scores indicating higher levels of self-esteem. The scale was designed specifically to be brief, easy to administer and unidimensional, all of which may serve as strengths and weaknesses (Tippett & Silber, 1965). Tippett and Silber (1965) report reliability as assessed using a Guttman Scale reproducibility coefficient (.92), a test-retest correlation (.85), convergent validity (ranging from .56 to .83), discriminant validity (.21 to .53) and a Cronbach Alpha of .72.

The Life Orientation Test (LOT)

The LOT was devised and validated by Scheier and Carver (1985) as a way to conceptualise outcome expectancies of dispositional optimism. In order to assess positive versus negative expectancy outcomes respondents were asked to indicate their degree of agreement using a 5 point Likert scale ranging from strongly disagree to strongly agree. The LOT contains 12 items, 4 positively worded ("In uncertain times I usually expect the best"); 4 negatively worded ("I hardly ever expect things to go my way"), plus 4 filler items ("It's easy for me to relax"). After reversing the scoring for the negatively worded items, the scores for the 8 items are summed to produce an overall optimism score with high scores representing greater optimism. The LOT has a recorded Cronbach's alpha score of .82 (Scheier, Carver & bridges, 1994).

For the follow-up administration the Health and Employment Survey included an additional item designed to measure employment status:

Have you been involved in any of the following work or training activities since the course finished?

Activity	Yes	No
Work experience	❑	❑
Voluntary work	❑	❑
Casual work	❑	❑
Temporary work	❑	❑

Activity	Yes	No
Part-time work	❑	❑
Full-time work	❑	❑
Part-time course	❑	❑
Full-time course	❑	❑

2.4 Training Program

2.4.1 Development of the program

Three day program

The three day "Psychological Wellbeing Program" was adapted from a CBT training program developed by a team of researchers at Griffiths University in Queensland. "Improving Well Being, Cognitive Functioning and Learning Strategies – A Training Course for Long Term Unemployed Youth" (Nichols, Creed, Sakellariou and Gordon, 1992) was a brief preparatory program for unemployed young people who were planning at a later date to attend formal study, such as SkillShare or TAFE courses. The program had five components: CBT training, problem solving, memory skills, assertiveness, and relaxation.

The "Psychological Wellbeing Program" was adapted by a clinical psychologist and research officer from the Unemployment and Health Project to meet the needs of people of all ages who were long-term unemployed and living in South Western Sydney: a region characterised by high levels of disadvantage and large numbers of people from a non-English speaking background. A detailed description of both the Creed et al (1992) program, and the adapted "Psychological Wellbeing Program" is provided in the "SkillShares: Improving the health of People who are unemployed" report.

Two day program

Whilst the "Psychological Wellbeing Program" was piloted successfully within SkillShares (Lee at al, 1998), it did not fare so well within the Job Network, where poor attendance on the third day in two pilot administrations of the program caused the project team to re-think the design of the program. Taken together, twenty-three people started the Employment National and Sydney Counselling Centre pilot programs, but only four people (three at the first site and one at the second) were in attendance on the final day - there was no noticeable decline in numbers from the first to second day. This significant decline in numbers in course attendance on the third day was considerably lower than what would be expected in standard or average course attrition. It also meant that participants who left the course before day three had not learned adequate skills to successfully dispute negative thoughts, a key goal of the CBT training.

Consultations were held with clinical psychologists and others with expertise in CBT, including one of the developers of the Nichols et al (1992) program, Dr Peter Creed to determine if the program could be adapted to another format to suit the interest level and needs of participants. The general consensus was that a reduction in the length of the program would not greatly effect the integrity of the CBT training and a decision was made by the project team to further adapt the course to a 2-day format. The result was an intensive 2-day course for people who are long-term unemployed, "Strategies for Re-employment: Changing the Way we Think about Getting a Job".

Development of the 2-day CBT training program involved:

Focus on CBT

- removing memory skills and assertiveness from the program to allow adequate time for CBT training.

Repetition of 'Core' CBT Principles and Techniques

- extending the time dedicated to learning and practise of the A-B-C-D-E model for identifying and disputing negative thoughts to allow participants adequate time for learning of practical skills.

Learning from Participant's Examples

- encouraging interaction, and in particular real-life examples of negative thinking and disputation to facilitate the process of the group learning from each other.

Structured Problem Solving

- including a structured problem solving hand-out from the St Vincents Hospital Anxiety Disorders Clinic that used the same problem-solving method used in previous programs.

Language, Literacy and Comprehension Issues

- modifying and simplifying activities and content in the participant workshop manual.

Evaluation Questionnaires

- removing previous questionnaires and adding the SF-36, Beck Hopelessness Scale, Job Search Self-Efficacy Scale, Rosenberg Self Esteem Scale, and Life Orientation Test.

2-day Program Overview

The 2-day "Strategies for Re-employment" Program had three core components:

- CBT skills
- structured problem solving
- relaxation skills

CBT Training

For participants, the primary goal of CBT training is to understand and dispute negative automatic thoughts using realistic thinking. Negative automatic thoughts can effect a person's motivation when looking for work and inhibit their performance in job interviews. Participants learn Albert Ellis' A-B-C-D-E model to explain the link between negative thoughts and feelings, and generate realistic responses to challenging situations. In the Ellis model, each letter or state triggers the next: adverse events (A), trigger negative thoughts or beliefs (B), which cause negative feelings and emotions (C). This

leads to recognition of the thought process and a disputation of the negative and unrealistic thoughts (D), which prompts positive thoughts, action or consequences (E). Considerable time is spent on the core CBT concept that thoughts influence feelings and behaviour. Rehearsal of disputation strategies using participant's real-life examples takes up much of the remaining time dedicated to CBT training.

Structured Problem Solving

Structured problem solving complements CBT training and gives participants another skill to deal with some of the practical difficulties that are associated with unemployment (eg. living on a limited income, dealing with government agencies, organising transport). Participants learn a four-step problem-solving process: defining the problem; brainstorming solutions; selecting the best option; and, breaking down the solution into simple, practical steps. In this exercise, participants use real-life examples and all group members have an opportunity to brainstorm solutions for each problem.

Relaxation Skills

Learning of relaxation skills is often teamed with CBT training because it enables participants to curb arousal during adverse events or difficulties and promotes an appropriate state for realistic thinking. Participants learn that relaxation is an active process that can be used to relax both physically and mentally and ultimately improve performance in situations such as job interviews. Participants learn two relaxation techniques: Breath Control Relaxation and Progressive Muscle Relaxation (PMR).

2.4.2 Pilot Programs

Piloting of the 3-day "Psychological Well-Being" Program to trial the intervention and assess the appropriateness of the program for unemployed people in South West Sydney was conducted in 1997-1998 and is reported in the "SkillShares: Improving the health of People who are unemployed" report.

The 3-day course was again piloted from July – September 1998, with people who were long-term unemployed (ie. IA clients) and registered with two separate Job Network agencies.

The aim of the pilots was to:
1. trial the intervention (ie. CBT training, recruitment procedures, consent forms and questionnaires) within the Job Network setting;
2. assess the appropriateness of the program for the "Flex 3" or "intensive assistance" client group; and
3. train a clinical psychologist in administration of the program.

The pilot programs took place at Sydney Counselling Centre in Parramatta and Employment National in Liverpool. Twenty-three clients participated in the two pilot programs. Main findings included:

- recruitment procedures involving employment consultants were acceptable, although there was some difficulty in ensuring the appropriateness of referrals;
- the program content appeared to be appropriate for intensive assistance clients: it was not surprising that intensive assistance clients did not as a whole seem to differ from long-term unemployed clients from SkillShare as many intensive assistance clients were in fact, long-term unemployed;
- participant's evaluation of the course was overwhelming positive and most activities and components were rated highly;
- there were no difficulties encountered with telephone administration of the Health and Employment survey, and participants believed that both the survey questions and Enrolment Form were appropriate;
- employment consultants and course participants did not report any difficulties in understanding the study information sheet or consent form;
- Job Network was an appropriate venue for the research program and dissemination of the training intervention;
- attendance at the third day of the CBT training at both pilot sites was significantly lower than would be expected in normal or average course attrition. From twenty-three starters, only four participants (three at one site and one at another) presented for the final day.

Following piloting of the 3-day intervention within two Job Network agencies, the CBT training was adapted to a 2-day format. This program was not piloted as it involved content that had been piloted in the 3-day administrations.

2.4.3 Comparison program

The project had originally planned for the intervention to be evaluated against a no-training control group, but this wait-list condition (ie. participants were eligible to receive the CBT training at the end of a three month waiting period) proved to be very unpopular with both unemployed people and employment consultants. In more than two months of recruitment, only four wait-list control group members had completed the Health and Employment survey. Persistent difficulties in recruiting and maintaining a wait-list control group prompted the research team to replace the wait-list control with a comparison course program: a problem and solution alluded to by other researchers in this area (see Proudfoot et al, 1997). Consultations with other researchers, unemployed people, employment consultants and the management of participating Job Network providers had suggested that a comparison course would be useful in motivating project participants.

The control group program consisted of a WorkCover and VETAB accredited Senior First Aid Certificate provided by the Australian Red Cross. This practical, skills-based program was chosen as an appropriate control for the CBT training course because it was a standardised program, was matched for length of training (ie. 2-days) and did not include any training in, or reference to, psychological skills.

2.5 Participants

The source population for this study was intensive assistance or "Flex 3" clients registered with Job Network agencies in the South West and Central areas of Sydney. Participating Job Network agencies included:

- Employment National
- Wesley Employment
- Mission Employment
- Sydney Employment Development Service
- Sydney Counselling Centre

2.6 Research Design

This research used a randomised controlled trail experimental design with pre-post measures. That is, recruits were randomly assigned to either the intervention or comparison group, and were administered the Health and Employment Survey both before, and three months after training. The independent variable was group condition (intervention and comparison) and the dependent variable was scores on the standardised measures contained in the Health and Employment Survey.

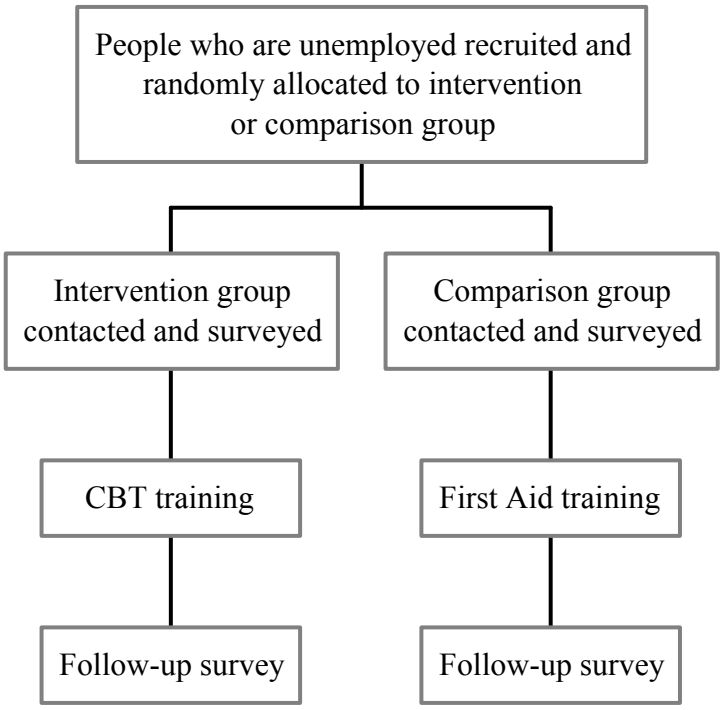
However, practical difficulties in recruitment and working within the Job Network and Australian Red Cross structures meant that this design was sometimes compromised. Randomisation to intervention and control groups did not always occur because of small recruitment numbers and competing demands. For this reason, this research may be best described as a controlled-trial design with pre-post measures.

2.7 Research Procedure

People who were unemployed and receiving intensive assistance services through the Job Network were recruited by employment consultants, and then randomly allocated where possible to either the intervention or control group. Assessment of health and employment status through questionnaires took place prior to training and 3-months following (Figure 2.7).

Figure 2.7: Research procedure for randomised controlled trial of CBT intervention

2.7.1 Recruitment



Job Network agencies

Whilst Job Network agencies were not in themselves the "subjects" or agents of study for this project, their recruitment to the project and continued support of the program was integral to the research design. Initial recruitment of Job Network agencies took place in mid-1998. Letters detailing the project and supporting information on the reported success of CBT with people who are unemployed were sent to all Job Network providers in South Western Sydney with intensive assistance clients. Letters to agencies were followed-up in some instances with phone-calls, particularly to agencies that had access to large numbers of intensive assistance clients. Seven employment placement agencies expressed interest in the program, and five agreed to participate in the study.

It took approximately two months to establish contact with these different Job Network providers, attend information sessions with management and staff, explain recruitment procedures and obtain their agreement to participate in the project. Participating Job Network agencies were: Employment National (Liverpool), Wesley Employment (Campbelltown, Liverpool and Fairfield), Sydney Employment Development Service (Liverpool), Mission Employment (Green Valley and Campbelltown), and Sydney Counselling Centre (Parramatta, Petersham and Chatswood). Recruitment of different providers and site agencies was ongoing during the life of the project.

Sydney Counselling Centre was not part of the South Western Sydney area but was chosen for inclusion because the project's clinical psychologist consultant was an employee, and later manager, of one of the sites. Being able to work closely within a Job

Network agency gave the project an insight into how these employment agencies worked and what pressures they were under. It also enabled the project team to trial different methods of recruitment with employment consultants.

Participants

After making initial contact with participating Job Network agencies, the project team consulted with agency managers to organise training dates and venue. Agency managers and employment consultants were briefed about the aims of the study, the principles of CBT, recruitment issues including randomisation, and the evaluation procedure. In addition, Employment Consultants received an information package that included a study brief and guidelines for recruitment including client eligibility:

- intensive assistance client
- 18-45 years of age
- basic reading, writing and language skills
- must be able to be reached by phone
- no major drug or alcohol problems
- no major psychotic disorder

Employment Consultants were asked to review their client base and refer clients who met the eligibility criteria. There were then two methods of recruitment:

1. Clients identified through a record search were invited to attend an interview with the employment consultant where the offer of participation in the research program was presented. Employment consultants discussed with clients their role in the training and evaluation and what they should expect in both courses. If the client was interested in participating in the program they completed the enrolment form including consent, and the Employment Consultant forwarded the information to the project team at CHETRE. Clients were told that they would be contacted within a week by a member of the project team.

2. Employment consultants invited appropriate applicants with a standard letter to course Information Sessions. Information sessions were conducted by two members of the project team and included information on why the study was being conducted, the content of both courses, course dates, randomisation, survey and follow-up procedures. Interested clients were asked to complete and sign the enrolment form and were told that a member of the project team would contact them in a few days to complete a telephone survey and let them know what course they were being offered.

All those referred were contacted by a CHETRE staff member who reassessed their suitability according to the inclusion criteria and conducted the pre-test questionnaire to obtain baseline data. From this initial contact suitability was determined and when appropriate, people were referred to further services as indicated. Employment consultants were advised of their clients' inclusion or exclusion and the rationale for the decision. One week prior to the course clients were allocated to either the intervention or comparison condition and notified via telephone and mail of the course details.

2.7.2 Pre-testing

Testing prior to the training programs involved administration of the:

- Enrolment Form; and
- Health and Employment Survey

The enrolment form was completed by potential participants either during or after sessions with their employment consultant. The employment consultant was asked to witness the signature of the client and all enrolment forms were completed on the premises of Job Network agencies. Clients sealed the forms within envelopes that were provided by the project team to ensure confidentiality and consultants posted the sealed forms to CHETRE.

In the two-weeks prior to training participants were contacted by telephone and administered the Health and Employment survey. Telephone administration of the survey was considered to be more convenient, less time consuming, and less expensive than a mail-out survey. Evidence and prior experience also suggested that a higher response rate would be achieved via this method. Telephone administration of the survey lasted from 15-20 minutes, although some calls with people from a non-English speaking background lasted up to 40 minutes.

When clients were referred who did not have access to a home phone, attempts were made to phone interview the clients when they were at the Job Network agency. In a small number of cases when this was not possible the survey was completed by participants in a self-report format on the day of the course.

2.7.3 Training program

The CBT training was completed over two days in four sessions lasting from 9.30am – 4.30pm (see Table 2.7.3.1). Five-and–a–half hours were spent in active learning. The short time-frame and inclusion of regular breaks was thought to suit the training and concentration needs of people who were long-term unemployed and had not been within an intensive learning environment for some time. At the end of the 2-days participants completed a 5-minute evaluation of program activities, exercises and presenters (see Appendix X).

Table 2.7.3.1 Overview of the CBT training program

Time	Day 1	Day 2
9.30 – 10.45	Welcome and Introductions What are Automatic Thoughts?	ABCDE – Disputing ABC
10.45 – 11.00	Morning tea	Morning tea
11.00 – 12.30	The ABC of Automatic Thinking	Exploring Joblessness
12.30 – 1.30	Lunch	Lunch
1.30 – 2.45	Exploring Distorted Thinking	Creating Solutions – Problem solving
2.45 – 3.15	Afternoon tea	Afternoon tea
3.15 – 4.30	Relaxation Homework exercises	Relaxation Evaluation of program Awarding of certificates

Table 2.7.3.2 Overview of CBT training courses

Job Network Agency	Course location	Dates	Group size*
Employment National	Liverpool	12th/13th October 1998	13
Employment National	Liverpool	26th/27th October 1998	6
Wesley Employment	Campbelltown	26th/27th November 1998	7
Sydney Counselling Centre	Petersham	1st/2nd December 1998	8
Sydney Employment Development Service (SEDS)	Liverpool	7th/8th December 1998	9
Mission Employment	Green Valley	9th/10th March 1999	9
Sydney Counselling Centre	Petersham	16th/17th March 1999	11
Wesley Employment	Fairfield	24th/25th June 1999	5
Sydney Counselling Centre	Petersham	29th/30th June 1999	11
SEDS Liverpool/ Employment National Campbelltown	Liverpool	28th/29th October 1999	8
Sydney Counselling Centre	Petersham	2nd/3rd December 1999	15

*Number of people who participated in the group for at least one day, including those who did not form part of the study.

Eleven CBT training programs were held between October 1998 and December 1999. All of these were conducted on-site in areas provided by the Job Network Agency. Table 2.7.3.2 provides an overview of the agencies involved in the CBT training and details of the course administration.

Nine Senior First Aid Certificate courses were held from February 1999 to December 1999. Six of these courses were conducted at the Australian Red Cross headquarters in Sydney. In these instances, the research participants completed the First Aid course in groups of up to 25 people, the majority of whom were unrelated to the research program. Study recruits attending the First Aid program were required to attempt and pass a First Aid exam held one week after the course to be awarded the Senior First Aid certificate. An overview of the First Aid Training and the number of recruits who attended at least one day of the training is presented in Table 2.7.3.3.

Table 2.7.3.3 Overview of First Aid Training

Job Network Agency	Course location	Dates	Recruits
Mission Employment Green Valley	Liverpool Hospital	9th/10th February 1999	8
Employment National Liverpool	On-site	16th/17th February 1999	12
Sydney Counselling Centre	Australian Red Cross, Sydney	16th/17th March 1999	6
Employment National	Sydney	1st/2nd June 1999	7
Wesley Employment	Sydney	24th/25th June 1999	3
Sydney Counselling Centre	Sydney	29th/30th June 1999	2
Wesley Employment	Sydney	Aug – Sept 1999	4
Sydney Counselling Centre	Sydney	2nd/3rd December 1999	10
Mission Employment	Campbelltown	8th/19th December 1999	9

2.7.4 Post-testing

Post-testing with the Unemployment and Health Survey (including the employment status item) began 12-weeks following the last day of training. All post-test surveys were conducted via telephone and took approximately 15 minutes to complete. Attempts to get in touch with participants who were difficult to contact continued, on average, up to 18 weeks after training.

From January to May 1999 a 6-week post-test of the Health and Employment Survey was conducted with participants who had completed both courses. It was thought that contact with program participants at this time, half-way between the end of the course and follow-up, would maximise retention at 12-weeks. The 6-week follow-up however proved unexpectedly difficult, and there was a concern that surveys conducted up to 9-

weeks after the end of training would interfere with survey responses made at 12-weeks: the follow-up period which was integral to the research design. As a result, the 6-week follow-up was abandoned in May 1999.

2.8 Analysis

Data compiled from the enrolment form and health and employment surveys was entered into the data analysis program SPSS Version 9 and analysed using SPSS Version 10.

2.8.1 Demographic variables

Demographic variables used in analysis include:

- gender
- age
- English-speaking background
- length of unemployment
- employment status
- education level

Variable definitions

A number of categorical variables were recoded for analysis because they had only a small number of responses in each category. Continuous variables that were not well represented by mean values were recoded into categorical variables. Recoded variables included:

Country of birth
Country of birth was originally coded using standard ABS country categories. For analysis, this variable was recoded into "born in English speaking country" and "born in non-English speaking country".

Employment status
Employment status in the previous 3-months was assessed at baseline using a 7-item response category, ranging from no-work to full-time work in the previous 3-months. This question was simplified at follow-up, and two study/training categories were added. For analysis, 'Employment status' was recoded into "work in the last 3-months" and "no work in the last 3-months".

Length of unemployment
The continuous variable 'Length of unemployment' measured in months was recoded into a categorical variable using standard ABS classifications ie. [< 6 mths; 6-12; 13-18; 19-24; 25-36; 37-60; > 60 mths]. This variable was further recoded into a dichotomous variable: "unemployed for 12 months or less" and "unemployed for 13 months or more".

Age
Age, a continuous variable, was considered in some analyses as a categorical variable. Age was recoded using standard ABS classifications ie. [18-24 yrs; 25-34; 35-44; 45-54 years].

2.8.2 Scoring of instruments

This section provides a brief overview of the scoring and interpretation of the standardised physical health and psychological measures used in this study. Box 2.8.2.1 displays an interpretation of high scores for each measure. Detailed information on scoring and interpretation can be found in the manuals or papers listed in the references section.

Box 2.8.2.1 Interpretation of high scores for each measure

a) SF-36 (Medical Outcomes Study Short-form 36): high scores indicate higher states of physical and mental functioning;
   The SF-36 has 2 composite scores:
   - Physical Health Composite
   - Mental Health Composite

b) BHS (Beck Hopelessness Scale): high scores indicate greater hopelessness;
   The BHS has 4 descriptive labels:
   - 0 – 3 minimal
   - 4 – 8 mild
   - 9 –13 moderate
   - 14 – 20 severe

c) JobSearch Self-Efficacy Scale: high scores indicate greater self-efficacy in job seeking;

d) Rosenberg Self-Esteem Scale: high scores indicate higher levels of self-esteem;

e) Life Orientation Test: high scores indicate higher levels of optimism.

SF-36
Items are scored and converted to standardised scores ranging from 0-100 according to instructions in the SF-36 manual. The 36-items form 8 subscales: physical functioning (10-items); role functioning (4-items); bodily pain (2 items); general physical health (5-items); vitality (4-items); social functioning (2-items); role-emotional (3-items); mental health (5-items). One further item measures health transition. The 8 subscales are converted to physical health and mental health summary scores. The Physical Health Composite (PHC) and Mental Health Composite (MHC) scores were calculated using population weights based upon Australian norms.

Beck Hopelessness Scale (BHS)
The 20 BHS items are scored 1 and 0 according to a scoring key and added to achieve the total score between 0 and 20. Descriptive labels indicate severity of hopelessness (see

Box 2.8.2.1). The BHS was analysed as a continuous variable to enable the detection of change within and between groups because the sample at baseline did not indicate a wide range of scores across all descriptive categories.

JobSearch Self-Efficacy Scale (JSSE)
The 6-item JobSearch Self-Efficacy Scale is scored according to responses on a 5-point scale from 1 (not at all confident) to 5 (a great deal confident). The mean value is calculated to achieve the JobSearch Self-Efficacy Index.

Rosenberg Self-Esteem Scale (RSE)
In this administration, the 10-item Rosenberg Self-Esteem Scale was scored according to the Guttman method, using a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Responses are added to achieve a total score between 5 and 50.

Life Orientation Test (LOT)
Only 6-items of the 10-item Life Orientation Test are scored using a 5-point scale from 0 (strongly disagree) to 4 (strongly agree). After reverse scoring of 3-items, responses are added to achieve a total score between 0 and 30.

2.8.3 Checking the data

Frequencies of all measures were produced to identify values outside those permitted by each variable (ie. errors related to data entry). A 10% check of the data was performed and validated by two members of the research team.

2.8.4 Analysis at baseline

Defining the sample
Descriptive statistics were produced for the entire sample at baseline. Categorical variables were analysed using frequencies and continuous variables were described using means, standard deviations, and the range of scores.

Norms
The mean physical health component summary (PCS) and mental health component summary (MCS) scores for the sample, intervention and comparison groups, were compared to the ABS Australian norms for people who are unemployed.

Comparison between groups
Chi-square tests and one-way analysis of variance (ANOVA) were used to test the assumption that there would be no differences between the groups at baseline.

Chi-square tests compared group condition (intervention and comparison) with the categorical variables gender, age, English-speaking background, length of unemployment, employment status and education level.

ANOVAs compared the intervention group and comparison group mean scores on continuous variables, the SF-36, BHS, JSSE, RSE, and LOT.

2.8.5 Analysis at follow-up

Pre-test and post-test comparisons
Paired t-tests were used to compare participant's scores at baseline to their scores at follow-up on the SF-36, BHS, JSSE, RSE, and LOT. Results were grouped according to condition: intervention or comparison.

Within group analysis of change in employment status from baseline to follow-up was conducted using Fisher's Exact Test.

Comparisons between groups
Analysis of co-variance (ANCOVA) was used to test for differences between group scores at follow-up when controlling for differences in baseline scores. ANCOVAs were used in the detection of differences between the intervention and comparison groups on the SF-36, BHS, JSSE, RSE, and LOT.

Fisher's Exact Test was used to compare employment status between groups at follow-up.

2.8.6 Analysis of loss to follow-up

Both chi-square tests and ANOVAs were used to test if there were any differences between recruits who completed follow-up and those that were lost to follow-up.

As before, ANOVAs were used to test for differences between the groups on the continuous variables (SF-36, BHS, JSSE, RSE, LOT) and chi-square testing was used to compare differences in categorical variables (gender, age, English-speaking background, length of unemployment, employment status and education level). Results were grouped according to condition: intervention or comparison.

Part 3: Results

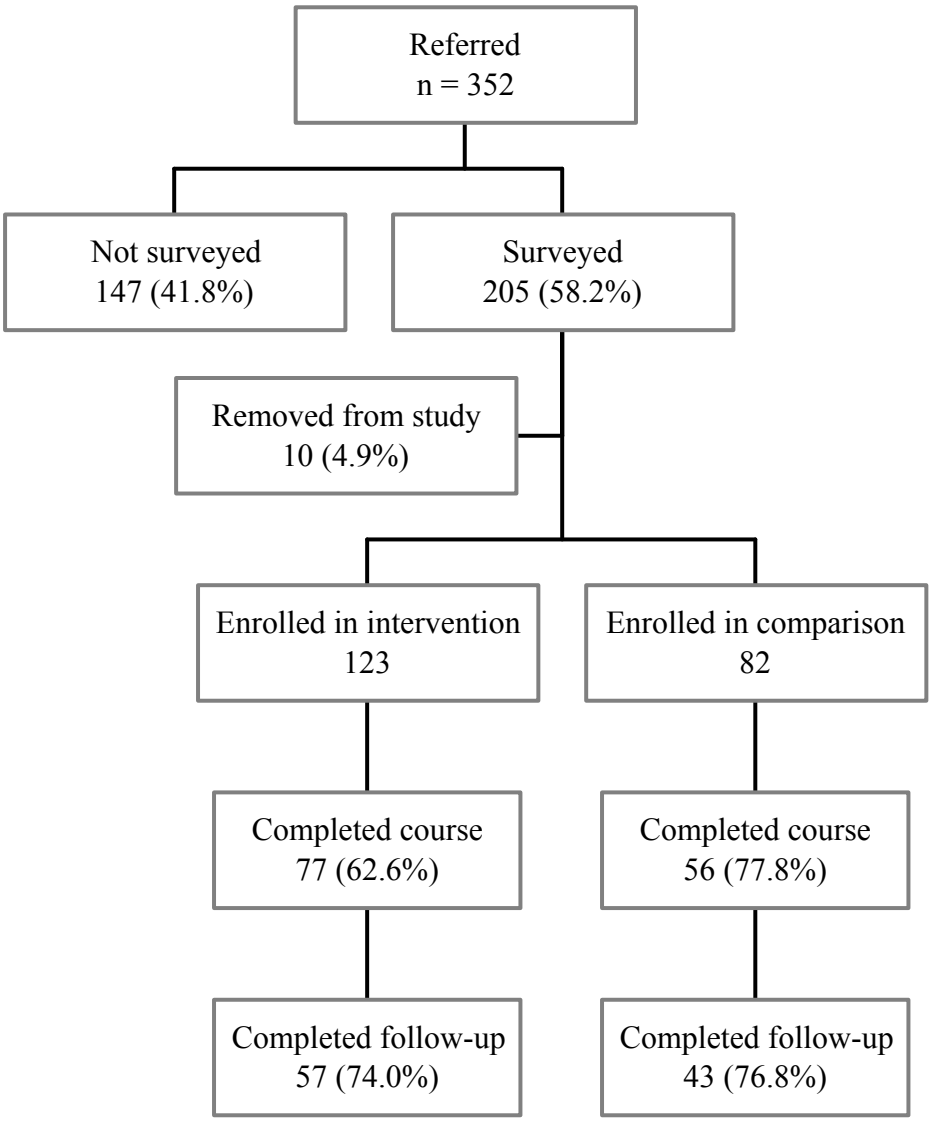
3.1 Response Rates

3.1.1 Recruitment and participation

Three-hundred and fifty-two people who were unemployed and registered with Job Network agencies were referred to the study. Figure 3.1.1. displays the recruitment and response tree for this population. Ten recruits were removed from the study after course allocation and survey because they were outside age restrictions (6 recruits) or part of the wait-list control group (4 recruits).

There is an obvious imbalance in the number of recruits enrolled in the intervention program and those enrolled in the comparison program (ie. 63.1% of recruits were enrolled in the intervention). This is a product of the difficulties in recruiting an appropriate number of clients for the randomisation process to occur and the delayed start to the comparison course after the failure of the wait-list control.

Figure 3.1.1. Recruitment and response tree showing client participation in the study



One-hundred and forty-seven Job Network clients who were referred to the study were not surveyed. Table 3.1.1 provides a break-down of these referrals. Sixty-seven clients or 19% of all those referred by employment consultants were considered inappropriate to the study because they fell outside of the inclusion criteria.

Table 3.1.1. Characteristics of Job Network clients who were referred but not surveyed (n=147)

Characteristic	Number	Percent
Referral not appropriate (eg's. NESB; no means of contact)	46	31.3%
Cancelled because of other commitments	31	21.1%
Did not wish to participate	25	17.0%
Could not be contacted by project team	24	16.3%
Attended course but not included in the study (eg's. outside age range; client of CSP or STEPS program*)	21	14.3%
TOTAL	**147**	**100.0%**

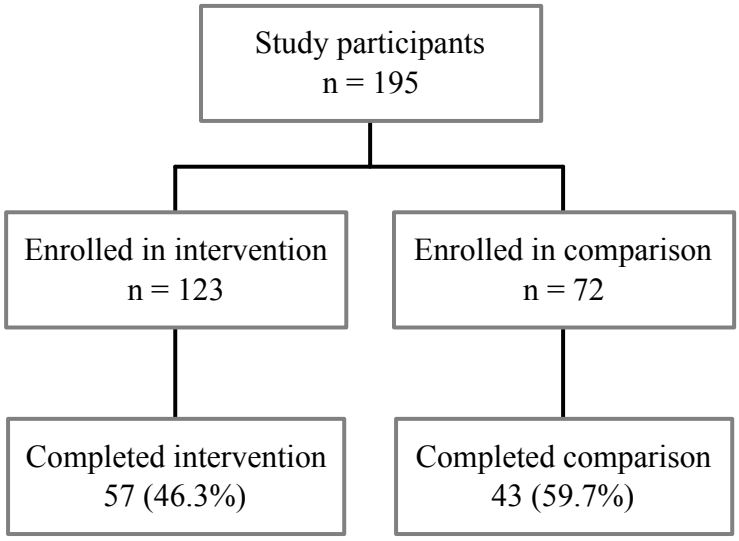
* Programs for people with intellectual disability or psychiatric diagnoses

Seventy-seven recruits (62.6%) enrolled in the intervention completed the training program, compared with fifty-six (77.8%) recruits enrolled in the comparison program. Approximately 25% of program participants were lost to follow-up in each condition.

3.1.2 Intervention and comparison group participation

Of the 195 Job Network intensive assistance clients who were appropriate for study participation, 123 were enrolled in the CBT training program and 72 in the First Aid training. A greater percentage of comparison group members (59.7%) than intervention group members (46.3%) completed all requirements of the study program (ie. course and follow-up survey). Figure 3.1.2 compares intervention group and comparison group participation.

Figure 3.1.2 Participation in the study according to condition



Of the 66 (53.7%) intervention recruits who did not complete all requirements for the study, 46 were lost before the end of training and 20 were lost to follow-up. In comparison, of the 29 (40.3%) First Aid recruits, 16 failed to complete training and 13 were lost to follow-up, meaning that a higher proportion of intervention recruits (70% vs 55%) dropped-out of the program before the end of training. Table 3.1.2 displays the characteristics of recruits who were lost from the study before the completion of training and during follow-up period.

Table 3.1.2 Characteristics of recruits lost from the study before the completion of training and follow-up according to condition.

Characteristic		Intervention		Comparison	
		N	%	N	%
Left study before completing training					
Did not complete course		20	43.5	3	18.7
Did not attend training		18	39.1	6	37.5
Cancelled because of other commitments		7	15.2	6	37.5
Course cancelled		1	2.2	1	6.3
	Total	*46*	*100.0*	*16*	*100.0*
Left study at follow-up					
Could not be contacted by project team		13	65.0	7	53.8
Moved address		6	30.0	6	46.2
Refused to participate		1	5.0	-	-
	Total	*20*	*100.0*	*13*	*100.0*

It is difficult to interpret differences in non-participation in the intervention and comparison groups because there are only small numbers of recruits in each group, particularly in the comparison condition. It is worth noting however, that 43.5% of participants who did not complete the intervention program left the CBT training before the end of 2-days. A member of the project team attempted to contact recruits who did not return for the second day of training to find out why they had not attended, but this was not always successful. It is not known why all of these intervention recruits left training but at least some of them mentioned that they failed to return because they were uncomfortable with the often personal and confrontational nature of the course content.

3.2 Characteristics of participants

3.2.1 Baseline data for the sample

Of the 195 Job Network clients referred to the program and accepted into the study, 54.9% were male, 45.3% were aged over 35 years, 60.4% were born in an English speaking country, 45.4% had achieved a level of education up to NSW Year 10, 59.1% had been unemployed for more than 18 months and 57.7% had not engaged in any work (including voluntary) in the last 3-months (Table 3.2.1.1).

Table 3.2.1.1 Demographic data for the whole sample (n = 195)

Variable	Number	Percent
Gender		
Male	107	54.9
Female	88	45.1
Age		
18 to 24 years	37	22.0
25 to 34 years	55	32.7
35 to 44 years	50	29.8
45 to 54 years	26	15.5
English Speaking Background		
Born in English speaking country	102	60.4
Born in Non-English speaking country	67	39.6
Level of Education		
Less than year 10	19	11.5
Year 10	56	33.9
Year 11	9	5.5
Year 12	30	18.2
TAFE / Business College	31	18.8
University	20	12.1
Length of Unemployment		
Less than 6 months	26	15.7
6 to 12 months	35	21.1
13 to 18 months	7	4.2
19 to 24 months	35	21.1
25 to 36 months	24	14.5
37 to 60 months	24	14.5
More than 60 months	15	9.0
Work status (in last 3-months)		
None	97	57.7
Temporary or casual work	18	10.7
Work experience or voluntary work	28	16.7
Part-time work	17	10.1
Full-time work	8	4.8

Table 3.2.1.2 displays descriptive statistics for the continuous psychological and physical health scores of all program participants at baseline. The range of possible scores for each variable is included to aid the interpretation of mean values because not all measures provide indicators of functioning or Australian norms. SF-36 composite scores are interpreted against Australian norms (see Table 3.2.1.3).

On average, the baseline sample of Job Network intensive assistance clients had a BHS mean score within the mild range (5.26), indicating a mild level of hopelessness. The JSSE mean score (3.47) indicates that the sample was, on average, 'some' to 'pretty much confident' in their job seeking abilities. Both the RSE mean score (36.83) and LOT mean score (14.30) fall within the scale categories of 'neutral' and 'agree', suggesting that, on average, the sample had mildly elevated levels of self-esteem and optimism.

Table 3.2.1.2 Range, mean and standard deviation scores on all measures at baseline for the whole sample (n = 195).

Measure	Range	Mean	St dev
SF-36 Physical Health Composite	0 - 100	53.39	8.69
SF-36 Mental Health Composite	0 - 100	42.51	13.46
Beck Hopelessness Scale	0 - 20	5.26	4.08
JobSearch Self-Efficacy Scale	1 - 5	3.47	0.96
Rosenberg Self-Esteem Scale	10 – 50	36.83	7.06
Life Orientation Test	0 - 24	14.30	4.08

Note: SF-36 Composite scores calculated using Australian population data weights from the 1995 National Health Survey.

Scores on the SF-36 Mental Health (MCS) and Physical Health Composites (PCS) can be compared against Australian norms of people who are both employed, unemployed and not in the workforce (Table 3.2.1.3). Whilst the physical health of this sample appears to be similar to the age-standardised norms for employed people, the average mental health score is at least 4-points below that of people who are unemployed, and 3-points below people who are not in the labour force. This suggests that this sample of intensive assistance clients have poorer mental health than other categories of people who are unemployed. The standard deviation of 13.46 for the MCS suggests that there was considerable variation in mental health scores amongst study recruits. Note that the standard deviations or standard errors, in the case of the SF-36, vary greatly from the research sample to the norming survey because of different sample sizes.

Table 3.2.1.3 Sample SF-36 mean and standard deviation scores compared to Australian norms for employed, unemployed and people not in the workforce.

SF-36 Composite	Sample	Australian Norms		
		Employed	Unemployed	Not in the labour force
Physical Health	53.39	52.2	51.0	47.4
	(8.69)	(0.1)	(0.7)	(0.4)
Mental Health	42.51	50.6	47.1	46.2
	(13.46)	(0.1)	(0.8)	(0.4)

3.2.2 Baseline data for the intervention and comparison groups

Table 3.2.2.1 compares the demographic characteristics of the intervention and comparison group at baseline. Even though some proportions appear to vary between the groups, such as age, English speaking background, and work status in the previous three months, these differences were not statistically significant. A significant difference between the intervention and comparison groups was found in length of unemployment when this variable was recoded into less than 12 months / more than 12 months because of small cell sizes ($\chi^2_1 = 17.66$, $p < .001$). Recruits in the intervention group were significantly more likely to be unemployed for more than 12 months than recruits in the comparison group.

A trend was observed in work status within the last three months when recoded into a dichotomous variable (i.e. work/no work), towards the comparison group comprising a greater proportion of recruits involved in some form of work prior to training than the intervention group ($\chi^2_1 = 2.67$, $p = .07$).

Table 3.2.2.1 Demographic data for the intervention group (n= 123) and comparison group (n=72) at baseline.

	Intervention		Comparison	
Variable	**N**	**%**	**N**	**%**
Gender				
Male	67	54.5	40	55.6
Female	56	45.5	32	44.4
Age				
18 to 24 years	23	22.1	14	21.9
25 to 34 years	40	38.5	15	23.4
35 to 44 years	25	24.0	25	39.1
45 to 54 years	16	15.4	10	15.6
English Speaking Background				
Born in English speaking country	69	65.7	33	51.6
Born in Non-English speaking country	36	34.3	31	48.4
Level of Education				
Less than year 10	12	12.1	7	10.6
Year 10	33	33.3	23	34.8
Year 11	5	5.1	4	6.1
Year 12	17	17.2	13	19.7
TAFE / Business College	20	20.2	11	16.7
University	12	12.1	8	12.1
Length of Unemployment[1]				
Less than 6 months	12	11.4	14	23.0
6 to 12 months	14	13.3	21	34.4
13 to 18 months	6	5.7	1	1.6
19 to 24 months	25	23.8	10	16.4
25 to 36 months	19	18.1	5	8.2
37 to 60 months	18	17.1	6	9.8
More than 60 months	11	10.5	4	6.6
Work status (in last 3-months)				
None	64	62.7	33	50.0
Temporary or casual work	9	8.8	9	13.6
Work experience or voluntary work	16	15.7	12	18.2
Part-time work	8	7.8	9	13.6
Full-time work	5	4.9	3	4.5

[1] When recoded into less than 12 months / more than 12 months, there is a significant difference between the intervention and comparison groups in length of unemployment ($\chi^2_1 = 17.66$, $p < .001$).

Table 3.2.2.2 compares intervention and comparison group mean scores on the health and psychological variables at baseline. One-way ANOVA testing detected a significant difference between the intervention and comparison group on RSE scores at baseline ($F_{1,193} = 5.64$, $p = .02$), indicating that the comparison group had higher levels of self-esteem before training than did the intervention group. The *F*-values for both the MCS ($F_{1,193} = 3.39$, $p = .07$), and JSSE ($F_{1,192} = 3.33$, $p = .07$), are approaching significance suggesting a trend toward the comparison group having a higher level of mental health functioning and job search self-efficacy than the intervention group at baseline.

Table 3.2.2.2 Mean, standard deviation and *F*-value scores on baseline measures for the intervention (n= 123) and comparison (n=72) groups.

Measure	Intervention	Comparison	*F*
SF-36 Physical Health Composite	53.45	53.28	0.02
	(8.85)	(8.46)	
SF-36 Mental Health Composite	41.16	44.82	3.39
	(14.41)	(11.43)	
Beck Hopelessness Scale	5.26	5.25	0.00
	(3.82)	(4.52)	
JobSearch Self-Efficacy Scale	3.38	3.64	3.33
	(0.98)	(0.91)	
Rosenberg Self-Esteem Scale	35.92	38.37	5.64*
	(7.22)	(6.53)	
Life Orientation Test	14.01	14.67	0.91
	(4.13)	(4.01)	

* $p < .05$.

3.3 The efficacy of CBT

Scores on the six psychological and physical health measures, and work status in the previous three months, were compared at baseline and 12-week follow-up to test whether the CBT based training course - and the comparison First Aid course - had produced a change in participant's functioning over time.

3.3.1 Intervention Group

It was hypothesised that the CBT based training would improve the scores of people who were unemployed on all physical health, psychological health, and work status measures. Table 3.3.1.1 displays the means, standard deviations and t-values for the pre-post comparisons. Paired t-testing showed a significant difference in RSE scores at baseline and follow-up ($t_{56} = -2.28$, $p = .02$). Intensive assistance clients who participated in the CBT based training program reported higher self-esteem 12-weeks after training than they did at the beginning of the program.

Table 3.3.1.2 shows work status in the previous three months for all intervention recruits at pre-test and post-test according to five work status categories. There was a slight increase in the proportion of intervention group members who were involved in some

form of work activity at entry to the CBT course (37.3%) compared to three months following training (41.9%). However, chi-square testing of a recoded work status variable (i.e. work/no work) failed to detect any changes in work status from baseline to follow-up for the intervention group ($\chi^2_1 = 0.28$, $p = .44$).

Table 3.3.1.1 Mean, standard deviation and t-value scores on all measures at pre-test and post-test for the intervention group (n= 57).

Measure	Pre	Post	*t*
SF-36 Physical Health Composite	53.27	51.29	0.92
	(8.81)	(9.36)	
SF-36 Mental Health Composite	41.03	44.14	-1.53
	(15.13)	(12.91)	
Beck Hopelessness Scale	5.23	5.11	0.17
	(3.54)	(4.27)	
JobSearch Self-Efficacy Scale	3.37	3.57	-1.41
	(0.93)	(0.89)	
Rosenberg Self-Esteem Scale	35.37	37.61	-2.38*
	(7.29)	(6.33)	
Life Orientation Test	13.49	13.54	0.17
	(4.29)	(4.09)	

* $p < .05$.

Table 3.3.1.2 Work status at baseline and follow-up for all intervention recruits.

	Baseline		Follow-up	
Work Category	**N**	**%**	**N**	**%**
None	64	62.7	25	58.1
Temporary or casual work	9	8.8	5	11.6
Work experience or voluntary work	16	15.7	2	4.7
Part-time work	8	7.8	3	7.0
Full-time work	5	4.9	8	18.6
Total	**102**	**100.0**	**43**	**100.0**

3.3.2 Comparison Group

There were no expectations as to whether a change in scores from baseline to follow-up would be detected in the group who underwent First Aid training as this was not an intended design feature of the study. Table 3.3.2.1 displays the means, standard deviations and t-values of pre-post scores in the comparison group. Paired t-testing showed a significant difference in BHS ($t_{41} = 2.43$, $p = .02$) and LOT ($t_{42} = -2.03$, $p = .05$) scores at baseline and follow-up. Intensive assistance clients who participated in the First Aid training reported lower levels of hopelessness and higher levels of optimism 12-weeks following training than they did at the beginning of the program.

Table 3.3.2.1 Mean, standard deviation and t-value scores on all measures at pre-test and post-test for the comparison group (n= 43).

Measure	Pre	Post	*t*
SF-36 Physical Health Composite	53.05	54.45	-1.22
	(9.26)	(7.55)	
SF-36 Mental Health Composite	45.63	46.31	-0.42
	(12.35)	(12.78)	
Beck Hopelessness Scale	5.12	3.07	2.43*
	(4.53)	(2.73)	
JobSearch Self-Efficacy Scale	3.69	3.77	-0.65
	(0.91)	(0.89)	
Rosenberg Self-Esteem Scale	39.86	40.30	-0.58
	(5.74)	(6.01)	
Life Orientation Test	15.07	16.14	-2.03*
	(4.09)	(3.54)	

* $p < .05$.

Table 3.3.2.2 shows work status in the previous three months for all recruits to the comparison group at pre-test and post-test according to five work status categories. Even though there appears to be a substantial increase in the proportion of program participants involved in some form of work from baseline (50%) to follow-up (58.1%), this difference was not found to be statistically significant when chi-square testing was performed on the recoded work status variable, perhaps because of the small sample size ($\chi^2_1 = 0.12$, $p = .50$).

Table 3.3.2.2 Work status at baseline and follow-up for all comparison recruits.

Work Category	Baseline		Follow-up	
	N	%	N	%
None	33	50.0	18	41.9
Temporary or casual work	9	13.6	7	20.0
Work experience or voluntary work	12	18.2	3	8.6
Part-time work	9	13.6	0	0.0
Full-time work	3	4.5	7	20.0
Total	**66**	**100.0**	**35**	**100.0**

3.4 The efficacy of CBT vs First Aid

Comparisons between both groups at follow-up were performed to test the hypothesis that training in CBT principles would improve the health and employment status of people who were unemployed over and above those involved in a First Aid course. Because differences between the groups were detected at baseline, analysis of covariance (ANCOVA), which controls for baseline scores, was used to test for differences in scores between the intervention and comparison groups at follow-up (Table 3.4.1).

Table 3.4.1 Mean, standard deviation and ANCOVA *F*-value scores on follow-up measures for the intervention (n= 57), and comparison (n= 43) groups.

Measure	Intervention	Comparison	*F*
SF-36 Physical Health Composite	51.29	54.45	3.68
	(9.36)	(7.55)	
SF-36 Mental Health Composite	44.14	46.31	0.00
	(12.91)	(12.78)	
Beck Hopelessness Scale	5.11	3.07	7.26**
	(4.27)	(2.73)	
JobSearch Self-Efficacy Scale	3.57	3.77	0.18
	(0.89)	(0.89)	
Rosenberg Self-Esteem Scale	37.61	40.30	0.19
	(6.33)	(6.01)	
Life Orientation Test	13.54	16.14	7.29**
	(4.09)	(3.54)	

**$p < .01$

When controlling for baseline scores, significant differences were found between the intervention and comparison groups on the BHS ($F_{1, 97} = 7.26$, $p = .008$), and LOT ($F_{1, 97} = 7.29$, $p = .008$). Contrary to expectations, study recruits who participated in the First Aid course had significantly lower levels of hopelessness and higher levels of optimism three months after training than recruits who participated in the CBT based training program. There was a trend towards the comparison group reporting higher SF-36 physical health component summary scores at follow-up than the intervention group ($F_{1, 97} = 3.68$, $p = .058$).

At follow-up program participants were asked to indicate if they were or had been engaged in any work activity or study/training during the last three months. Table 3.4.2 displays employment related outcomes for the intervention and comparison groups at follow-up. There was no significant difference between the proportion of recruits achieving a positive employment outcome (i.e. work or study/training) in the intervention and comparison groups when employment related status was recoded into 'work and study'/'no work and study', and tested using Fisher's exact test ($\chi^2_1 = 0.27$, $p = .35$).

Table 3.4.2 Employment related outcomes at follow-up for the intervention and comparison groups.

Outcome	Intervention		Comparison	
	N	%	N	%
No work or training	25	47.2	18	41.9
Temporary or casual work	5	9.5	7	16.3
Work experience or voluntary work	2	3.8	3	7.0
Part-time work	3	5.7	0	0.0
Full-time work	8	15.1	7	16.3
Part-time study	5	9.4	2	4.7
Full-time study	5	9.4	6	14.0
Total	**53**	**100.0**	**43**	**100.0**

3.5 Characteristics of participants vs non-participants

Almost 50% of study recruits who were enrolled in the intervention and comparison program and completed a baseline survey failed to complete follow-up. These recruits either failed to attend or complete the intervention and comparison program or could not be contacted during 12-week follow-up. Analysis of the baseline data of program participants and non-participants was performed to assess whether significant differences between the intervention and comparison groups on the health and psychological variables may be accounted for by the characteristics and functioning of recruits who failed to complete follow-up.

3.5.1 Intervention group

Of the 123 unemployed people who were enrolled in the intervention program, 66 (53.7%) were lost to follow-up. Table 3.5.1.1 (page 45) shows the demographic characteristics of recruits who were enrolled in the intervention, recruits who were followed-up, and recruits who left the program. Much of the demographic data was recoded into dichotomous variables to enable chi-square testing. There were no statistically significant demographic differences between recruits who completed the intervention program or were lost to follow-up.

Table 3.5.1.2 compares baseline scores on the continuous health measures between recruits who completed the intervention program and recruits who were lost to follow-up. There were no significant differences in physical or psychological functioning between unemployed people who completed, or did not complete, the entire intervention program and follow-up.

Table 3.5.1.2 Mean, standard deviation and *F*-value scores on all measures for recruits who completed the program (n=57) and recruits who were lost to follow-up (n=66).

Measure	Completed	Lost to follow-up	*F*
SF-36 Physical Health Composite	52.37	54.39	1.60
	(8.82)	(8.83)	
SF-36 Mental Health Composite	41.04	41.28	0.01
	(15.13)	(13.85)	
Beck Hopelessness Scale	5.23	5.29	0.01
	(3.51)	(4.10)	
JobSearch Self-Efficacy Scale	3.38	3.38	0.00
	(0.93)	(1.03)	
Rosenberg Self-Esteem Scale	35.37	36.39	0.62
	(7.29)	(7.18)	
Life Orientation Test	13.49	14.61	2.26
	(4.30)	(3.94)	

Table 3.5.1.1 Demographic data for the intervention group according to enrollment, program completion, and loss to follow-up status.

	Enrolled in program		Completed program		Lost to follow-up	
Variable	**N**	**%**	**N**	**%**	**N**	**%**
Gender						
Male	67	54.5	29	50.9	38	57.6
Female	56	45.5	28	49.1	28	42.4
Age						
18 to 24 years	23	22.1	9	17.0	14	27.5
25 to 34 years	40	38.5	22	41.5	18	35.3
35 to 44 years	25	24.0	13	24.5	12	23.5
45 to 54 years	16	15.4	9	17.0	7	13.7
English Speaking Background						
Born in English speaking country	69	65.7	35	66.0	34	65.4
Born in Non-English speaking country	36	34.3	18	34.0	18	34.6
Level of Education						
Less than year 10	12	12.1	7	14.6	5	9.8
Year 10	33	33.3	14	29.2	19	37.3
Year 11	5	5.1	3	6.3	2	3.9
Year 12	17	17.2	8	16.7	9	17.6
TAFE / Business College	20	20.2	9	18.8	11	21.6
University	12	12.1	7	14.6	5	9.8
Length of Unemployment						
Less than 6 months	12	11.4	4	7.7	8	15.1
6 to 12 months	14	13.3	7	13.5	7	13.2
13 to 18 months	6	5.7	4	7.7	2	3.8
19 to 24 months	25	23.8	13	25	12	22.6
25 to 36 months	19	18.1	10	19.2	9	17.0
37 to 60 months	18	17.1	7	13.5	11	20.8
More than 60 months	11	10.5	7	13.5	4	7.5
Work status (in last 3-months)						
None	64	62.7	31	68.9	33	57.9
Temporary or casual work	9	8.8	2	4.4	7	12.3
Work experience or voluntary work	16	15.7	7	15.6	9	15.8
Part-time work	8	7.8	4	8.9	4	7.0
Full-time work	5	4.9	1	2.2	4	7.0

3.5.2 Comparison group

Of the 72 recruits who were enrolled in the comparison program, 29 (40.3%) were lost to follow-up at some time during the program. Table 3.5.2.1 shows the demographic characteristics of recruits who were enrolled in the intervention, recruits who were followed-up, and recruits who left the program.

Table 3.5.2.1 Demographic data for recruits in the comparison group according to enrollment, program completion, and loss to follow-up status.

	Enrolled in program		Completed program		Lost to follow-up	
Variable	**N**	**%**	**N**	**%**	**N**	**%**
Gender						
Male	40	55.6	21	48.8	19	65.5
Female	32	44.4	22	51.2	10	34.5
Age						
18 to 24 years	14	21.9	10	26.3	4	15.4
25 to 34 years	15	23.4	7	18.4	8	30.8
35 to 44 years	25	39.1	12	31.6	13	50.0
45 to 54 years	10	15.6	9	23.7	1	3.8
English Speaking Background						
Born in English speaking country	33	51.6	22	57.9	11	42.3
Born in Non-English speaking country	31	48.4	16	42.1	15	57.7
Level of Education						
Less than year 10	7	10.6	3	7.7	4	14.8
Year 10	23	34.8	12	30.8	11	40.7
Year 11	4	6.1	2	5.1	2	7.4
Year 12	13	19.7	10	25.6	3	11.1
TAFE / Business College	11	16.7	7	17.9	4	14.8
University	8	12.1	5	12.8	3	11.1
Length of Unemployment						
Less than 6 months	14	23.0	9	25.7	5	19.2
6 to 12 months	21	34.4	9	25.7	12	46.2
13 to 18 months	1	1.6	1	2.9	0	0.0
19 to 24 months	10	16.4	4	11.4	6	23.1
25 to 36 months	5	8.2	4	11.4	1	3.8
37 to 60 months	6	9.8	5	14.3	1	3.8
More than 60 months	4	6.6	3	8.6	1	3.8
Work status (in last 3-months)						
None	33	50.0	21	50.0	12	50.0
Temporary or casual work	9	13.6	6	14.3	3	12.5
Work experience or voluntary work	12	18.2	9	21.4	3	12.5
Part-time work	9	13.6	5	11.9	4	16.7
Full-time work	3	4.5	1	2.4	2	8.3

There were no statistically significant demographic differences between recruits who completed the intervention program or were lost to follow-up when variables were recoded and tested using chi-square.

Table 3.5.2.2 compares baseline scores on the continuous health measures between recruits who completed the comparison program and recruits who were lost to follow-up. A significant difference was found between recruits who completed the comparison program and those who were lost to follow-up on the RSE ($F_{1,70} = 5.91$, $p = .018$).

Unemployed people who completed the comparison program had higher self-esteem than recruits who left the program.

Table 3.5.1.2 Mean, standard deviation and *F*-value scores on all measures for recruits who completed the comparison program and recruits who were lost to follow-up.

Measure	Completed	Lost to follow-up	*F*
SF-36 Physical Health Composite	53.01	53.61	0.08
	(9.26)	(7.28)	
SF-36 Mental Health Composite	45.63	43.62	0.54
	(12.35)	(10.00)	
Beck Hopelessness Scale	5.12	5.45	0.09
	(4.53)	(4.57)	
JobSearch Self-Efficacy Scale	3.70	3.56	0.38
	(0.91)	(0.92)	
Rosenberg Self-Esteem Scale	39.86	36.17	5.91*
	(5.74)	(7.08)	
Life Orientation Test	15.07	14.07	1.08
	(4.09)	(3.88)	

*$p < .05$

Part 4: Discussion

4.1 Introduction

This study was undertaken to evaluate a CBT based training program that aimed to improve the health and employment outcomes of people who are long-term unemployed. There are few interventions world-wide that have attempted to ameliorate the health effects of unemployment and even fewer that have attempted to act within employment structures. This study provides insights into the efficacy of short-term training for people who are unemployed and receiving intensive assistance in South West Sydney, and suggests ways in which the health and employment sectors can work together to improve the health of people who are unemployed and their opportunities for employment.

The Job Network is an appropriate forum for intervention with people who were unemployed because, in most cases, it is a necessary contact for job-seekers who are being supported by unemployment benefits whilst they look for work. This study had some difficulty maintaining recruitment through Job Network structures and this had an impact upon the research process, particularly in terms of a control group and randomisation. Despite these difficulties there was sufficient statistical power to test the hypothesis that the CBT based training program would improve the health and employment outcomes of people who were unemployed in comparison to a Senior First Aid certificate course.

This study found that training in CBT strategies increased the self-esteem of people who were unemployed. However, training in First Aid increased optimism and decreased hopelessness in people who were unemployed and this improvement in functioning held when compared with the CBT based training group. The course chosen as a comparison or control measure, First Aid, was of greater benefit to people who were unemployed and receiving intensive assistance in South West Sydney than brief CBT based training.

4.2 Limitations of the study

4.2.1 Participation rates

Three hundred and fifty-two referrals represents a sizable population sample for an intervention study. However, a substantial proportion (41.8%) of intensive assistance clients who were referred by employment consultants did not participate in the study, in most cases, because they did not conform to the inclusion criteria. The majority of these one hundred and forty-seven ‘inappropriate referrals‘ were clients who did not have adequate English skills, perhaps reflecting a limited availability of appropriate training opportunities for unemployed people from a non-English speaking background in the South Western Sydney area. Other reasons for not participating in the study included, ‘other commitments’, ‘did not want to participate’, and ‘could not be contacted by research team’, reasons which to some extent, may be associated with economic and social disadvantage, and disenfranchisement from the workforce.

One hundred and ninety-five recruits were surveyed and enrolled in the study, and almost half that amount, 100 recruits, completed follow-up. Sample size calculations had determined that at least 206 recruits (103 in each group), were necessary to detect a 20% change in functioning from baseline to follow-up and across groups. Follow-up numbers of 57 in the intervention group, and 43 in the comparison group, were substantially less than that required by the sample size calculation. However, large sample sizes provide power to detect small differences, and the fact that this study detected differences in a small sample suggests that differences in functioning between the intervention and comparison groups at follow-up were large and valid.

4.2.2 Study design

This study was unable to completely and rigorously implement a randomised controlled trial (RCT) design to test the efficacy of the CBT based training program in improving the health and employment outcomes of people who were long-term unemployed. Difficulties with recruitment through the Job Network meant that this study was neither double-blind or wait-list controlled. The lack of a 'no treatment' control group prevented the research team from recording normal fluctuations in health and job finding that may occur within an intensive assistance group over a 3-month period. Further, training program factors not related to the intervention (or comparison), such as social cohesion, expectations of good outcomes and attention from trainers (the Hawthorne Effect) may account for any improvements in health status after training.

Recruitment was organised through employment consultants and this may have had an impact on the 'types' of clients who were referred, or not referred, to the study. Even though inclusion criteria was produced and disseminated to guide recruitment, evidence from informal interviews with Job Network staff suggests that a number of employment consultants made their own judgments about who would benefit most from training in CBT principles. For example, clients who were not considered to have psychological barriers to employment were not presented with an opportunity to participate. These employment consultants were using their own criteria to select clients for the study based on perceived psychological need, and this may in part account for the high proportion of inappropriate referrals made to the research team. Proudfoot et al (1997) and Creed and colleagues (1999) recruited people who were unemployed directly, by approaching them as they waited in line for employment services or left Centrelink offices. This approach may eliminate recruitment bias from agency staff and enable a more representative sample for study.

Another design issue concerns the appropriateness of evaluating public health interventions with randomised controlled trials (RCT). RCTs are considered to provide Level 1 evidence, or the best available evidence, in intervention studies for decision-making on health issues. They stem from the medical model and are characterised by clinical, randomised, double-blind, placebo-controlled research in tightly defined samples. However, difficulties can arise when an RCT or "regulatory model" framework is used to evaluate an intervention and research design which adheres to a "public health" model (Norquist, Lebowitz & Hyman,1999). Public health intervention models have different objectives to regulatory models. For example, they are interested in outcomes in

addition to clinical health status, such as employment or the ability to return to work, which "are seen as too risky, and indeed irrelevant, in the regulatory model". (Norquist, Lebowitz & Hyman, 1999, p. 2). Norquist, Lebowitz and Hyman (1999) suggest that "we should not be surprised to find that the [regulatory model] intervention may not work as expected when applied in broad community populations, in real world settings" (p. 2).

Whilst the successful UK Employment Study (Proudfoot et al, 1997), recruited from employment agencies they did not attempt to implement the intervention within employment department structures. In fact, subsequent administrations of this successful program within an agency setting have encountered substantial difficulties with recruitment, not unlike those outlined in this report (personal communication with Judy Proudfoot, 1999). This trial of the UK CBT program for people who are unemployed within an agency setting has not been successful and Judy Proudfoot believes that this is a result of the research team's failure to adhere to the program and research design because of agency pressures and other uncontrollable factors.

4.2.3 Instruments

Almost 40% of recruits who were surveyed at baseline were born in a non-English speaking country. This high proportion of NESB recruits in the study reflects the high proportion of this population group within South Western Sydney. Whilst language abilities and English skills differed from person to person, NESB recruits in general, had difficulty understanding questions which required an understanding of 'western' phrases and terminology. For example, questions such as the SF-36, "How much of the time during the past 4 weeks, have you felt *so down in the dumps* that nothing could cheer you up?", and the BHS, "I just *can't get the breaks*, and there's no reason I will in the future", posed great difficulty for many NESB recruits. This difficulty in understanding items from the Health and Employment Survey led to two significant problems: the phone interviewers attempted to interpret questions, a practice which can have an impact upon the validity of scores (de Vaus, 1992); and the time taken to administer the survey increased from, for example, 20 to 40 minutes, placing a considerable burden on the research team's resources.

Even for recruits with a good grasp of the English language, the Health and Employment survey took too much time to administer. Respondents commonly reported that the survey had too many questions, and that many of these were repetitive. It is unknown whether these factors may have had an impact on the quality of responses or affected the validity of scores on each instrument.

The Beck Hopelessness Scale and Life Orientation Test were included in the study because a measure was needed of negative thought to detect changes in thinking styles and optimism from the CBT training. However, two scales measuring psychologically similar concepts (i.e. high optimism equals low hopelessness) are in hindsight unnecessary. The 20-item BHS was described as "depressing" by a number of recruits during the baseline and follow-up surveys. The BHS is primarily used as a clinical instrument and for this reason it may not have been an appropriate measure of health status within a non-clinical population, especially when administered via telephone, as

psychologically sensitive scales are best administered via face-to face interviews (Fenig, Levav, Kohn & Yelin, 1993). A Health and Employment Survey without the problem-laden BHS would have been quicker to administer, easier to understand and less psychologically confronting for non-clinical populations than the version used in this study.

4.2.4 CBT based training program

The CBT based training program was administered in eleven hours over 2-days, and it is probable that this period of time was not long enough for a group of people who were unemployed and had been identified by Job Network as needing intensive assistance in job search activities, to learn complex CBT strategies for self-managing behaviour and improving health status. Effective CBT approaches usually rely on behavioural experiments and homework to encourage participants to learn and rehearse strategies, and opportunities for these practical applications of complex concepts were severely limited in the 2-day program. It is likely that participants in this study did not receive enough exposure to the principles and techniques of CBT and did not have enough time between the presentation of new concepts (i.e. spaced learning) to practise and consolidate learning.

When the 3-day program was adapted to the 2-day format for this study, five to six hours of practical training in activities designed to enhance participant's learning and improve confidence in using CBT techniques (e.g. assertiveness skills) were lost. The loss of these practical 'real-world' skills which often have immediate and obvious consequences may have further had an impact upon the effectiveness of the intervention. The positive health outcomes reported by participants in the comparison First Aid program suggests that intensive assistance clients respond well to practical programs.

It is probable that the CBT based training program used in this study did not meet the learning needs of the targeted population. As previous CBT interventions have been found to be effective over brief periods with different population groups (e.g. Creed et al, 1996), it may be that factors such as time, spaced learning, and an emphasis on practical skills are especially important program considerations for highly disadvantaged jobseekers.

4.3 Recruitment

4.3.1 Initial recruitment

The project experienced considerable difficulty in recruiting participants for the study through the Job Network. Even though the management and staff of the different employment services providers verbally supported the CBT program, this did not generally translate into the recruitment of appropriate clients. Over 40% of intensive assistance clients referred to the program were not surveyed. Whilst the bulk of this proportion may be accounted for by common attrition processes (e.g. recruits had other commitments), or factors associated with unemployment, like disengagement from the workforce (e.g. difficult to contact, did not wish to participate), almost half of all those

recruited to the study (45.6%), were 'inappropriate referrals': that is, they were outside the ages of 18-45 years, had poor reading, writing, and language skills, or were unable to be reached by telephone.

This large proportion of inappropriate referrals suggests that the inclusion criteria set by the study may have been a poor match for the characteristics of clients receiving intensive assistance services. That is, in the South Western Sydney area a significant proportion of jobseekers receiving intensive assistance services may be either early school leavers or aged over 45 years, have poor literacy skills, and/or have limited means of contact with others. In other words, employment consultants made inappropriate referrals to the study because these are the clients that make up their caseload. This large proportion of inappropriate referrals may point to a lack of appropriate service provision for this unemployed population, and in particular for people from a non-English speaking background with poor English language skills, and mature-age job seekers within Job Network structures.

4.3.2 Maintaining participation

Approximately half of all unemployed intensive assistance clients who completed the baseline survey (51.3%), failed to complete the training program in which they were enrolled. This figure represents a significant rate of attrition from the early stages of the study, in the main because these recruits failed to attend the first day of training. It is not unusual to find poor attendance rates for training amongst the unemployed population because of the poor mental health and low self-esteem associated with unemployment, and these problems may be exacerbated for job seekers of intensive assistance status who are highly disadvantaged.

The intervention program had greater difficulty maintaining participation in training than the comparison program. This may be because the CBT and First Aid programs emphasise the acquisition of different skills and methods of learning. The CBT program focussed on the mastery of cognitive or conceptual skills, whilst the practical, skills-based First Aid program was highly dependent on physical learning methods (i.e. applying bandages, CPR). People who are long-term unemployed likely find brief practical skills-based courses easier and more enjoyable than brief courses focussed on conceptual skills, because the nature of long-term unemployment means that individuals may not have been exposed to conceptual learning methods for some time. CBT is also more psychologically confronting than First Aid because it alerts participants to ways in which their thoughts can or have acted as barriers to employment, whilst the First Aid course promotes skills and a nationally accredited certificate that may aid in the search for employment.

In most cases, study recruits who completed a course also completed follow-up. The follow-up rates for both the intervention (74%) and comparison group (76.8%) were high, particularly for long-term unemployed populations where follow-up rates can fall below 50%. The main reasons for not completing the follow-up survey were that a study recruit could not be contacted, or had moved address, circumstances which may be related to the social and economic consequences of long-term unemployment.

4.3.3 Recruitment through Job Network

During the time of this study in 1988-1999, the national Job Network employment structures did not support training. Funding for agencies was outcome-based, meaning that agencies were funded according to how many unemployed people were placed in employment and remained in employment for up to 26 weeks. Intensive assistance clients attracted the most funding: $1500 to $3000 for registering an IA client, $1500 to $3200 for placing an IA client in full-time employment (there is a sliding funding scale for different employment outcomes) and $1200 to $3000 for an IA client who maintains full-time employment for 13 to 26 weeks. Full-time training for at least six-months was considered an appropriate outcome for intensive assistance clients although it attracted only $500, approximately 33% of funding available to agencies who were able to place this same person in full-time employment. There was no provision for short-term or brief training through the Job Network and agencies who wished to provide this for their clients did so at their own cost. This 'no–training' culture was reflected in the lack of appropriate training facilities that the project team encountered in many agencies when conducting the CBT course.

Job Network represented a major ideological shift from Working Nation which had fostered a training culture with SkillShares, and this study began when the first Job Network providers were struggling to come to terms with their new role, the new national employment structures and the tendering process (three of which occurred in the first year of operation). In fact, many SkillShares had become Job Network agencies to continue providing employment services to people who were unemployed. This may be one of the reasons why the CBT based training program was verbally supported by the management and staff of Job Network agencies but not supported practically through the recruitment of appropriate referrals. In other words, whilst Job Network staff recognised the value of training they could not afford to refer clients, especially those without significant barriers to employment, to programs that did not attract funding. In the eyes of a Job Network provider, intensive assistance clients with good English language skills and easy means of contact, would miss opportunities to search for employment and funded outcomes if they attended the free CBT and First Aid programs.

Another concern in recruiting through Job Network is the appropriateness of using employment consultants as the method of recruitment in a randomised trial. Consultations with managers and staff suggest that employment consultants felt uncomfortable suggesting that clients should participate in a program with an uncertain outcome. Some employment consultants attempted to refer to a program in which they believed their client would most benefit, a problem which is not uncommon in health care research (Bowling, 2000). It is also possible that employment consultants were using criteria for inclusion in the study other than that provided by the project team. Some believed that the CBT based training program would only benefit clients who had barriers to employment that were psychological in nature, although the program was designed to aid all job-seekers. Problems such as these mean that it is not possible to assert that the group of unemployed people receiving intensive assistance services in this study is a representative sample of the whole population of intensive assistance clients in South

Western Sydney. The direct consequence of poor recruitment is that it effects the integrity of the RCT research design.

4.3.4 Characteristics of participants and non-participants

Differences between study recruits who complete the full training and survey program and those who are lost to follow-up are important because they can identify a bias which may have an impact on the result of the evaluation. In the intervention group, recruits who completed the full program did not differ on any demographic, physical or psychological health, or employment status variable from recruits who were lost to follow-up. However, in the comparison group, recruits who completed the full program had higher self-esteem than recruits who were lost to follow-up. This presents a potential bias because any differences in self-esteem in the comparison group at follow-up may be accounted for not by improvements due to the First Aid program but by the differential loss of recruits with lower self-esteem scores. As the comparison group did not report significantly higher self-esteem after training, it is likely that this differential loss to follow-up did not have an effect upon the outcome of this study. Conversely, it may have actually impeded improvements in this wellbeing measure by creating a ceiling effect for those with high self-esteem in the First Aid course.

Almost half of all Job Network clients who enrolled in the study and completed baseline surveys failed to complete the full study program. This raises concerns about the representativeness of the study sample and the possibility that the most highly disadvantaged job-seekers were not accessed by the intervention.

4.4 Characteristics of participants

The high proportion of people from a non-English speaking background (39.6%), low education levels (45.4% had left school by Year 10), and long-term unemployment (59.1% unemployed for more than 18 months), characterise this sample of people who are unemployed as highly disadvantaged. This may be a reflection of the intensive assistance status of study recruits but it is also an indication of the nature of long-term unemployment in South West Sydney, which is still one of the most disadvantaged regions in NSW.

People who were unemployed in this study reported poorer mental health than unemployed people in the Australian SF-36 norming survey. This finding is consistent with research suggesting that long-term unemployment has a more detrimental effect upon mental health than shorter periods of unemployment. Physical health, in contrast, was at a level comparable to the Australian norms for people who were employed, a finding which is reported rarely in the research literature. These comparisons should be treated cautiously because of the small sample size of this study compared to the national SF-36 survey. However, this trend for satisfactory functioning continued with the other measures of psychological health and wellbeing. In general, the sample demonstrated levels of hopelessness, job search confidence, self-esteem and optimism that were within the limits of average functioning.

There were several differences at baseline between the intervention and comparison groups, all in favour of those who had enrolled in the First Aid course. Comparison group recruits had higher self-esteem and were more likely to have been unemployed for less than 12-months than recruits in the intervention group. Furthermore, trends were observed in this direction for higher levels of mental health and job search self-efficacy, and involvement in some form of work activity in the 3-months prior to the study.

The allocation of recruits, most of whom were randomly assigned, does not rule out differences between groups at baseline but it does attempt to minimise them and it is not known how or if difficulties with recruitment and randomisation may have had an impact upon the characteristics of recruits in the intervention and comparison groups. In any case, the relatively higher functioning status of unemployed people in need of intensive assistance in the First Aid group compared to the CBT based training program represents a significant bias in the study at baseline.

4.5 Changes in health and employment status

People who were unemployed in the CBT based training program reported higher levels of self-esteem 12-weeks following training than at entry to the study. In the First Aid training program, people who were unemployed reported higher levels of hopelessness and optimism during the 12-week follow-up period, and a trend was observed towards an improvement in employment status. However, these effects cannot be directly attributed to the CBT or First Aid training because the study did not have a no-training control group to measure the effect of a group program or normal fluctuations in health functioning.

Comparisons between the intervention and comparison groups at follow-up that account for baseline bias afford a more rigorous testing of the efficacy of the CBT program. Training in brief CBT principles and techniques did not improve the health or employment status of people who were unemployed and receiving intensive assistance services through the Job Network, when compared to a Senior First Aid certificate program. In contrast, First Aid training led to an increase in optimism and hopefulness, psychological wellbeing factors that had been included in the study to measure attributional and cognitive changes produced by CBT.

There are two possible explanations of our findings. CBT may not be effective with people who are highly disadvantaged and have difficulties processing information. The study had not originally intended to target clients classified by the Job Network as Flex 3 or “Intensive Assistance”, but it became apparent in early negotiations with employment placement agencies and the 3-day pilot, that the Job Network system did not promote training in ‘higher functioning’ unemployed groups, such as the Job Search (Flex 1), or Job Matching (Flex 2), categories. Many of the intensive assistance clients that participated in our program were long-term unemployed and may not have had opportunities to regularly engage in activities that promoted high-level processing, like that required by CBT. The First Aid certificate, in contrast, emphasises concrete skills-based learning.

There is evidence in the psychological therapy literature that CBT is difficult or ineffective with people who have processing impairments. Whilst the group who participated in our course may not have had impaired functioning, their higher order processing skills may have been "rusty" or under-practised. Some of the people in our group may never have had employment experiences, or other experiences, that required the use of these skills. The clinical psychologist who facilitated the CBT sessions believes that up to 40% of the people in each CBT group may have left the course without understanding the principles or concepts. Further evidence for this interpretation is found in the CBT and unemployment literature which shows that the participants in Proudfoot's study were unemployed professionals, and in Creed and Machin's courses were young people. In both studies, participants had either prior experience with higher-level processing (ie. professional and young people) or close proximity in time to when this skill was used (ie. young people).

It may be that participants in the brief (1, 2 and 3-day) Creed and Machin CBT courses improved their mental health upon completion in comparison to a waiting list control because they were able to draw upon their school experience to quickly adapt to an intensive and demanding learning environment (the average age of our group was 45 years). The long-term unemployed professional sample in Proudfoot's study attended a training course spread over 8 weeks, meaning that this group had more time to learn and rehearse CBT strategies, and 'reactivate' processing skills that may not have been used for some time. This highlights what we consider to be the major methodological limitation of this study: too little exposure to CBT. Two days was not enough time for people who were highly disadvantaged and have difficulties processing information to gain confidence and competency in CBT concepts and techniques.

4.6 Implications for further research

The potential health and employment effects of training in brief CBT principles and strategies needs to be explored further with highly disadvantaged populations who are unemployed. CHETRE is currently involved in the development and evaluation of a CBT based training program for people who are unemployed with psychiatric disability. This new study has attempted to correct some of the problems of the current research by spacing learning over 8-weeks and promoting rehearsal of CBT techniques through weekly homework activities.

Health interventions for people who are unemployed in South Western Sydney need to consider problems associated with multiple disadvantage. The majority of successful interventions reported in the unemployment literature service job-seekers without significant social and economic barriers to employment. The success of the First Aid program suggests that further brief intervention research in this area should focus on the potential health and employment benefits of generalist practical skills-based courses as they may be more accessible for unemployed people who are highly disadvantaged than programs based on the learning of complex conceptual skills.

Approximately 28.5% of people who are unemployed in South West Sydney are from a non-English speaking background [43]. Unemployed people with poor English language

skills were excluded from this study because CBT is language intensive and requires satisfactory levels of verbal comprehension. The high proportion of people from a non-English speaking background with poor English skills referred to this study suggests that there may be a gap in adequate provision for this group of people who are unemployed. Further research should focus on the development of appropriate training opportunities for this population. Again, generalist skills-based courses may be most appropriate for people with limited English skills.

4.7 Conclusions

Unemployment is becoming a chronic problem in the South West Sydney region and this is not likely to change in the near future with continuing high levels of recently arrived migrants and an increase in the levels of intergenerational unemployment. The health sector has long had a role in the management of health problems that are associated with unemployment at the individual level but it also needs to commit resources to interventions at the population level if it is to have an impact upon this growing problem. This study explored the utility of one approach that the health sector could take in working within national employment structures to improve the health and employment outcomes of people who are disadvantaged and unemployed.

CBT is one of the most prolific therapies in mental health intervention. It is increasingly being used with non-clinical populations in areas as diverse as parenting and breast cancer. The spread of CBT has not always been matched by empirical investigation. This research has been important in adding a qualifier to the growing CBT literature. CBT programs for people who are highly disadvantaged must allow sufficient time and support for participants to understand concepts and rehearse CBT skills, as for many people, this course may be their first exposure to higher order information processing and learning, or the first period in some time that they have had to use these skills.

Opportunities for the health system to work with national employment structures to disseminate health interventions may be improving as the Job Network structures run more smoothly and shorter term training programs become recognised again as important steps to employment for disadvantaged job-seekers. The findings of this study have important implications for public health intervention policy. Limited health intervention funding may be best spent in providing brief practical, skills-based courses for people who are unemployed and highly disadvantaged, as this approach may act to reduce inequalities in health that are the result of unemployment.

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