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Enhancing Employment Opportunities of People with Mental Illness through an Integrated Supported Employment Approach (ISE)

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A THESIS SUBMITTED

IN PARTIAL FULFILMENT OF THE REQUIREMENTS

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CERTIFICATE OF ORIGINALITY

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Abstract:

Objectives: We examined the effectiveness of an integrated supported employment (ISE) program, which augments the Individual Placement and Support (IPS) model with social skills training (SST) in helping individuals with severe mental illness (SMI) achieve and maintain employment, and compared ISE to IPS only and traditional vocational rehabilitation (TVR).

Design: One hundred sixty three participants with severe mental illness were recruited from two non-government organizations and three day hospitals in Hong Kong and randomly assigned into three vocational rehabilitation programs (ISE, IPS, and TVR). Data collection of employment information such as employment rates and job tenure was conducted by a blind and independent assessor at 7, 11, and 15 months after admission.

Results: After 15 months of service provision and follow along suppport service, both IPS and ISE participants had higher employment rates and longer job tenure when compared with TVR participants. In addition, more ISE participants gained competitive employment (78.8% vs 53.6%), and they worked longer (25.12 weeks vs 11.95 weeks) and had less interpersonal conflicts at the workplace than the IPS participants after the 15-month implementation.

Conclusion: The integrated approach of supported employment with the addition of social skills training from referral to follow along service enhances the employment outcomes of supported employment.

PUBLICATIONS ARISING FROM THE THESIS

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CHAPTER 1 INTRODUCTION

1.1 OVERVIEW OF STUDY

Individual Placement and Support (IPS) model is a specific model of supported employment for helping people with severe mental illness to obtain competitive employment. Its effectiveness of improving the short-term employment of participants had been well demonstrated (Drake and Becker, 1996; Drake et al., 1999; Lehman et al., 2002). Unfortunately, the job tenure of people with severe mental illness who participated in IPS was not always satisfactory. Interpersonal difficulty was the most frequently reported job problem that leads to pre-mature job termination (Becker et al., 1998). Integrated Support Employment (ISE; Tsang, 2003) is a preliminary supported employment protocol aiming at improving both the employment rate and job tenure of people with severe mental illness. This study aims at investigating and comparing the vocational outcomes of individuals with severe mental illness having participated in ISE and IPS.

1.2 PURPOSE OF STUDY

1. To study vocational outcomes of ISE and IPS in terms of employment rates, job satisfaction, job tenure, job stress coping, and job mobility.
2. To compare the vocational outcomes of ISE and IPS.

1.3 SIGNIFICANT OF STUDY

The results of the study will provide evidence to the research and clinical

communities that ISE is more effective than the commonly used IPS service in terms of some vocational outcomes. With promotional activities, ISE may be implemented in Hong Kong, China and elsewhere in the world to further improve vocational outcomes of people with severe mental illness.

CHAPTER 2 LITERATURE REVIEW

2.1. PREVALENCE

The prevalence of mental illness was generally higher than other forms of chronic medical conditions in the general population (Kessler, Greenberg, Mickelson, Meneades, & Wang, 2001; Murray & Lopez, 1996). People with psychiatric impairments are prevalent in especially stressful environment. According to the 2002 National Hospital Discharge Survey (DeFrances & Hall, 2002), there were 2.5 million inpatient discharges from nonfederal hospitals for all mental disorders. Kessler (2004) examined the prevalence of mental disorder during the past decade and reported that the estimated prevalence of a 12-month mental disorder in the United States that met the criteria of the Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM IV) was 29.4 percent between 1990 and 1992, and the rate between 2001 and 2003 was 30.5 percent. A survey reported that the number of people with a serious mental illness who were treated by a specialist increased by 20 percent between 1997 and 2001 (Mechanic & Bilder, 2004).

The data concerning the prevalence of mental illness in Chinese communities is very scanty. However, we should not overlook the seriousness of the problem. Mitchell (1969) compared a number of Southern Asian cities and reported that a high level of emotional illness was present among Chinese. In 1970s, a series of psychiatric epidemiological surveys were conducted in China (Chen et al., 1993).

The results showed that the 5-year period prevalence ranged from 3.2 to 7.3 per one thousand individuals with the lifetime prevalence from 15.6 to 16.9 per one thousand individuals. The highest prevalence among all diagnostic categories was schizophrenia, ranging from 1.6 to 4.6 per one thousand individuals. Chen (1995) estimated that the prevalence rate of mental illness in mainland China was about 11 per one thousand people in the 1980s. The estimated number covered a total of over 10 million people by referring to the population of China at that time. The situation of Hong Kong is also threatening. Health and Welfare Bureau (1999) reported that about 14,482 persons between the age of 15 and 64 suffered from schizophrenia and schizophreniform disorder in 1998. It was estimated that there would be 96,005 people with mental illness requiring psychiatric services in 2002 (Health and Welfare Bureau, 1999). With respect to the high prevalence of mental illness in both western and Chinese communities, we should take serious considerations about providing effective treatment for the individuals with mental illness and facilitate their recovery.

2.2. RECOVERY FROM MENTAL ILLNESS

2.2.1. DEFINITIONS OF RECOVERY

Recovery for individuals with severe mental illness has recently received much attention from researchers and policy makers (Anthony, 1993; 2000; New Freedom Commission on Mental Health, 2003). The New Freedom Commission on Mental Health recommended the promotion of research on factors contributing to rehabilitation and recovery from mental illness (New Freedom Commission on

Mental Health, 2003). Both of the practitioners and policy makers attempt to understand the meaning of recovery (Jacobson, 2001). Practitioners try to facilitate the recovery of the clients with mental illness while policy makers aim at promoting the "recovery oriented" systems. Many traditional mental health researchers view recovery as objective and measurable outcomes such as reduced hospitalizations or a reduction in symptoms (Lehman & Steinwachs, 1998). They suggested that recovery could be achieved through scientific technologies such as medication or rehabilitation techniques. Other experts claim that true recovery is a subjective and dynamic process through the interaction of numerous personal and environmental factors (Mancini, Hardiman & Lawson, 2005). William Anthony (1993), a supporter of the recovery model, defined recovery as" a deeply personal, unique process of changing one's attitudes, values, feelings, goals, skills, and/or roles. It is a way of living a satisfying, hopeful, and contributing life, even with limitations caused by the illness. Recovery involves the development of new meaning and purpose in one's life as one grows beyond the catastrophic effects of mental illness." (p. 15)**.** Patricia Deegan (1998), a clinical psychologist with schizophrenia who is also an advocator of the recovery model defined recovery as the development of new meaning and purpose in one's life, beyond the symptoms, disability and stigma of mental illness. She emphasized that recovery is not cure but a lifelong process instead (Deegan, 1993). Ridgeway (2001) described recovery as a nonlinear process in which individuals slowly took steps to become hopeful and active participants in their own lives. Sullivan (1994) presented a broad definition of recovery as "not only focuses on the management of the illness, but also highlight the consumer's

performance of instrumental role functions and notions of empowerment and self-directedness."

2.2.2 THE RECOVERY MODEL VERSUS MEDICAL MODEL

The recovery model is sometimes presented as an alternative approach of medical model to the treatment for individuals with serious mental illness. The medical model is highly paternalistic which emphasizes illness over health, weaknesses rather than strengths, limitations rather than potential for growth (Munetz & Frese, 2001). Conversely, the recovery model is a more personalized and subjective approach of caring for persons suffered from mental illness (Frese, Stanley, Kress & Vogel-Scibilia, 2001). The recovery model emphasized that responsibility for and control of the recovery process must be given to the persons who have mental illness. Supporters of the recovery model suggest that persons with mental illness should have a great freedom to choose their treatment and to participant in and contribute to the mental health system (Frese & Davis, 1997; Frese, Stanley, Kress & Vogel-Scibilia, 2001). The recovery model implies that the chances for recovery are optimized when a person is given maximum control of their conditions. Many persons who are well recovered from mental illness have enthusiastically embraced these recovery models.

2.2.3. PROCESS OF RECOVERY

For persons with severe mental illness, controlling symptoms, regaining a positive sense of self, dealing with stigma and discrimination, and trying to lead a

productive and satisfying life is increasingly referred to as the ongoing process of recovery (Markowitz, 2001). The core elements of recovery consist of symptoms of the illness, self-concept and aspects of social well-being involving employment, relationship and housing (Anthony, 1991; 1993). Recovery is not considered as an end point where symptoms have ceased and sense of self and quality of life are restored to some optimal level, but rather as an ongoing process where these elements interact over time (Anthony, 1991; 1993; Weingarten, 1994).

2.2.4. RELATIONSHIP BETWEEN PSYCHIATRIC SYMPTOMS, LIFE SATISFATION AND SELF-CONCEPT

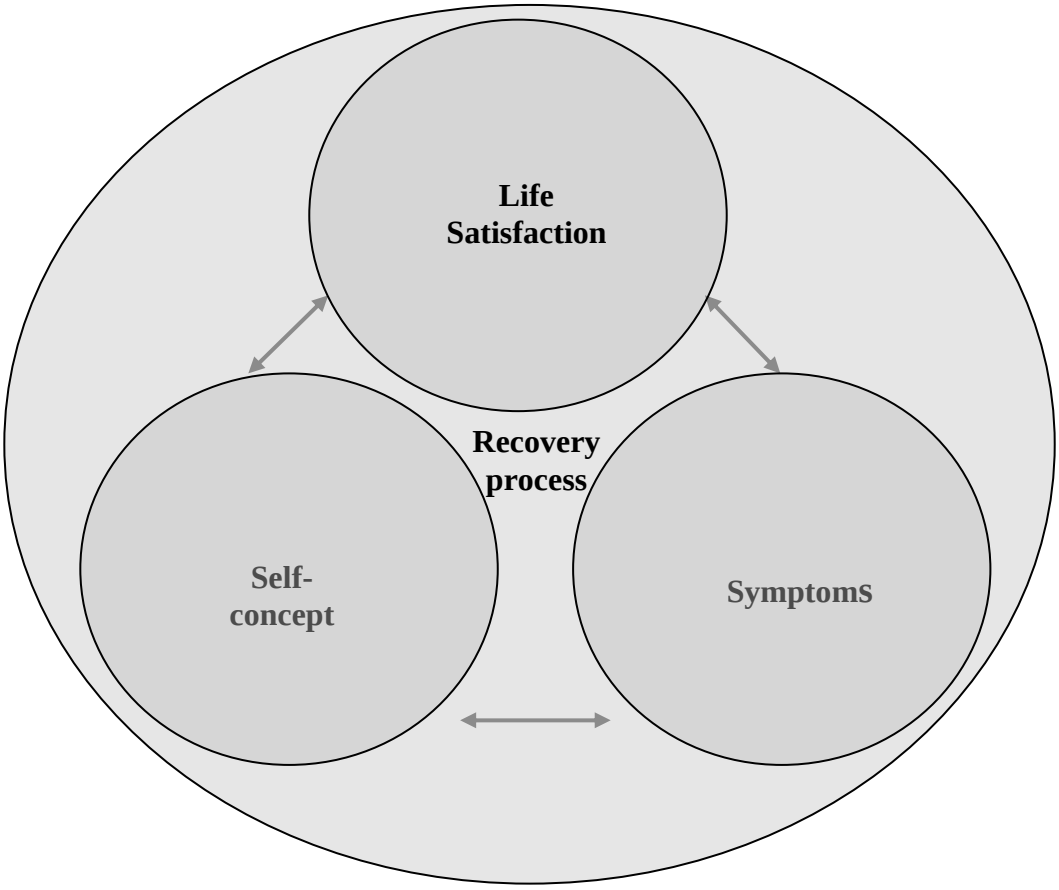
Markowitz (2001) examined the social-psychological processes involved in the relationships between psychiatric symptoms, self-concept and life satisfaction. Psychiatric symptoms are likely to be some of the most important factors related to life satisfaction. The effect of symptoms on life satisfaction can be predicted form a medical-psychiatric perspective (Gove 1982). One prediction derived from this perspective is that an increase in symptoms would result in a decrease in life satisfaction. This perspective suggests that deficits in social welling-being result primarily from the severity of illness. The assumption of the perspective is that persons suffering from mental disorder may be less able to perform work roles adequately, and consequently result in unemployment, insufficient resources, and poor housing conditions (Huffine & Clausen, 1979). As a result, the life satisfactions of individuals with mental disorder decrease. On the other hand, the social stress-

social support perspective suggests that the decline of life satisfaction of persons with mental illness may further affect the severity of their illness (Thoits, 1995). Unemployment, lack of resources and low-quality of housing combined may increase stress and put them at a higher risk for increased symptoms (Thoits, 1995; Turner, 1981).

The findings of Markowitz's study (2001) demonstrated that self-concept is an important part of the recovery process. Several studies have shown that self-concept has a negative effect on symptoms and positive effect of life satisfaction (Davidson & Strauss, 1992, Rosenberg, 1992; Rosenberg, Schooler & Schoenbach, 1989). The explanation of the relationship is that higher self-efficacy among persons with mental illness would facilitate a more active role and higher motivation in the recovery process (Gecas, 1989). In addition, the establishment of social relationships, employment and housing would be facilitated by positive self-evaluation. Consequently, an increase in life satisfaction would result from improved interpersonal and economic circumstances. Similarly, self-perception theory predicts that life satisfaction will affect self-evaluation. The interpretation is that individuals who enjoy satisfying family and work lives may think more positively about themselves (Gecas & Seff, 1990). These studies suggest that the three core elements of recovery, symptoms control, self-concept and life satisfaction interact with each other in a dynamic process.

Figure 1

Recovery Process of Mental Illness (Markowitz, 2001)



2.2.5. THE SIGNIFICANCE OF WORK IN THE RECOVERY PROCESS

Work in an important part of the lives of many people. Apart from generating income, work is associated with positive mental health as it provides opportunities for skills development and social contacts and participation in the community (Ruesch, Graf, Meyeer, Rossler & Hell, 2004). Meaningful employment is believed essential to the recovery process for persons with mental illness (Leete, 1992). Persons with severe mental illness are known to have a diminished self-concept and a distorted sense of self-efficacy (Davidson & Strauss, 1992). Strong's study (1998) found that the act of working is powerful in creating and facilitating change in a person's self-concept and self efficacy. The participants of Strong's study with work experience redefined themselves as competent through daily and persistent efforts at work. The participants had to meet challenges and face new experiences in the workplace. With each successful experience, if they realized that it is due to their own efforts, their self-efficacy would improve. Strong (1988) concluded that one way to facilitate recovery is by helping the persons with mental illness to link up the meaningful occupations and to experience challenges and successes in the context of meaningful work. Markowitz (2001) highlighted the significant effect of employment on the recovery process of persons with mental illness. The study of Markowitz (2001) suggested that treatment programs that are effective in developing social and vocational skills may introduce a dynamic process of recovery. A higher level of social well-being including employment would be achieved by improving social and vocational skills. And the promoted social well-

being would result in an increase of sense of esteem and efficacy, which in turn decreases the symptoms of illness and leads to further increase of social well-being.

2.3. EMPLOYMENT SITUATIONS OF PERSONS WITH MENTAL ILLNESS

2.3.1. EMPLOYMENT RATES

Unfortunately, few people with severe mental illness are employed despite the various studies demonstrated that obtaining and maintaining employment can contribute to recovery of them (King et al., 2006). Many individuals with mental illness desire to work, but unemployment rates for people with a history of mental disorder are three to five times of people with no disorder (Sturm, Gresenz, Pacula & Wells, 1999 The employment rates of discharged psychiatric patients are surprisingly low and range from 15% to 30% (Anthony, Cohen, Farkas & Gagne, 2002; Equal Opportunity Commission, 1997; Rosenheck et al., 2006). The rates of people who suffer from schizophrenia are even lower (Equal Opportunity Commission, 1997). With reference to the employed proportion of people with severe mental illness of Australia in 1998, 21.1 % of people with mixed psychotic disorders were employed while only 16.3% of people with schizophrenia could obtain employment successfully (King et al., 2006). From the statistics about the employment rates, we know that persons with severe mental illness are highly disadvantaged with respect to their participation in the labor market. Given the importance of employment outcomes to the recovery, the identification of the barriers of individual with severe mental illness to employment is essential.

Furthermore, a systematic investigation of more effective and evidenced-based employment services is a research priority in the field of psychiatric rehabilitation.

2.3.2. BARRIERS TO EMPLOYMENTS

Various studies tried to identify the possible barriers to successful employment of persons with severe mental illness (Rutman, 1994; Waghorn, Chant & King, 2005).

One of the barriers is the impact of mental illness on the person. The community Support System of the National Institute of Mental Health (NIMH) identified several typical characteristics of persons with psychiatric disabilities: 1, having poor job skills and work history; 2, being unable to establish or maintain a personal support system; 3, exhibiting inappropriate social behaviors and 4, requiring help in basic living skills (NIMH, 1980). The decline in their abilities resulting from the mental illness minimizes their chances to obtain competitive employment. People with severe mental illness have significant deficits in social skills and social performance (Anthony & Liberman, 1986). In addition, schizophrenia is characterized by positive symptoms, negative systems and a decline in both social and occupational functioning (American Psychiatric Association, 1994). Many studies demonstrated that the employment problems of people with schizophrenia are a result of lacking appropriate general social competence and social skills in the workplace (Wehman & Kregel, 1982, Tsang & Pearson, 1996). They are unable to interact effectively with their supervisors and co-workers which

affects their social relationship at work. For example, they may not be able to handle conflicts with co-workers or request help from others appropriately. Previous study demonstrated that poorer vocational outcomes were associated with deficits in social skills in people with schizophrenia (Johnstone, Macmillan, Frith, Benn & Crow, 1990). In addition, evidence has shown that interpersonal difficulties are the most frequently reported job problem leading to unwanted job terminations (Mak, Tsang & Cheung, 2006). Meanwhile, a review of available studies confirmed that social competence is a consistent and significant predictor of gainful employment (Cook & Razzano, 2000; Tsang, 2003; Tsang, Lam, Ng, & Leung, 2000). Therefore, we could summarize that skill deficits of skills level, especially work-related social skills is a barrier to employment for people with severe mental illness.

Another possible barrier to employment pertains to the environmental factors such as the nature of the labor market and the availability of suitable employment assistance (King et al., 2006). In 1997, there was an economic turmoil in Hong Kong, and the overall employment rate was low in the general population (Labour Department, 2003; Lee, 1999). Consequently, the successful employment rate of individual with severe mental illness was affected as there were fewer job opportunities in the labor market. Moreover, there are some limitations about the current vocational services for persons with mental illness which will be discussed in the later session.

The third possible barrier is systematic in nature, such as community stigma and low expectations of health professionals (King et al., 2006). Many studies showed that stigma and discrimination act collectively as a primary barrier to employment (Carling, 1990, Wahl, 1999). The literature shows that employers express a wide range of negative beliefs regarding hiring persons with mental illness (Diksa & Rogers, 1996). In addition, about 50% of employers expressed their unwillingness to employ individuals with mental illness (Ip, Pearson, Ho, Lo, Tong, & Yip, 1995). The literature shows that employers report a wide range of negative beliefs concerning hiring individuals with mental illness (Diksa & Rogers, 1996; Johnson, Greenwood & Schriner, 1988). Negative beliefs about people with mental illness include poor work performance such as absenteeism and brief tenure, poor work personality like difficulty in following instructions or poor ability to socialize and also the personal factors in terms of low motivation and easy to get angry (Diksa & Rogers, 1996; Johnson, Greenwood & Schriner, 1988; Cook, Razano, Straiton & Ross, 1994)). These negative beliefs induced the perceived difficulty of employers for individuals with mental illness to meet work requirements and in turn might reduce their willingness to hire this group of individuals. A recent cross-cultural study used qualitative means to obtain information on employers' concerns about hiring people with psychotic disorder for entry-level jobs in US and China. More severe public stigma pertaining to mental illness was found in Chinese communities (Tsang et al., under review). In addition, more employers in Hong Kong and Beijing were concerned about poor work attitudes and behaviors of people with psychotic disorder and how they would affect colleagues and supervisors. Since social

competence of the employees in workplace is a major concern of the employers, improving social skills in the vocational aspects of people with severe mental illness should lead to a higher chance of getting a job.

2.4. VOCATION REHABILITATION

2.4.1. TRADITIONAL VOCATIONAL REHABILITATION

It is obvious that persons with severe mental illness have to face many problems and barriers in returning to work. This is particularly true for those who have to work in Hong Kong and Chinese communities. Vocational rehabilitation service for this group of persons as a result forms a focus among the mental health professionals. Vocational rehabilitation aims to allow persons with disabilities to secure, retain and advance in suitable employment in order to facilitate their integration into the society.

Traditional vocational rehabilitation adopts the stepwise, “train then place” approach that involves comprehensive vocational assessment and pre-vocational training. Mental health professionals identify the needs and the baseline performance of the clients using the standardized vocational assessment such as Valpar Component Work Samples and non-standardized assessment such as observation of their work performance by therapist. Prolonged pre-vocational training will then be provided to the clients in the sheltered environment in the form of various work groups and workshop training such as clerical training, computer training and cleaning training. The workshop-based training aimed to train the specific work

skills and work habits of the participants for later upgrading to sheltered workshop or open employment. The majority of work in sheltered workshops is in the form of assembly or sub-assembly work including simple packaging, processing, finishing tasks. Recently, some sheltered workshops have diverted to some service oriented work such as delivery and car washing to meet the changing market needs.

2.4.2. LIMITATIONS OF TRADITIONAL VOCATIONAL REHABILITATION

Generally speaking, the majority of patients with mental illness who are discharged from mental hospitals have been referred to sheltered workshops after receiving a long period of prevocational training. The limitation of this approach is that it has little sustained impact on competitive employment for people with severe mental illness (Twamley, Jeste & Lehman, 2003). Although competitive employment is an ultimate goal of the vocational rehabilitation, the successful rate of traditional vocational rehabilitation is often low. An early survey illustrated the prospects of clients at sheltered workshops for competitive employment was discouraging (Whitehead, 1987). Literature showed that around 2.5% of people among those working in sheltered workshops could proceed to competitive employment (Tsang, Fong & Bond, 2004). One of the explanations for the low successful rate is that traditional vocational rehabilitation (TVR) services usually adopt a step-wise approach with a lengthy pre-vocational training. However, Bond et al. (1995) had found that early entry into competitive employment is more effective than incorporating prevocational training. Furthermore, in the sheltered workshops, all the workers are suffered from mental illness; therefore, the consumers have little

chance to interact with co-workers who are not mentally ill. Consequently, sheltered workshops would result in isolating the consumers and preventing their re-integration into the community. Sheltered workshops provide the simulated work tasks to the consumers and disregard the interest and preferences of them. As a result, the consumers could not apply the work skills from the workshops to their preferred jobs in open employment. Clients working in sheltered workshops are underpaid with less than minimum wage (Drake, et al, 1999).

2.4.3. DEVELOPMENT OF SUPPORTED EMPLOYMENT

Although supported employment was developed for persons with development disabilities originally, it has been successfully used in mental health programs (Drake, MuHugo, Becker & Anthony, 1996). The development of supported employment marked an important shift in the history of vocational rehabilitation for people with severe mental illness (Bond, Drake, Mueser & Becker, 1997). Supported employment was first defined during the 1980s and it had attracted much attention in the psychiatric rehabilitation field (Kregel & Wehman, 1989). It is a well defined approach for helping people with disabilities participate as much as possible in the competitive labor market, working in jobs they prefer with the level of professional help they need (Bond et al., 2001). A formal definition of supported employment included the following features: clients work for pay, preferably the prevailing wage rate, as regular employees in integrated settings and in regular contact with non-handicapped workers, and receive ongoing support (Bond, Drake, Mueser & Becker, 1997). Supported employment follows the “place

then train" rather than "train then place" approach. Supported employment allows consumers to get competitive employment in the community and work with people without disabilities rather than in a workshop setting. Also, supported employment focuses on the strengths and interest of the consumer, rather than teaching them different work skills in the stimulated work settings which prepare them for future jobs (Rusch & Hughes, 1989). Unlike other vocational approaches, supported employment programs do not screen people for work readiness, but help all who express their desire to work. Supported employment does not provide intermediate work experience through prevocational training or sheltered workshops, but actively facilitates job acquisition directly with the professional help and provide the ongoing support after the client is employed (Bond et al., 1997).

2.4.4. INDIVIDUAL PLACEMENT AND SUPPORT (IPS) APPROACH

Individual Placement and Support (IPS) is a specific model of supported employment in helping people with severe mental illness to obtain competitive employment (Drake & Becker, 1996). IPS integrates employment specialists into case management or mental health team to provide consumers with practical assistance in finding and maintaining competitive employment. Each employment specialist provides the full range of vocational services to each consumer, including identifications of the strengths and job interests with comprehensive vocational assessment, job searching and job support (Becker & Drake, 1993). IPS has been the most frequently studied and comprehensively described supported employment approach for person with severe mental illness. This approach is described in details

in a manual providing implementation guidelines for practitioners (Becker & Drake, 1993). In addition, it provides a standardized fidelity scale as service protocol (Bond et al., 2002).

2.4.5. PRINCIPLES OF IPS

There are seven principles of IPS model and each principal serves as a foundation for the evidence-based guidelines to provide effective supported employment services (Bond, 2004).

1. Competitive employment is the goal

The first principle of IPS approach is that the goal is competitive employment in the community's economy.

2. Rapid job search

Consumers of IPS program are expected to obtain a job directly, instead of receiving a lengthy prevocational training before the job acquisition process.

3. Integration of rehabilitation and mental health

IPS program is not a separate service for consumers, but incorporate with other components of mental health treatment.

4. Attention of consumer's preference

Consumers are expected to find jobs according to the preference, strengths and work experience of their own, rather than the judgments of the vocational specialists.

5. Continuous and comprehensive assessment

Assessments starting from the first contact with the consumers and continuous after the consumers are employed.

6. Time-unlimited support

Follow-along support is provided once the consumers are employed and continued for an indefinite period.

7. Benefits counselling

On going guidance is provided to help the consumers to make secisions regarding Social Security, Medicaid, and other government entitlements.

Bond (2004) reviewed the empirical evidence regarding the seven principles in IPS. Literature shows that each of them contributes to the successful employment outcomes, although the evidence for some principles is comparatively weak and further study on principles is still in need.

2.4.6 EVIDENCE OF IPS

The advantages of IPS are that it is developed specifically for people with SMI and its effectiveness of facilitating employment outcomes of persons with psychiatric disabilities had been well demonstrated (Crowther and colleagues, 2001; IPS; Drake and Becker, 1996; Drake et al., 1999; Lehman et al, 2002). The first research study of IPS was conducted in New Hampshire by Drake et al. in 1994. Drake's study involved a natural experience that a community mental health center operating day treatment programs in two rural sites faced financial difficulties. One site converted the day training programs into IPS while another site continued

providing day training programs with traditional vocational rehabilitation. The participants converted to IPS had a significant increase of employment rate from 33% to 56% while the other site which provided day training program had no change of employment outcomes. Another essential finding of the study was that IPS had no adverse impact on the participants such as re-hospitalization or suicide attempts or drop out. In addition, all the participants, their family members and the mental health staff confirmed success of IPS and reported satisfaction with the conversion. Similarly, the study of Lehman et al. (2002) reported that 42% of IPS group and 11% of TVR group in Lehman's study were employed competitively. The review article (Bond, 2004) summarizes the findings of nine randomized controlled trials comparing supported employment with a variety of traditional vocational services for people with severe mental illness (Bond, Dietzen, Mcgrew, et al., 1995; Chandler, Meisel, Hu, McGowen & Madison, 1997; Drake et al., 1999; Drake, McHugo, Becker, Anthony & Clark, 1996; Gervey & Bedell, 1994; Gold et al., 2006; Lehman et al., 2002; McFarlane et al., 2000; Mueser et al., 2004). All studies reported better employment outcomes for consumers receiving supported employment. A mean of 56% of supported employment participants achieved competitive employment compared to 19% of comparison groups. In addition, a recent study conducted by Wong and colleagues (2006) found significantly better competitive employment outcomes for IPS participants, compared with traditional vocational rehabilitation program. The employment rate of IPS participants was 64% along 12 months study period. Table 1 summarizes the outcomes of different experimental studies on IPS.

Table 1

Outcomes of different Experimental Studies on IPS

Experimental Study	Employment Rate (%)	
	IPS	TVR
Bond, Dietzen, McGrew, et al, 1995	56	29
Chandler, Meisel, Hu, McGowen & Madison, 1997	31.3	13.2
Drake et al., 1999	60.8	9.2
Drake, McHugo, Becker, Anthony & Clark, 1996	78.1	40.3
Gervey & Bedell, 1994	76	6
Gold et al., 2006	64	26
Lehman et al., 2002	42	11
McFarlane et al., 2000	46	19
Mueser et al., 2004	73.9	27.5/18.2
Wong et al., 2006	64	31

2.4.7. IPS SERVICE PROTOCOL

The protocol of IPS is as follows (Becker & Drake, 1993):

1. Referral

Those who are 18 years and older and have a major mental illness are eligible. The only additional requirement is expressing interest in competitive employment.

2. Building relationship

The employment specialist should establish a trusting and collaborative relationship with the clients.

3. Vocational Assessment

Initial vocational assessment includes work background, current adjustment, work skills and other work-related factors. Afterwards, assessment occurs continuously as each job experience gives both clients and employment specialist new information.

4. Individual treatment plan

A typical plan would have five sessions including client's vocational goals, client's strength and weakness, objectives enabling the clients to meet his/her goad, type of support the client wants from the employment specialist and the people, services and supports that will help the client achieve the objectives.

5. Obtaining employment

The employment specialist and client work together to find a job in the community and the client takes the lead as much as possible in the job seeking process.

6. Follow along support

An IPS program must be able to offer its clients a complete system of supports, from 24-hour emergency services to peer support groups, employment counseling, benefits planning, and reliable transportation.

2.4.8. LIMITATIONS AND AUGMENTATIONS OF IPS

Although the effectiveness of IPS in improving short term employment had been confirmed, it shows no significant improvement on wages, job satisfaction, non-vocational outcomes and job tenures when compared with people receiving TVR (Drake et al., 1999). IPS appears to be the most effective type of vocational rehabilitation; however, still nearly half of the IPS participants could not obtain any competitive work through out the whole study period (Bond, Drake, Mueser & Becker, 1997). Researchers therefore suggested that further improvements should be made so that IPS will result in more positive outcomes for larger proportion of consumers in the program (Twamley, Jeste & Lehman, 2003).

Due to the limitations of IPS, some vocational researchers tried to integrate brief and effective skills training into IPS for augmentation of the vocational outcomes (Cook et al, 2005; McGurk, Mueser & Pascaris, 2005; Wallace, Tauber &

Wlide, 1999). In Cook's study (2005), participants from 7 states in the United States were randomly assigned to an experimental or control SE program for comparison. Several experimental study sites combined SE program with special enhancements. The enhancements include broadening the natural support networks of participants, combining IPS with a psycho-educational multifamily groups or Mental Health Employer Consortium. Results showed effectiveness on integrating clinical and vocational services into SE service over TVR (55% vs. 34% employment rate). Furthermore, cognitive training (CT) was suggested to be integrated into SE program. The results showed that the integration of CT and SE could generate more desirable outcomes including more likely to work (69.6% vs. 4.8%); working more jobs (0.96 vs 0.05); working for more hours (34.48 vs. 2.58 per month) and earning more wages (199.11 vs 15.17 per month) than those received SE alone over a year (McGurk, Mueser & Pascaris, in press).

2.5. SOCIAL SKILLS IN WORKPLACE

2.5.1. SIGNIFICANCE OF SOCIAL COMPETENCE IN WORKPLACE

Interpersonal difficulty was the most frequent reported job problem that leads to short job tenure (Becker et al., 1998). It has been suggested that job-related social skills training may be a useful component of a vocational rehabilitation intervention (Twamley, Jeste & Lehman, 2003).

People with schizophrenia and other forms of SMI have deficits in social functioning (Bond, Drake & Becker, 1998). Good social skills and supportive social

networks contribute to success in employment (Bond, Drake & Becker, 1998). Social competence is one of the most significant and consistent predictors of employment outcome among individuals with mental illness (Tsang, Lam, Ng, & Leung, 2000). Job retention problems were related to their social functioning. Interpersonal difficulty was the most frequently reported job problem (58%) that may lead to job termination (Becker et al., 1998) and this was in line with predictors research: social competence is one of the most significant predictors of employment outcome (Cook & Razzano, 2000; Tsang, Lam, Ng & Leung, 2000) In addition, Lehman et al. (2002) reported that there was no between-group difference in the length of employment among the IPS participants and comparison. Lehman hypothesized that impaired interpersonal skills played a significant role in job retention problems.

2.5.2. ATTITUTES OF EMPLOYERS REGARDING SOCIAL SKILLS IN WORKPLACE

It is important to understand the concerns of employers about hiring persons with mental illness so that we could provide practical assistance to our consumers in finding competitive employment. The literature shows that employers express a wide range of negative beliefs regarding hiring persons with mental illness (Diksa & Rogers, 1996; Johnson, Greenwood & Schriner, 1988). Generally, the negative beliefs of employers include their concerns regarding the work performance, work personality and symptoms. Recently, Hand and Tryssenaar (2006) had studied the beliefs of small business employers regarding hiring individuals with mental illness.

The results of the study highlighted the importance of interpersonal aspects in workplace as employers reported that they were most concerned regarding the social and emotional skills of individuals with mental illness. In the study, the top seven concerns held by employers were all related to work personality rather than work competence. The employers were particularly concerned about the social interactions with supervisor and co-workers including handling criticism, requesting supervision and resolving conflicts. A similar finding is reported in a recent cross-cultural study exploring the concerns of employers about hiring people with psychotic disorder for entry-level jobs in US and China (Tsang et al., under review). This study reported that more employers in Hong Kong and Beijing were concerned about poor work attitudes and behaviors of people with psychotic disorder and how they would affect colleagues and supervisors. Since social competence is the major concern of the employers and it plays a significant role in the process of job search and retention among individuals with mental illness, work-related social skills training is therefore crucial in vocational rehabilitation.

2.5.3. PERSPECTIVE OF CONSUMER'S VIEW

Vocational researchers stated that maintaining a job is a more difficult task than getting a job (Becker et al., 1998). Literature showed that the job tenure of consumers is short and the job terminations are unsatisfactory despite that follow along support is given to them (Cook, 1992). Furthermore, Cook (1992) found that more than half of the employees with mental illness ended the jobs themselves rather by their employers. With respect to preventing our consumers from initiating job

terminations themselves, we have to understand the difficulties of our consumers faced in their workplace. Different factors leading to job terminations were identified in various studies including lack of work experience, inadequate work readiness, poor social skills, inadequate supports, severe psychopathology and stressful environment (Anthony & Jansen, 1984; Dietzen & Bond, 1993; Cook, 1992; Fabian, 1992; Bond, 1994). Becker et al. (1998) had examined the job terminations of persons with psychiatric disabilities who were participating in supported employment particularly. The results of the study suggested that majority of the job terminations were unsatisfactory and interpersonal difficulties were the most frequently job problems (58%) that lead to job terminations. Kirsh (2000) also studied the meaning of work from consumer's perspectives and identified the importance of relationships and attitudes of supervisor and co-workers. The study by Kirsh (2000) reported that the nature of supervisory and coworker relationships was a factor affecting the quality of work life and job tenure of consumers. Since good relationships with supervisor and coworkers have an impact on consumer to stay at work, work-related social skills training could be helpful to our consumer for building up good interpersonal relationship in work and in turn enable the persons to maintain their jobs. A study explored the reasons for job terminations among 60 individuals with severe mental illness participating in a supported employment program in Hong Kong (Mak, Tsang & Cheung, 2006). More than half of the job terminations (53%) were unsatisfactory which included dissatisfaction with job (44%) and lack of interest (22%). Interpersonal problem with either supervisors or co-workers accounted for 13% of unsatisfactory terminations in the study.

2.6. WORK-RELATED SOCIAL SKILLS TRAINGING

2.6.1. OVERSEA STUDY

Wallace had tried to combine the IPS model with the Workplace fundamental skills module that was designed to teach people with mental illness to keep their jobs (Wallace, Tauber & Wlide, 1999). Participants receiving the Workplace fundamental skills module leant how to interact with supervisors and peers to improve job task performance and socialize successfully with co-workers. Also, they learnt the problem solving skills to recruit social support on and off the job in this module. Results showed that participants receiving both IPS and the skills training had significantly less job turnover than those received IPS only (1.2 compared with 1.9) (Wallace & Tauber, 2004).

2.6.2. LOCAL STUDY

Apart from the Workplace fundamental skills module developed by Wallace, work-related social skills training (WSST) was designed in Hong Kong to improve the social skills necessary for getting and keeping a job (Tsang & Pearson, 1996).

WSST consisted of ten group sessions lasting for one and a half to two hours. Consumers first receive the basic social skills and social survival skills including verbal and non-verbal skills, assertiveness, grooming and personal appearance, and greeting and basic conversation skills. Afterwards, they would proceed to the core work-related skills including job searching skills such as performance of phone

interview and face to face interview, social skills in specific situations in workplace like handling conflicts and requesting sick leave, and also the problem solving skills. The training sessions are facilitated by a trained therapist and followed the standard components of social skills training including warm-up activities, instruction, demonstration, role play, feedback and homework assignments (Wallace et al., 1980).

The vocational outcomes of WSST have been demonstrated with 46.7% of the participants receiving both WSST and follow up support were employed whereas only 2.4% of participants in control group were employed (Tsang & Pearson, 2001).

2.7. INTEGRATED APPROACH OF SUPPORTED EMPLOYMENT

2.7.1. DEVELOPMENT OF INTEGRATED SUPPORTED EMPLOYMENT (ISE)

Although both social skills training and supported employment are demonstrated with vigorous evidence for improving the employment outcomes of persons with mental illness, few studies try to combine the two programs and investigate if optimal outcomes could obtained (Tsang, Kopelowizc & Liberman, 2001). Tsang (2003) hypothesized that the vocational outcome of IPS would be augmented if social skills training are combined. The work related social skills training (WSST; Tsang & Pearson, 2001) was developed based on a conceptual framework validated by Tsang and Pearson (1996) guided by the basic principles of social skills training (Liberman, DeRisi & Mueser, 1989). Since WSST is

compatible to the IPS model as it is related to the vocational context, it can be merged into IPS to form Integrated Support Employment (ISE) service protocol.

Vocational rehabilitation integrated with SST which is tailor made for them will provide opportunities for learning, practicing and improving their social functioning in real life situations (Corrigan, Schade & Liberman, 1992). Becker et al. (1998) stated that job terminations of consumers mainly occurred after starting the job. Therefore a skills training module addressed the skills and support for a specific job after job placement might be more effective than before job placement. ISE provides follow up support after consumer are employed in the way of meeting with therapist or phone call after the ten training session. The support put an emphasis on generalization of the social skills to real situations. As a result, consumers could receive the practical guidance on handling difficulties in the specific and real situations about their own jobs during the follow along support.

The major difference between ISE and IPS was that the social functioning of participants was enhanced in the ISE programme by a social skill training module (WSST) with generalization extended into the follow-up period of the supported employment service. Social skills essential to retaining a job which include maintaining a good working relationship with supervisor and co-workers are delivered to the participants (Tsang & Pearson, 1996). These social skills equip them to cope with specific situations in the workplace that may cause problems such as handling interpersonal conflicts at work. Follow-along support of ISE program

focuses on the relationship with their supervisor or co-workers and emphasis is given to the generalization of social skills they learnt.

2.7.2. ISE SERVICE PROTOCOL

ISE refers to the protocol merging IPS and SST as described by Tsang (2003).

The service protocol consists of two basic intervention components: individual placement and support (IPS) and social skills training (SST). The actual implementation follows the steps of a typical IPS program (Becker & Drake, 1993):

- Referral
- Building a relationship
- Vocational assessment
- Individual employment plan
- Obtaining employment
- Follow-along support

Vocational assessment: Social skills training began to be an integral part of the ISE approach during the step of vocational assessment. IPS emphasized tracking experiences in competitive jobs. The goal was to find out how well the client did in a competitive job out in the community. Assessment covered work background,

current adjustment, work skills, and other work-related factors. Assessment on social skills necessary for seeking and maintaining a job was incorporated into the ISE.

Individual employment plan: In the stage of formulating an employment plan, a course of action was figured out after taking into account everything that the treatment team knew about the client that related to the client's ability to get and hold a job. As suggested by Becker and Drake, the plan consisted of five sections: client's vocational goals, his/her related strengths and weaknesses, objectives enabling the client to meet his/her goals, the type of support the client wants from the employment specialist, and people/services/supports that will help the client achieve the objectives. In ISE, an emphasis was given to the role social skills played in the individual employment plan. The case manager was fully aware of the social skills needed for jobs that fell into the client's preferred job range. For instance, the case manager beared in mind that the client had to know how to handle complaints from customers if he/she planned to be a sales assistant in a department store. The social competence required then became one of the objectives. Services or programmes that brushed up the client's capability in this aspect were given.

Obtaining employment: Before the process of obtaining employment, services or programmes mentioned above that helped the client to upgrade his level of social competence in attending job interviews and the workplace were given. The work-related social skills training module developed by Tsang (2001) was used.

Follow-along support: The most important process was the step of follow-along support. As mentioned by Becker and Drake, clients were not be able to maintain a job successfully without ongoing help with the problems and challenges of working a job. The IPS program aimed to offer clients a complete set of support, from 24-hour emergency services to peer support groups, employment counseling, benefits planning, and reliable transportation. With ISE, ongoing support included a special emphasis on providing assistance to the clients in how to develop and maintain good and cooperative working relationship with their fellow-workers, supervisors, and customers. This process was conducted individually and in a group. It was conducted in the workplace, at clients' homes or in the psychiatric facility. Contents covered in Tsang's module was revised. Emphasis was given to the generalization of the skills taught. A problem solving approach was used to help clients to handle their interpersonal conflicts.

WSST will be provided to ISE participants prior to the stage of obtaining employment. Apart from the WSST sessions, there is a special emphasis on providing assistance to participants in developing and maintaining good and cooperative working relationship with their fellow worker, supervisors and customers in the follow-along support proffered to the ISE participants. We hypothesized that the vocational outcome of people with SMI would be further enhanced by using ISE.

2.8. THE MAIN HYPOTHESIS

This study aimed at figuring out the details of the service protocol for ISE postulated by Tsang (2003) and investigating the effectiveness of the Integrated Support Employment (ISE) in terms of employment rates and job tenure for people with SMI.

We hypothesized that ISE program, which is a special supported employment approach incorporating IPS and WSST, is a more effective vocational service for persons with severe mental illness. Most IPS participants experienced interpersonal difficulties in the workplace and this job problem led to job termination. We assume an integration of IPS and WSST could alleviate the interpersonal problems faced by consumers in real situations and in turn improve their vocational outcomes.

CHAPTER 3 METHODOLOGY

3.1 PARTICIPANTS

We recruited 163 participants from July 2003 to March 2005 with 52 participants assigned to ISE program, 56 participants to IPS program, and 55 participants to TVR program randomly. The subjects were recruited from the service units of Richmond Fellowship, the Baptist Oi Kwan and three day hospitals based on the following selection criteria: 1. suffering from severe mental illness (operationally defined as schizophrenia, schizo-affective disorder, bipolar disorder, recurrent major depression, or borderline personality disorder), 2. with at least two years of major role dysfunction, 3. having medium to high functioning and free from serious role dysfunction for the past three months, 4. being unemployed 5. willing to give informed consent, 6. lack of memory impairment, learning disorder and neurological or medical illness that would preclude working or participating in research interviews, 7. completed primary education, and 8. had a desire to work.

In addition, the Global Assessment of Functioning Scale (GAF) and Brief Psychiatric Rating Scale (BPRS) were used to assessment baseline functioning of the recruited subjects by our employment specialists. After description and explanation of the study to the subjects, written informed consent was obtained.

Comparison of the demographic data of the ISE, IPS and TVR participants are summarized in Table 2. There was no significant difference among the three groups in gender (X^2 =0.23, *df*=2, *p*=0.89), educational level (X^2 =9.40, *df*=6, *p*=0.15),

diagnosis (X^2 =0.26, *df*=2, *p*=0.88) and employment history (X^2 =3.78, *df*=2, *p*=0.15). Also, there was no significant difference among the three groups in their age (*F*=1.79, *df*=2, 160, *p*=0.17). Scores of GAF showed the there was no significant difference in the functioning of participants among three group at baseline (*F*=1.73, *df*=2, 160, *p*=0.18). However, there was a significant difference in the psychiatric symptoms between the three groups (*F*=9.94, *df*=2, 160, *p*<0.001). As reviews (33, 41) reported that psychiatric symptomatology is not a significant predictor of future work performance, we think that this would not have confounded our study. In addition, we set the psychiatric symptoms as a co-variate when conducting data analysis to control the effect of this variable.

Table 2

Demographic Characteristics of Participants I

	ISE (*n*=52)	IPS (*n*=56)	TVR (*n*=55)	X^2	*df*	*p*-value
Gender						
Male	26 (50.0%)	29 (51.8%)	26(47.3%)	0.23	2	0.89
Female	26 (50.0%)	27(48.2%)	29(52.7%)			
Education						
Below Primary	0(0%)	0(0%)	1(1.8%)			
Primary	4(7.7%)	3(5.4%)	8(14.5%)			
Secondary	42(80.8%)	42(75.0%)	43(78.2%)	9.40	6	0.15
Post - Secondary	6(11.5%)	11(19.6%)	3(5.5%)			
Diagnosis						
Schizophrenia	41 (78.8%)	42(75.0%)	43(78.2%)	0.26	2	0.88
Others	11 (21.2%)	14(25.0%)	12(21.8%)			

Employment History						
Yes	47(90.4%)	48(85.7%)	53(96.4%)	3.78	2	0.15
No	5(9.6%)	8(14.3%)	2(3.6%)			

Table 2

Demographic Characteristics of Participants II

	ISE (*n*=52)		IPS (*n*=56)		TVR (*n*=55)			
	M	*SD*	*M*	*SD*	*M*	*SD*	*F*-value	*p*-value
Age	33.52	9.08	33.77	9.12	36.35	7.61	1.79 (2, 160)	0.17
BPRS	6.12	3.36	6.00	3.07	10.05	8.16	9.94 (2, 160)	<0.001
GAF's score	69.69	7.94	66.61	7.57	68.96	11.21	1.73 (2, 160)	0.18

3.2 OUTCOME MEASURES

Medical history, work history, and demographic data. A demographic data sheet was developed and pilot-tested with psychiatric patients. Medical history referred to previous admision to medical hospitals and work history referred to

whether the participants had been employed for three months or more (Tsang, Ng, Ip & Mann, 2002).

Employment Outcome Checklist (EOC). This checklist was designed to assess the outcomes for the participants in relation to their employment status. The checklist included the number of job interviews attended, the number of jobs taken, the reasons for job loss, the degree of job satisfaction and the quality of relaltionships with colleagues. This was also used to assess employment outcome of participants including type, duration, wage of employment, etc. (Tsang & Pearson, 2001)

The Chinese Job Stress Coping Scale (CJSC). The scale consists of 21 items and the respondent has to rate each item using a five-point response scale ranging from 1 (hardly ever do this) to 5 (almost always do this). This was to assess the coping strategies of participants to cope with stress related to their jobs.

The Chinese Job Termination Checklist (CJTC). This checklist was to collect information regarding their job terminations (Mak, Tsang & Cheung, 2006). CJTC is culturally relevant and content validity is high after the review by the expert panel. The most relevant use of the checklist is to assess the reasons for job terminations among the people with severe mental illness participating in the supported employment program.

GAF Scale (44) and *Brief Psychiatric Rating Scale (BPRS).* These two scales were used to identify study participants.

All the outcome measures were assessed by a trained, blind, and independent assessor who was a certified occupational therapist. GAF Scale (American Psychiatric Association, 1994) and Brief Psychiatric Rating Scale (BPRS) acted as the baseline measures were rated by the corresponding employment specialists of the participants.

3.3 INTERVENTION PROTOCOLS

The IPS participants joined the IPS program (Drake & Becker, 1996) which is a specific model of supported employment in helping people with SMI to obtain competitive employment described earlier in the introduction. We adhered as much as we could to the seven principles of supported employment described above. We used the fidelity scale (Bond et al., 2002) to monitor our adherence throughout the study period. The protocol of IPS included: 1. Referral; 2. Building a relationship; 3. Vocational assessment; 4. Individual employment plan; 5. Obtaining employment; and 6. Follow-along support.

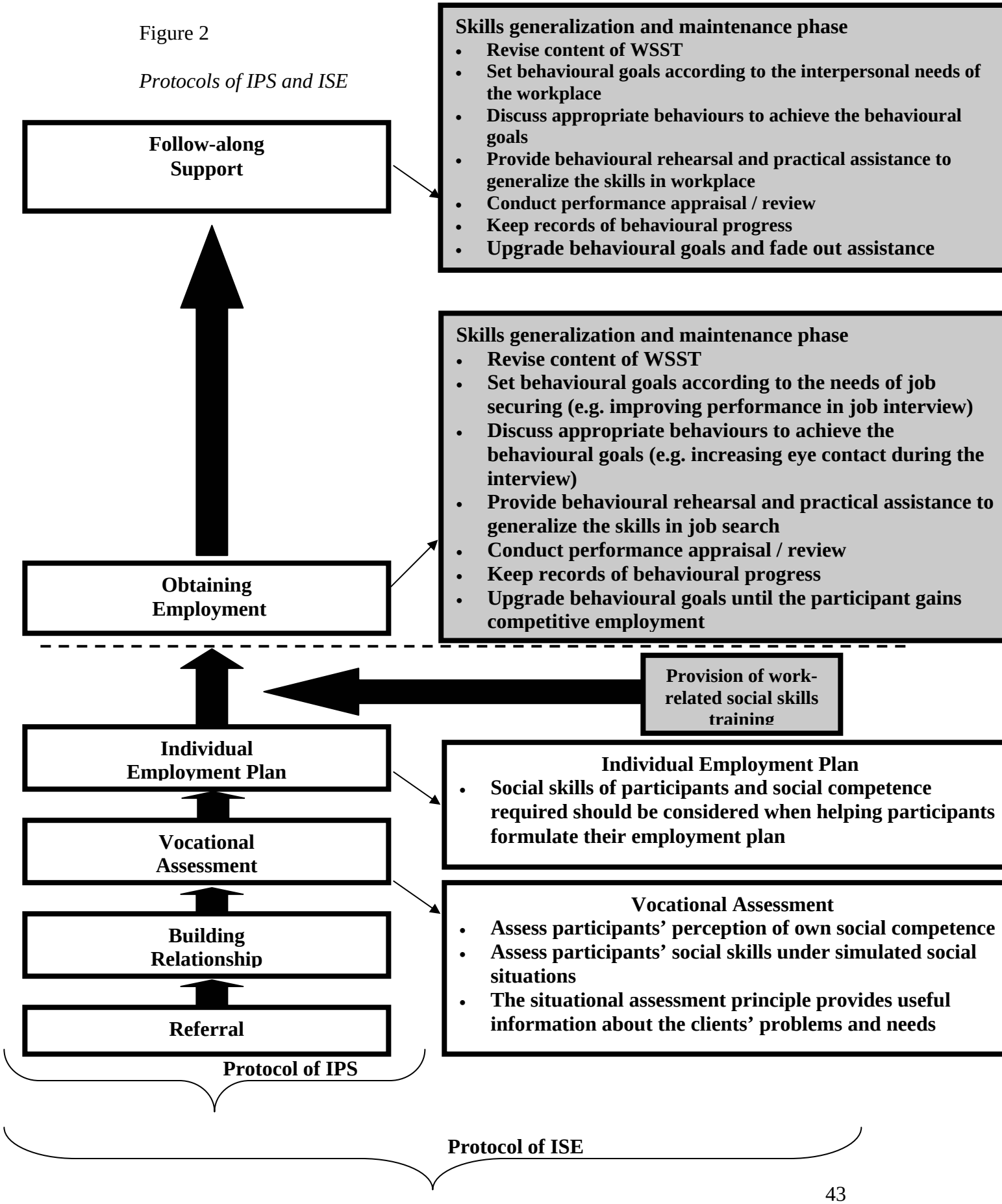
The ISE participants joined the ISE program which refers to the protocol integrating IPS and WSST. It consists of IPS and work-related social skills training (WSST). The actual implementation followed the steps of a typical IPS program. The seven principles of IPS also applied to this intervention. The main difference

with IPS is that it is enhanced by WSST which consists of a structured program to teach participants basic social and social survival skills, interview skills, and communicating skills with supervisors, co-workers and customers. The social skill training was provided to ISE participants before the step of obtaining employment. Apart from the WSST program, generalization of social skills learned was strengthened in the follow-along support. Special emphasis was given to providing assistance to the participants in order to develop and maintain good and cooperative working relationships with their fellow worker, supervisors and customers.

Each of the employment specialists received the same proportion of participants in IPS and ISE programs to minimize the variance of service delivery by different employment specialists in two programs. The frequency of contacts and hence the amount of support received by the participants from the employment specialists was the same between the IPS and ISE groups following the operational principle set out in the fidelity scale. Figure 2 illustrates the similarities and differences of the IPS and ISE protocols to be compared in our study.

Figure 2

Protocols of IPS and ISE



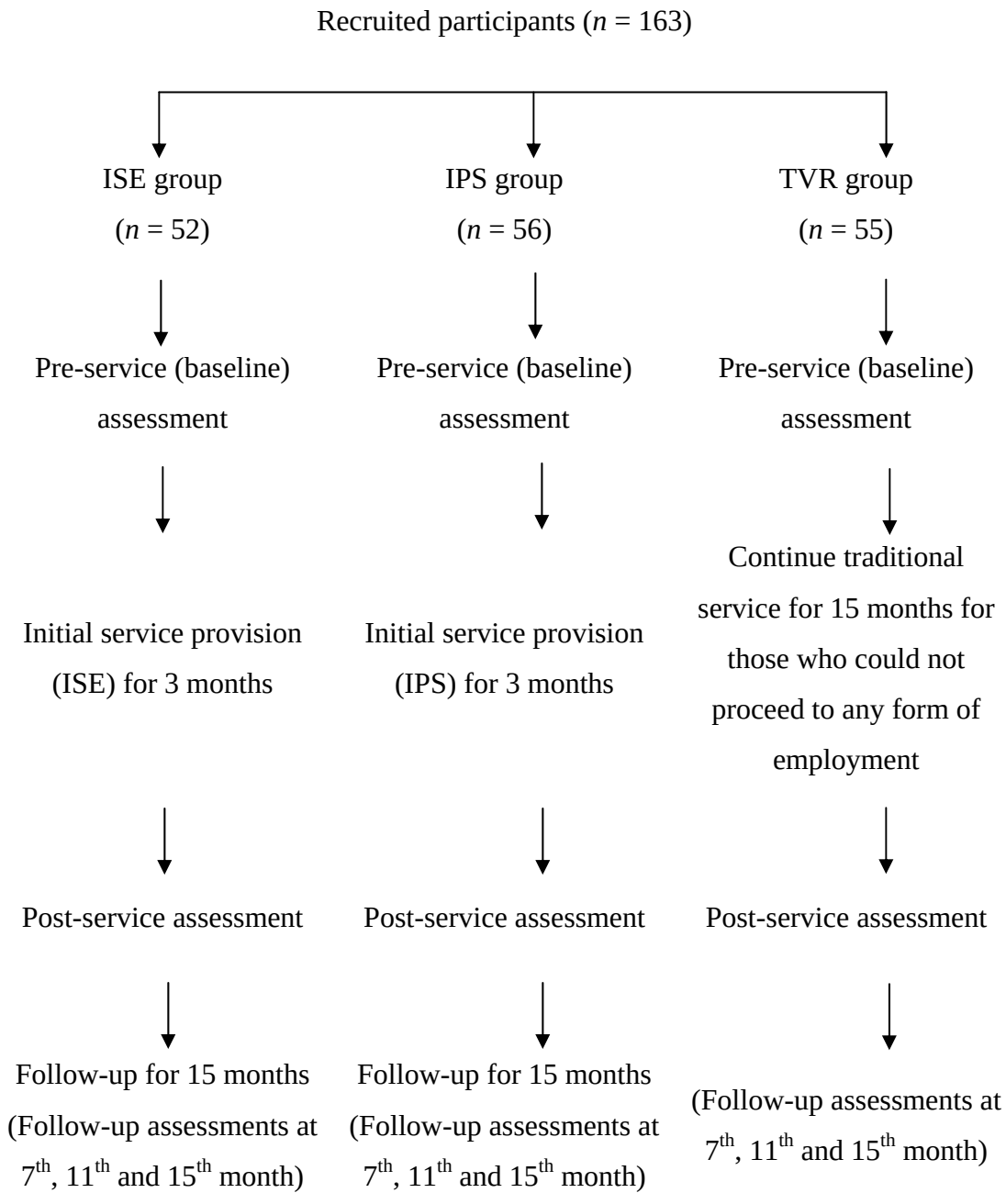
The TVR participants received traditional services which involved comprehensive vocational assessment and pre-vocational training. Having established their baseline performance, pre-vocational training was provided to the participants in various work groups in the sheltered environment. The workshop-based training aimed at training the specific work skills and work habits of the participants for later upgrading to sheltered workshop or competitive employment.

3.4 DATA COLLECTION

Counting from the commencement of the three-month initial service provision, the whole program lasted for 15 months for the ISE and IPS groups. TVR group received traditional vocational service for 15 months altogether to mirror the other two groups. Assessments using instruments listed previously were conducted at a different times which were before after the completion of the three-month service, and follow-up at 7^{th}, 11^{th} and 15^{th} month. Figure 3 summarizes the data collection protocol.

Figure 3

Data Collection Protocol



3.5 SERVICE TEAM AND QUALITY ASSURANCE

Altogether we involved three registered occupational therapists as employment specialists to implement either the ISE or IPS protocol with an average staff to participants ratio of approximately 1:27. Social workers were also involved in the ISE and IPS groups who acted as the case managers and referred cases to our study and assisted in managing the participants in other social and family issues other than the employment aspect. Multi-disciplinary meetings involving the psychiatrist, rehabilitation managers, case workers and social workers were organized regularly to discuss and review individualized treatment plans of the participants including the employment plan taken care by the employment specialist. Prior training to the employment specialists as to the IPS protocol was provided at two levels. Theoretical aspects were trained by the Gary Bond when he visited Hong Kong in 2001 and who acted as adviser to this study . Practical aspects were trained by Robert Drake and Debbie Becker when they visited Hong Kong in 2002. The training lasted for a week that focused on the practical implementation including the principles and protocol of the supported employment approach. Only the most experienced occupational therapist in the team attended the training. We used the on-the-job training for the other two employment specialists who joined our study a few months after the beginning of the study when the caseload of the senior employment specialist approached saturation. The on-the-job training was provided by the experienced occupational therapist and the researcher. The researcher had years of experience providing supported employment services in Hong Kong and had attended a two-week training program at the New Hampshire Dartmouth

Psychiatric Research Center in 2001 with a learning focus on implementing IPS. The training on ISE was also given by the researcher who developed WSST and thus the ISE. The 15-item supported employment fidelity scale (Bond et al., 2002) was adopted to ensure the quality of our supported employment service. The principle investigator met with the employment specialists at the 1st, 4th, 9th, and 15th month of the study and used the scale to check for the adherence of the two protocols to the principles of supported employment. The score of IPS ranged from 65 to 68 out of 75 (87% to 91%) and ISE ranged from 64 to 67 out of 75 (85% to 89%). On the whole, are considered a good supported employment implementation indicated by the scale. An independent and trained assessor who was a registered occupational therapist but blind to the research design and group status of the participants adminstered the assessment after the completion of the three-month service and all follow-up assessments at the 7th, 11th and 15th month. For the TVR group, services were provided by the service centers by their staff members that also included occupational therapists and social workers.

3.6 PROGRAM ATTRITION

Among the 163 participants randomly assigned to three different vocational programs, 153 (93.9%) completed the 3-month service, 144(88.3%) completed the 7-month service, 132(81.0%) completed the 11-month service, and 127(77.9%) completed the entire 15-month service. Some 96.2% of ISE participants received first three months of initial service, 92.3% received service in until 7th month, 86.5% in the until 11th month, and 82.7% until 15th month. As to the IPS group, 91.1%

participants received first three months of initial service, 82.1% received service up to 7th month, 76.8% up to 11th month, and 73.2% up to 15th month. For the TVR group, 94.5% participants received the first 3-month service, 90.9% received service up to 7th month, 80.0% up to 11th month, and 78.2% up to 15th month. Chi-square analyses indicated that the attrition rate did not differ significantly across the three groups at 3rd month (X^2 =1.28, df=2, p=0.53), 7th month (X^2 =3.234, df=2, p=0.20), 11th month (X^2 =1.72, df=2, p=0.42), and 15th month (X^2 =1.41, df=2, p=0.49). On the whole, 127 participants completed all vocational follow-up data constituting an actual attribution rate of 22.1%. The reason of the slightly higher attribution compared to overseas study was mainly due to the availability of more traditional vocational training centers such as sheltered workshops. Some participants quitted the study simply because they preferred a more secure working environment in sheltered workshops instead of experiencing the risk of not being able to get a job under the rapid job search paradigm in our interventions.

3.7 DATA ANALYSES

Pre-service assessment scores and the demographic variables were compared by ANOVA or Chi-square to detect significant differences among the participants of the three groups. Repeated measures ANCOVA with post hoc analysis was used to determine if significant difference occurred among the three groups at baseline and different stages of the follow along period. Psychiatric symptom was treated as a co-variate when we conducted repeated measures ANCOVA to control the potential confounding effect of this variable. We defined success in competitive employment

as having continuously worked in the job for two months or above with at least 20 hours per week. Also, we defined job tenure as the longest duration in terms of the number of weeks of participants worked for the same job.

The baseline of the vocational outcomes including employment rate, job tenure, number of job terminations and salary was operationally defined as the assessment at the 7th month after they joined the program. Intent-to-treat analyses of the employment rates were conducted on the entire randomized sample (*n*=163). Similarly, analyses of other employment outocmes were conducted on the sample who completed all assessemnts. These analyses included those who dropped out from the research program. Chi-square was used to analyse the employment rates of the three groups at different times levels, job nature, types of jobs, and reasons of job terminations. Exact logistic regression was used to compare the employment rates among three groups at different time intervals. For the Job Stress Coping Score, comparisons were only made between IPS and ISE groups because only a few subjects in the TVR were employed. In addition, concerning salary and number of terminations, analysis was based on the participants who were employed and completed all assessments at 7^{th} month, 11^{th} month, and 15^{th} month. Analyses were based on an alpha value of 0.05 with Bonferroni adjustments applied to all post-hoc comparisons.

CHAPTER 4 RESULTS

4.1 EMPLOYMENT RATES

During the follow-up period, 41 (78.8%) of ISE participants obtained fully competitive or partially competitive employment, compared with 30 (53.6%) of IPS participants and 4 (7.3%) TVR participants competitively employed after 15 months' follow-up service. Table 3 summarizes relevant statistics of the employment rates and other vocational outcomes among the three groups. Exact logistic regression showed that employment rates of ISE group were significantly higher than TVR at 7^{th} month follow up ($p<0.001$), 11^{th} month ($p<0.001$), and 15^{th} month ($p<0.001$). Similarly, employment rates of IPS group were significantly higher than the TVR group at 7^{th} month ($p=0.003$), 11^{th} month ($p<0.001$), and 15^{th} month ($p<0.001$). More importantly, more participants in the ISE group were employed than the IPS group at 7^{th} month follow up ($p=0.003$), 11^{th} month ($p=0.002$), and 15^{th} month ($p<0.001$).

Figure 4

Employment Rates of ISE group, IPS Group and TVR Group at Three Different Stages

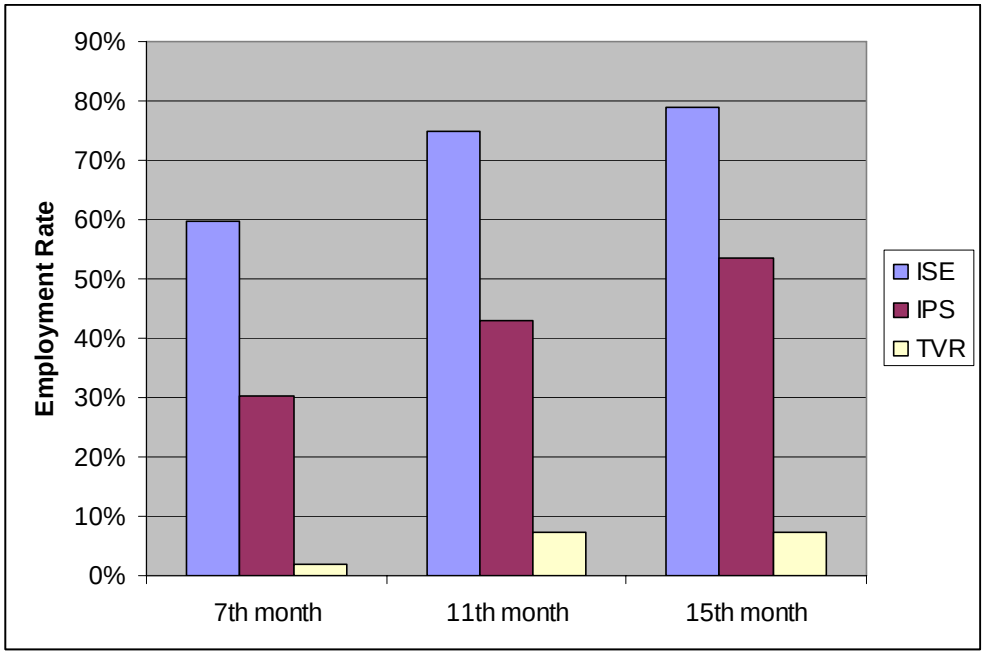


Table 3

Vocational Outcomes of ISE, IPS and TVR Participants

	ISE (*n*=52)	IPS (*n*=56)	TVR group (*n*=55)	X^2	*df*	*p*-value
Employment rate at 7th month	31/52 = 59.6%	17/56 = 30.4%	1/55 = 1.8%	42.47	2	<0.001
Employment rate at 11th month	39/52 = 75%	24/56 = 42.9%	4/55 = 7.3%	48.23	2	<0.001
Employment rate at 15th month	41/52 = 78.8%	30/56 = 53.6%	4/55 = 7.3%	56.10	2	<0.001
Job nature	Full time: 20/36 = 55.6% Part time: 16/36 = 44.4%	Full time: 7/18 = 38.9% Part time: 11/18 = 61.1%	Full time: 3/3 = 100%	4.19	2	0.12
Type of jobs	Fully competitive: 27/36 = 75.0% Not fully competitive: 9/36 = 25.0%	Fully competitive: 17/18 = 94.4% Not fully competitive: 1/18 = 5.6%	Fully competitive: 3/3 = 100%	3.81	2	0.15

Table 3

Vocational Outcomes of ISE and IPS Participants (cont)

Job title	Cleaning worker: 9 Shop assistant: 5 Delivery worker: 4 Sales: 4 Security guard: 3 Waiter: 3 Clerk: 2 Office assistant: 2 Healthcare Assistant: 1 Airport assistant: 1 Leaflet distributor: 1 Construction site worker: 1	Clerk: 4 Cleaning worker: Private tutor: 3 Security guard: 2 Shop assistant: 2 Delivery worker: 1 Office assistant: 1 Waiter: 1 Healthcare assistant: 1	Security guard: 1 Sales: 1 Shop assistant: 1

*

Exact logistic regression of employment rates between ISE group and TVR: at 7th month (β=4.38, *df*=1, *p*<0.001), at 11th month (β =3.54, *df*=1, *p*<0.001), and at 15th month (β =3.86, *df*=1, *p*<0.001). Exact logistic regression of employment rates between IPS group and TVR: at 7th month (β =3.16, *df*=1, *p*=0.003), at 11th month (β =2.26, *df*=1, *p*<0.001), and at 15th month (β =2.26, *df*=1, *p*<0.001). Exact logistic regression of employment rates between ISE group and IPS: at 7th month (β =1.22, *df*=1, *p*=0.003), at 11th month (β =1.29, *df*=1, *p*=0.002), and at 15th month (β =1.60, *df*=1, *p*<0.001).

4.2 JOB CHARACTERISTICS

As shown in Table 3, the three groups did not differ in the job nature and types of jobs. Twenty ISE participants (55.6%), seven IPS participants (38.9%), and three TVR participants (100%) worked full-time (X^2 =4.19, *df*=2, *p*=0.12). Twenty seven ISE participants (75.0%) and 17 IPS participants (94.4%) worked for jobs that were fully competitive in the job market. The rest of the employed ISE and IPS participants worked for jobs that were partially competitive. These included jobs referred by the vocational rehabilitation centres. But they still needed to attend a job interview and competed with others who were mentally ill. Their co-workers in the workplace were people without mental illness. Additional chi-square analysis indicated that there was no significant difference in the types of competitive employment, either fully competitive or partially competitive, between ISE and IPS (X^2 =3.007, *df*=1, *p*=0.083). Salaries of the ISE and IPS participants (*F*=1.19, *df*=2, 21, *p*=0.32) did not show significant difference. The majority of the participants worked for the jobs that were at entry-level such as security guard, cleaning worker, office assistant, and delivery worker.

4.3 JOB TENURE

Table 4 summarizes data pertaining to job tenure of the participants. Group x time interaction effect showed overall significance among three groups (*F*=11.94, *df*=4, 244, *p*>0.001). Post hoc comparison showed that ISE group had longer job tenure than the TVR group between 7^{th} month and 11^{th} month (*p*<0.001) and between 7^{th} month and 15^{th} month (*p*<0.001). Comparison between IPS and TVR

groups followed the same pattern. ISE group had longer job tenure than IPS group (p<0.001) between 7th and 15th month.

Figure 5

Job Tenure of ISE Group, IPS Group and TVR Group at Three Different Stages

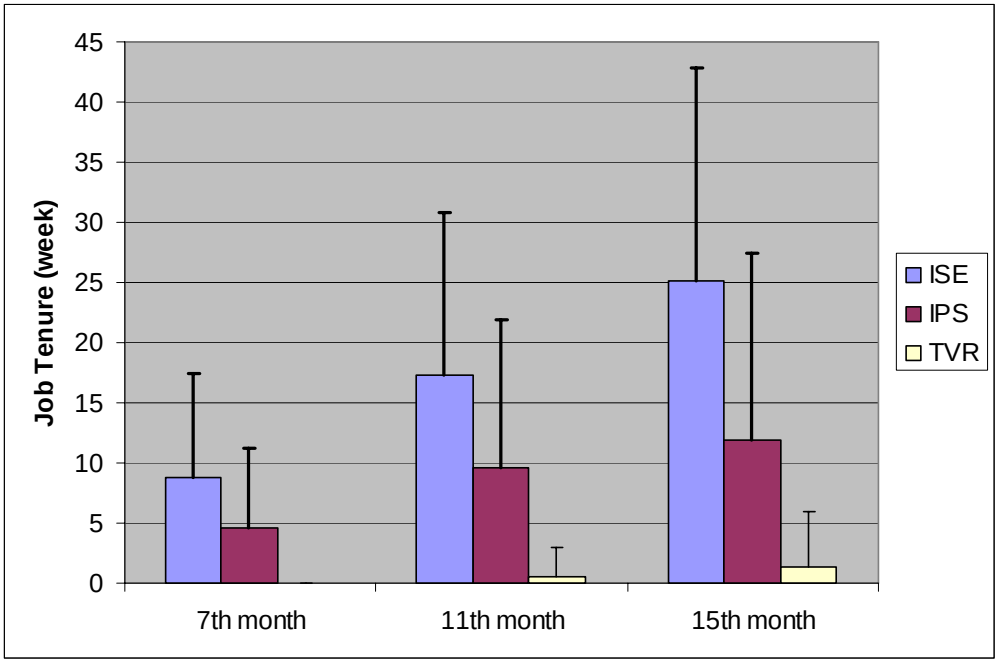


Table 4

Comparison of Job Tenure, Salary and the Number of Job Terminations among ISE, IPS and TVR Groups

	Follow up assessment at 7th month						Follow up assessment at 11th month						Follow up assessment at 15th month						Repeated Measured ANCOVA*	
	ISE		IPS		TVR		ISE		IPS		TVR		ISE		IPS		TVR			
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*-value	*p*-value
Job tenure (week)	8.79	8.70	4.54	6.63	0.00	0.00	17.30	13.53	9.66	12.18	0.58	2.332	25.12	17.67	11.95	15.51	1.05	4.50	11.94 (4, 244)	<0.001
Salary (dollars)	24.37	10.06	25.85	11.59	n/a	n/a	24.08	10.99	20.99	7.61	n/a	n/a	24.49	11.27	21.19	10.98	n/a	n/a	1.19 (2, 21)	0.32
No. of job termination (time)	0.34	0.48	1.18	1.47	n/a	n/a	0.28	0.45	1.47	2.07	n/a	n/a	0.34	0.81	1.76	1.92	n/a	n/a	1.57 (2, 42)	0.22

* Psychiatric symptom was treated as a co-variate in repeated measures ANCOVA

4.4 JOB TERMINATION

There was no significant significance in the number of unwanted job terminations between ISE group and IPS group (F=1.57, df=2, 42, p=0.22) although there was a trend that ISE participants had less job turnover rate than IPS participants. The number of job terminations for the ISE group was 0.34 ± 0.81 times and for the IPS group was 1.76 ± 1.92 times at 15th month of follow up service. As to the reasons of job terminations, 25.0% of IPS participants were related to interpersonal problems such as poor relationship with supervisor and co-workers whereas only 7.7% of ISE participants were due to interpersonal problems. The results indicated that ISE participants had less interpersonal difficulties in the workplace than IPS participants which resulted in job terminations although significant difference was not achieved at this stage. Table 5 summarizes the reasons of job terminations of the participants

Table 5

Comparison of Reasons of Job Terminations among ISE, IPS and TVR Groups

	ISE	IPS	TVR group	X^2	*df*	*p*-value
Reason of job termination	(*n*=26)	(*n*=40)	(*n*=1)			
Interpersonal problems	7.7%	25%	0%	3.43	2	0.18
Non-interpersonal problems	92.3%	75%	100%			

4.5 JOB STRESS COPING

No significant difference was found between the ISE and IPS group in the scores of Job Stress Coping Scale thoughout the study (F=1.10, df=4, 78, p=0.36).

Figure 6

Scores of Job Stress Coping Scale of ISE Group and IPS Group at Five Different Stages

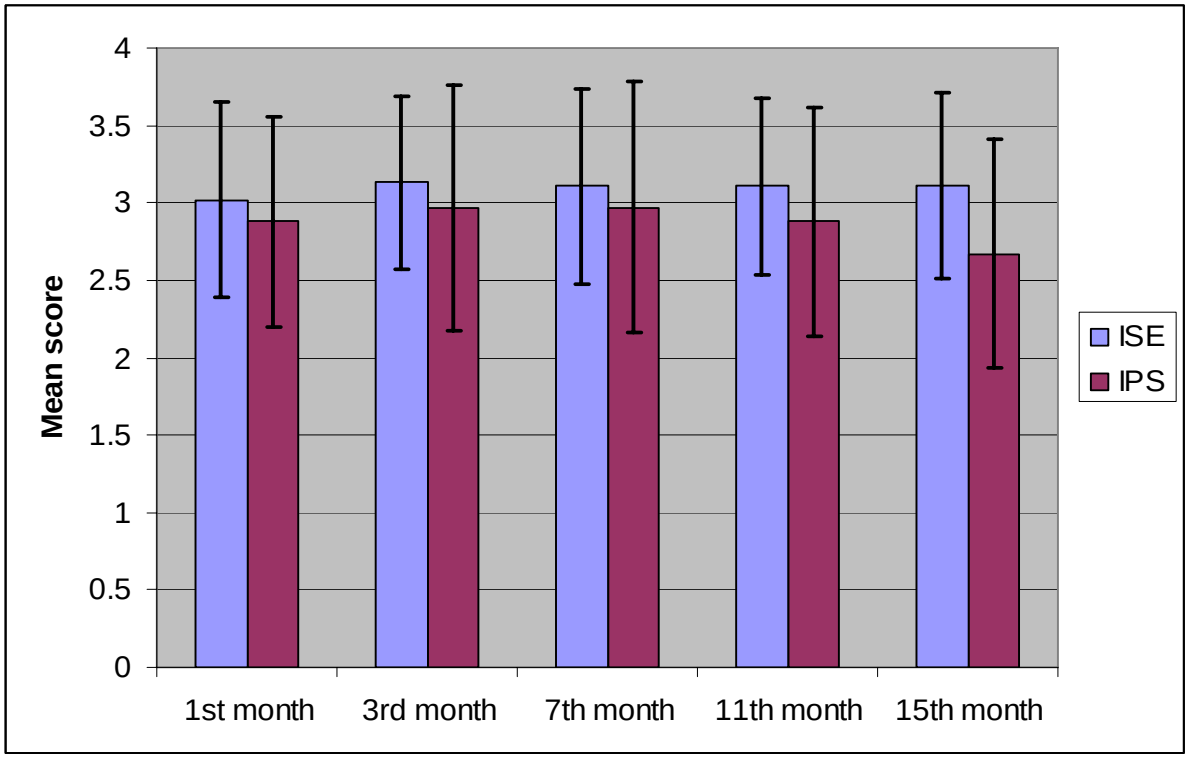


Table 6

Comparison of scores of Job Stress Coping Scale among ISE, IPS and TVR Groups

	Initial assessment				2nd assessment				3rd assessment			
	ISE		IPS		ISE		IPS		ISE		IPS	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
JSCS	3.02	0.63	2.88	0.68	3.13	0.56	2.97	0.79	3.11	0.63	2.97	0.81

	4th assessment				5th assessment				Repeated Measured ANCOVA*	
	ISE		IPS		ISE		IPS			
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*-value	*p*-value
JSCS	3.11	0.57	2.88	0.74	3.11	0.60	2.67	0.74	1.10 (4, 78)	0.36

* Psychiatric symptom was treated as a co-variate in repeated measures ANCOVA

CHAPTER 5 DISCUSSION

5.1 EMPLOYMENT RATES OF DIFFERENT VOCATIONAL SERVICES

Numerous empirical reports on supported employment demonstrated enhanced vocational outcomes of individuals with severe mental illness in United States and other western countries. However, not much is known about the program outcomes and applicability in Asia and Chinese communities. In a randomized controlled trial of supported employment in Hong Kong which was implemented at more or less the same time with the existing study, Wong and colleagues (Wong, Chiu, Tang, Chiu & Tang, 2006) found significantly better competitive employment outcomes for IPS clients, compared to controls referred to the usual vocational rehabilitation system. This research group obtained a 12-month competitive employment rate of 64%. Similar finding was obtained in this study that participants in both supported employment programs (ISE and IPS) had significantly higher employment rates than TVR participants. In addition, one of the major findings of the existing study was that individuals with severe mental illness participating in ISE program were more likely to achieve employment than both IPS and TVR participants over the 15-month study period (78.8% vs 53.6% vs 7.3%).

The employment rates of IPS participants and TVR group in our study were in line with the mean for the 9 RCTs, which is 56% (Crowther, Marshall, Bond & Huxley, 2001). The results of the present study and Wong's study mutually supported each other to provide evidence to the effectiveness of IPS for use with

severe mental illness in Hong Kong and probably mainland China which had 12 million of people with severe mental illness (Chen, 1995). These findings are increasingly relevant to the contemporary China as it is rapidly transforming from planned to market economy (Siu, Tse, Yau, Lee & Chow, 2004; Tong, 2006). It is supported by a recent study on concerns of employers in Beijing towards hiring individuals with mental illness. The employers' concerns share a lot of commonalities with Hong Kong and Chicago such as the applicants' general appearnace, qualifications and skills, and social competence (Tsang et al., under review). Recently, there are many in-service trainings provided by the companies in China in order to enhance the core skills of the employees (http://www.greenhr.gov.cn/zxzn/zyfl_3.htm#). There are eight types of core skills in total that a capable employee should have. Actually, good communication skills and good working relationship with co-worker are two of the core skills held by the competent employees. It is believed that the competitiveness of the company would increase if the core skills of the employees are improved. This phenomenon is again consistent to the earlier studies which persistently demonstrated that social competence is the most significant predictor of vocational success among individuals with psychotic disorder (Anthony and Jensen, 1984; Hand & Tryssenaar, 2006; Tsang, Lam, Ng & Leung, 2000).

The employment rates of TVR participants in the present study was 7.3% which was in line with previous studies that only a very small proportion of participants in sheltered workshop program could move to competitive employment

(Young, 2001). A local survey reported that only 2.5% of people in sheltered workshops could obtain open employment (Social Welfare Department, 1990). TVR does not aim at rapid job search but follows the traditional, stepwise, "train then place" approach that involves a lengthened prevocational training (Twamley, Jeste & Lehman, 2003). As a result, most TVR participants spent a substantial amount of time in prevocational training and their employment rates were so low compared to ISE and IPS group after 15 months service provision.

Our finding added to the existing evidence as to the effectiveness of IPS program to improve the employment rate of people with severe mental illness (Bond, 2004), including those in China and Asia, which shows that IPS is more effective than traditional model to help people with SMI get employment. What is more encouraging is that we obtained an impressive employment rate of 78.8% among the ISE participants after 15 months of service which was significantly higher than the IPS and TVR participants respectively. This contributes to the evidence that IPS enhanced with SST could further increase the employment rate of those with SMI to a higher level.

5.2 SIGNIFICANCE OF SOCIAL SKILLS IN JOB SEARCH

As social competence is one of the most significant predictors of employment outcome among individuals with mental illness (Tsang, Lam, Ng & Leung, 2000), it makes perfect sense that more ISE participants with special training in their job seeking social skills gained competitive employment than IPS

participants. We envisaged that the major factor contributing to the more successful job finding process among the ISE participants was the improved job interview skills necessary for getting a job. These skills were delivered to the participants during the skills training session, and practiced with them again before they attended the real job interviews (Tsang, 2003; Tsang & Pearson, 1996). Our employment specialists performed an appraisal with them after each job interview hoping that they were able to perform better in the next job interview even though they failed this time. Actually, Tsang (2001) studied the vocational outcome of WSST with three months follow up and reported the result of 46.2 % employment rate in Hong Kong. As both IPS and WSST module were demonstrated to be able boost up the employment rate of people with severe mental illness, it is consistent with our hypothesis that ISE programme which is a combination of IPS and WSST would result in higher employment rate. On the other hand, we conceived that another factor that might have contributed to the more successful job finding process among the ISE participants was the improved motivation to work after attending the WSST. Tsang (2001) reported that the technical guidance during follow up services after WSST might help participants defuse their potential difficulties and obstacles that reduce their job seeking attempts. Case Vignette one illustrates how ISE helped the participants finding a job.

Case Vignette one. Mr. Lee was a 23 years old gentleman who suffered from schizophrenia. He had low work motivation and adopted a sick role. Mr. Lee's social network was limited because he tended to stay at home. He got exhausted easily and looked very tired. He claimed that he was very weak. He felt dizzy and

headache all the time. Mr. Lee worked as waiter and warehouse worker in the past. Most of his jobs were introduced by his family or friends.

During the initial interview, Mr. Lee looked very tired throughout the interview. Although he was polite in answering questions, Mr. Lee was very passive and unable to initiate and continue a conversation. Lack of eye contact and low voice volume were noted which made him look unconfident. Mr. Lee has difficulty in job finding because of his poor interview performance. He was then referred to the supported employment team where we conducted this study and attended the WSST group as the beginning of the ISE program.

At the beginning of the WSST group, Mr. Lee was rather asocial and did not join the discussion with other participants. He tended to close his eyes and sit back. Social skills and job interview skills were taught in the group. As Mr. Lee appeared to be quite isolated, he was first encouraged to observe the performance of other participants so as to acquire the skills. After several lessons, Mr. Lee was required to practice the job interview skills acquired with other participants. Appreciation and encouragement were given to him afterwards. Mr. Lee seemed to be quite happy with that. He was asked to identify the proper skills and manner required in the job interview. Also, importance of work was discussed in the group. This meant to help him establish the motivation for learning the skills. Finally, Mr. Lee was required to undergo a guided practice and implement the job interview skills learnt in the group. Performance was reviewed afterwards. Homework was given which required him to

brainstorm the possible interview questions that would be asked by the interviewer and his answer to those questions. His homework was evaluated and discussed. Mr. Lee role-played the job interview with the therapist using the questions and answers from his homework. Feedback was given. Obvious improvement in both his basic social skills and job interview skills were shown.

After the WSST group, Mr. Lee underwent rapid job searching with the employment specialist. After job matching, he would like to find a job as a waiter. Before attending the job interview, Mr. Lee was nervous about that. The employment specialist encouraged him to get well-prepared before attending the interview and revised the content of job interview skills with Mr. Lee again. Also, he was asked to review the possible interview questions that would be asked. The employment specialist noticed that his lack of eye contact and insufficient volume of voice might be his impediment to successful job interview. The employment specialist discussed with Mr. Lee and then set a goal for him to improve the performance of interview. And the goal could be achieved by maintaining sufficient eye contact and voice volume so as to increase his self-confidence to the employer. Through several individual role play exercises, Mr. Lee was more confident and familiar with the interview process. The first interview ended in failure. Mr. Lee was required to review his performance to the employment specialist. Feedback was given based on his illustration. Mr. Lee was encouraged to elaborate more on his answers during the interview instead of giving too simple answers. After having such an experience, Mr. Lee was less anxious and more skillful about the job

interview. He was able to generalize the skills to his second job interview and finally excelled himself in the jog interview and got the job as a waiter.

5.3 JOB TENURE OF THREE VOCATIONAL SERVICES

Supported employment has become an evidence-based treatment for vocational rehabilitation of persons with severe mental illness (Bond, 2004). Although almost half of the participants of supported employment are placed in competitive jobs, the remaining half of the employed participants lost their jobs in six months after job placement (Lehman et al., 2002). Additionally, participants in IPS program and TVR program got similar job tenure (131 days vs 139 days) in Wong's study (2006). For that reason, vocational researchers (McGurk, Mueser, Pascaris, 2005; Kopelwicz, Liberman & Zarate, 2006; Wallace & Tauber, 2004; Wallace, Tauber & Wilde, 1999) attempted to improve job tenure of participants of supported employment by improving their social competence in the workplace. Perhaps the most exciting finding of our study was that the job tenure of ISE participants was significantly longer than IPS participants towards the end of the follow-up period of our study. Our hypothesis was confirmed by these findings that ISE was superior to IPS in helping people with mental illness to keep their jobs.

5.4 SIGNIFICANCE OF SOCIAL SKILLS IN JOB MAINTENANCE

Many researchers have addressed the importance of interpersonal skills in job retention. As discussed by Tsang (2003), social skills play a critical role in the process of job search and retention among people with severe mental illness. In the

study of Lehman et al. (2002), there was no between-group difference in the length of employment among the IPS participants and comparison. Lehman hypothesized that impaired interpersonal skills played a significant role in job retention problems. Strengthening the social skills and competence along with other evidence-based services can reduce and compensate for the adverse effects of stressful events and social maladjustment of individuals with severe mental illness (Kopelwicz, Liberman & Zarate, 2006). The major difference between ISE and IPS was that the social functioning of participants was enhanced in the ISE programme by a social skill training module (WSST) with generalization throughout the entire period of the ISE programme. Work related social skills necessary to retain a job including maintaining a good working relationship with supervisor and co-workers were delivered to the participants (Tsang & Pearson, 1996). These social skills equipped them to cope with specific situations in the workplace that might cause problems such as handling interpersonal conflicts at work. When individuals have been equipped with skills to deal with stressful life event, that is the interpersonal difficulties in the present study, they are more competent in solving problems and challenges that arise in their lives (Ventura & Liberman, 2000). Moreover, follow-along support of ISE program focused on the relationship with their supervisor or co-workers and emphasis was given to the generalization of social skills they learnt. The results of this study supported our view that improving the social functioning of people with mental illness could lengthen their job duration.

5.5 ENHANCING GENERALIZATION

Recent advance in skills training is the generalization of training by special adaptations and applications into the community (Kopelwicz, Liberman & Zarate, 2006.). The major difference between ISE and IPS was that the social functioning of participants was enhanced in the ISE program by a social skills training module and the efforts targeted at skills generalization throughout the entire follow along process. Job retaining social skills including maintaining a good working relationship with supervisor and co-workers were delivered to the participants (McGurk, Mueser, Pascaris, 2005). These social skills equipped them with ways to cope with interpersonal conflicts in the workplace that might cause participants to leave the jobs. Follow along support of ISE program focused on improving and maintaining relationship with their supervisor or co-workers and emphasis was given to the generalization of social skills they learnt. Generalization of social skills training must address more directly the factors in the environment (Kopelwicz, Liberman & Zarate, 2006). It occurs when participants are provided with opportunities, encouragement, and reinforcement for practicing the skills in specific situations. Whenever ISE participants had problems with their supervisor or co-workers, the employment specialist reminded them of the social skills learned in the work related social skills training program. The employment specialist set behavioural goal together with the participants. The behavioural goal was specific and related to the workplace of the participants such as building up relationship with supervisors and co-workers when they started a new job, or maintaining and improving social relationships in workplace if they had conflicts or interpersonal difficulties. The specialist discussed with the participants appropriate behaviours in dealing with the

social problems using a social problem solving approach, performed behavioural rehearsal, and provided practical assistance to the participants so that they could bridge the gap in generalizing the skills to their workplace. Both the behavioural goal and the specific behaviours were recorded to remind them of the goals and behaviours. The specialist met them regularly and reviewed their performance. If the participants could handle the interpersonal difficulties successfully, reinforcement was given as encouragement. At the same time, the specialist discussed with the participants for upgrading of the behavioural goals. On the other hand, if they could not handle the problems well, the specialist provided further assistance and practiced with them again until they were able to deal with the work situations. Case Vignette two illustrates how ISE helped participants improve the relationship with supervisor.

Case Vignette two. Mr. Chan was a 44 years old gentleman who suffered from paranoid schizophrenia since 2000. He worked in several different fields, such as secondary teacher, laboratory assistant and sales. He started investing the properties and stock markets in 1995. However, he lost all his money from 1997-1999. He then worked as a financial analyst. He quitted quickly due to high stress level and the demanding nature of the job and began to feel being persecuted. He complained that the telephone line was being hooked by triad society members. Auditory hallucination with abusive content by triad members was noted. Finally, he was admitted to psychiatric hospital due to psychotic relapse and high anxiety level.

After three months of hospitalization, Mr. Chan's condition became more stable and he was less troubled by the paranoid idea. He started to seek job in different fields but in vain. He had been unemployed for over two years and finally sought help from our supported employment service.

During initial interview, Mr. Chan seemed to be functioning well with appropriate dressing and social manner, but he was a bit suspicious when the employment specialist asked about his previous paranoid ideas. As Mr. Chan was a university graduate, his expectation on his career was quite high. After discussed the job preferences and his working ability with employment specialist, he agreed to set a lower job searching target and aimed at finding job as an office assistant. Mr. Chan had been unemployed for over 2 years so he was quite anxious about the job interview. Role-play on job interview was performed so as to refresh and familiarize his skills. Mr. Chan's overall job interview skills were good with proper manner. After several weeks, Mr. Chan was employed as an office assistant. The follow-up period was then started. Mr. Chan complained that his supervisor asked him to do some personal tasks which were not his responsibilities (e.g. bank transfer of personal events, sending personal letters and parcels, table booking, etc). Also, he regarded his supervisor as a picky person and the schedule of his job was grueling which made him stressful. He was very nervous during work and made many mistakes. Due to this poor relationship between Mr. Chan and his supervisor, he kept minimal contact with his supervisor and occasionally responded to his supervisor in an impolite way.

The employment specialist revised the content of interaction with supervisor which Mr. Chan had learnt in the WSST before. The employment specialist discussed with Mr. Chan about the possible reasons of the high demand of the supervisor using a social problem solving approach. He was encouraged to seek help whenever there were problems. Based on the problem faced by Mr. Chan in the working environment, the employment specialist and Mr. Chan discussed and then set a goal for him to improve the working relationship with his boss. Also, the employment specialist discussed the appropriate behaviours to achieve the goal including giving appropriate response to supervisor and seeking help from others politely when necessary. Role play exercises of the negotiation skills were performed. During the role-play, Mr. Chan appeared to be quite rude and defensive when negotiating his work duties with the supervisor. Feedback was given and proper communication skills were taught. Through guided practices and feedback given afterwards, he was able to perform the social skills well with confidence. Follow-up support was continued about the performance of Mr. Chan in real situations. Finally, Mr. Chan got along well with the supervisor. Mr. Chan had worked in that company for more than 9 months till now and was satisfied about the job.

5.6 JOB TERMINATONS

We investigated the reasons of job terminations of both IPS participants and ISE participants and the advantages of the social skills training approach along with

supported employment could be identified. . As to the reasons of job terminations 25.0% of IPS participants were related to interpersonal problems. The result was consistent with Becker et al.'s study (Becker et al, 1998) that a lot of job problems pertained to interpersonal difficulty. However, we could see that only 7.7% of ISE participants terminated their jobs because of social problems in workplace. Although significant difference in terms of interpersonal reasons between IPS and ISE was not achieved at this stage, we observe the obvious trend that ISE participants had less interpersonal difficulties in the workplace than IPS participants.

5.7 JOB CHARTERISTICS

For other vocational outcomes including job titles, job nature and the salary, no significant results were found. This may be due to the fact that our participants were expected to find competitive employment in the open market. Jobs suitable for both IPS and ISE groups seemed to be more or less the same. Consistent with other studies of supported employment (Lehman et al., 2002; Wong, Chiu, Chiu, Tang, 2001), most of the jobs obtained by the participants of both supported employment programs were unskilled and entry level jobs such as cleaning workers, delivery workers and security guards. Similarly, number of participants of both programs obtained part-time jobs did not differ significantly. Since participants of both programs worked for similar types of jobs in the open market, it makes sense that no significant differences could be found in job titles and salary.

5.8 IMPLICATIONS

5.8.1 CLINICAL EFFORTS

Application of supported employment is becoming more and more popular in psychiatric rehabilitation in Hong Kong. However, the programs being adopted in the clinical settings may not follow the exact IPS model which was developed specifically for people with severe mental illness. The current supported employment service in Hong Kong may not be able to follow all principles of IPS model. For example, the participants may receive a lengthened prevocational training before the step of obtaining employment. Also, the follow along period of the service in Hong Kong is much shorter than the requirements of IPS which is unlimited follow up support. We suggest that it is essential to follow all the principles of IPS as each principal serves as a foundation for the evidence-based guidelines to provide effective supported employment services (Bond, 2004). To achieve this, a standardized 15-item fidelity scale was developed for quality assurance (Bond et al., 2002). We therefore suggest that the clinical settings in Hong Kong which provide the supported employments service should adopt the fidelity scale to ensure the quality of their supported employment service.

IPS model is an evidence-based practice that has demonstrated to be consistently more effective than traditional stepwise approach of vocational rehabilitation for people with severe mental illness to achieve competitive employment. Our finding added to the existing evidence as to the effectiveness of IPS program to improve the employment rate and its application in Hong Kong.

Meaningful employment is essential to the recovery process for persons with mental illness (Leete, 1992) and open employment is view as the most important outcome indicator of psychiatric services to show that people with severe mental illness have competence to contribute themselves and integrate into community (Cook & Razzano, 2000; Tsang & Chen, in press; Tsang, Chan & Bond, 2004; Yip & Ng, 1998). It is very clear that the outcome of traditional stepwise approach of vocational program with prolonged prevocational trainings is not satisfactory. Also, literature shows that further enhancements should be incorporated with the IPS model in order to achieve better outcomes particularly in job tenure. This study empirically shows the effectiveness of the supported employment programs especially if combined with a work-related social skills training. We believe that the implementation of the ISE program in clinical settings would improve the chances of our consumers in obtaining employment and lengthen their job tenure. Since ISE program is a newly developed vocational service in Hong Kong, a comprehensive training regarding how to run the ISE program is essential to the mental health professionals in order to introduce and facilitate the implementation of ISE program effectively. The practical implementation including the principles and protocol of the ISE program would be delivered to the clinicians working in the psychiatric rehabilitation. Apart from providing training to the clinicians, a teaching package is now being progressed for teaching and training purpose in PolyU in order to facilitate the transfer of clinical skills to the undergraduate and post-graduate students. The recovery process of people with severe mental illness would be

facilitated if additional resources may be allocated to organizations providing psychiatric rehabilitation services.

Furthermore, we believe that the application of ISE program is not limited in Hong Kong. Most of the participants of supported employment obtained the entry-level jobs. In a cross cultural study that identifying the employers' concerns about hiring people with psychotic disorder for entry-level jobs in US and China, the employers expressed that communication skills was an important quality when they consider hiring a staff (Tsang et al., under review). Similar findings were obtained in previous studies that social competence is the most significant predictor of vocational success among individuals with psychotic disorder (Anthony and Jensen, 1984; Hand & Tryssenaar, 2006; Tsang, Lam, Ng & Leung, 2000). In addition, comparatively more employers in Hong Kong and Beijing were concerned about poor work attitudes and behaviors of people with psychotic disorder and how they would affect colleagues and supervisors then western societies (Tsang et al., under review). Therefore, the ISE program has great potential to be applied in clinical and community settings in mainland China as interpersonal skills in workplace is a major concern of employer in China. The effectiveness of IPS program to improve the employment rate and its generalizibility in Hong Kong have been demonstrated by the present and Wong's study (2006). It implies that the IPS programs can be widely used in Chinese communities. Additionally, the WSST program used in this study was developed in Hong Kong which is therefore suitable and relevant to Chinese culture. It makes sense that the application of ISE program is not limited in

Hong Kong but also in Mainland China. If feasible, the 12 million of people with SMI in China may benefit from our study. The protocol of ISE is clearly showed in Figure 2 and it can serve as a reference for developing supported employment program in China. If the evidence-based ISE program is widely used in the organizations providing psychiatric rehabilitations services, their chance of being gainfully employed will be enhanced. We may liaise with mental hospitals in major cities such as Beijing of China and provide a comprehensive training to the clinicians in order to introduce and facilitate the implications of ISE program in China effectively. Also, we may invite the clinicians working in the psychiatric field in China to Hong Kong and arrange a clinical visit to them regarding how to run the ISE program in real situations.

Besides application in Chinese communities, we believe that ISE program has great potential to be applied in western countries. The development of ISE program was based on IPS program which was developed in US and most of the previous IPS studies were conducted in both rural and urban communities of US (Bond, 2004). In addition, evidence showed that the results of IPS studies can be generalized to populations in western countries (Bond, Dietzen, McGrew & Miller, 1995; Drake et al, 1999). ISE essentially uses the same seven principles from original IPS (Drake & Becker, 1996) with the inclusion of work related social skills training to maximize the vocational outcomes for the people with severe mental illness. On the other hand, the application of the work related social skills training is not limited in Hong Kong only. In US, a large proportion of research supports the

efficacy and effectiveness of social skills training for schizophrenia (Kopelowicz, LIberman, & Zarate, 2006). A resent study conducted in Germany found that a work-related social skills training is more effective in improving the social functioning at follow-up and achieving better outcomes in psychopathology for people with schizophrenia than unspecific social skills training (Roder, Muller & Zorn, 2006). Furthermore, researchers have begun to investigate the outcomes of adapted forms of social skills training as a component of comprehensive services in new clinical settings (Kopelowicz, Liberman, & Zarate, 2006). The findings of our study provide evidence that social skills training and supported employment are compatible and could produce better vocational outcomes. As the social skills training has already been well received by psychiatric settings in western countries, and IPS model is widely used in various geographic regions (Bond, 2004), we conceive that ISE model which is an integration of IPS model and social skills training could can be generalized to populations in western countries.

Since ISE program is a newly developed vocational service and is still not widely used at the moment, teaching packages with specific guidelines of implementation and demonstrations are now being progressed for teaching and training purpose in University and to the clinicians working in the psychiatric field who have little experience in providing supported employment. The teaching package aims at developing an innovative online service to facilitate transfer clinical skills to the university students in the provision of supported employment service for people with severe mental illness. The teaching package will focus on a strong case

management element in which the students currently lack skills The teaching package will also assist students in developing case management concepts and techniques via demonstration with case vignettes which include interview skill, treatment planning, and handling techniques of problematic clients. An online ISE teaching package will be created that the university students can learn the case interview and case management skills of people with sever mental illness with the simulated scenarios at different levels of complexity and challenge. The online package will specifically involve video interviews and supported online case-based simulations to allow students to explore scenarios relating to dealing with people with severe mental illnesses during initial interview and follow along support.

5.8.2 IMPLICATIONS FOR FURTHER RESEARCH STUDIES

Although the effectiveness of supported employment in returning people with severe mental illness to competitive employment has been supported by numerous randomized controlled trials for the past decade, it does not show much advantage in job tenure when compared with people receiving traditional vocational services. The recent trend of research is therefore to develop various forms of enhanced supported employment by psychosocial rehabilitation services to further improve its vocational outcomes (Bond, 2004). Cognitive training (CT) integrated into SE program is shown to have enhanced effects. People receiving both CT and SE were more likely to produce desirable outcomes than those received SE alone over a year (McGurk, Mueser & Pascaris, 2005). Meanwhile, there are some attempts which failed to show significant outcomes with enhancements of supported

employment (Cook et al., 2005; McFarlane, 2002; McFarlane et al., 2000). Further efforts to examine what and why particular enhancements would lead to improved IPS outcomes should continue.

The findings of our study provide evidence that supported employment and skills training are compatible and could produce better vocational outcomes. Numerous studies have suggested that stepwise approaches with prolonged prevocational trainings do not lead to better employment outcomes (Bond, Dietzen, McGrew & Miller, 1995). However, this study suggests that some training programs are integrative with the supported employment model. It is increasingly more obvious that there is a need to develop strategies for enhancing the effectiveness of supported employment model. McGurk et al. suggests that it is feasible to implement cognitive training (CT) in the context of supported employment. Our study suggests that integrating a work-related social skills training with clearly spelt out generalization strategies into the more embracing integrated supported employment approach could further enhance the effectiveness of the supported employment model. We suggest that additional research is still in need to explore other psychosocial and vocational services that would be incorporated into the integrated model.

Work in an important part of the lives of many people. Apart from generating income, work is associated with positive mental health as it provides opportunities for skills development and social contacts and participation in the

community (Ruesch et al., 2004). Meaningful employment is believed essential to the recovery process for persons with mental illness (Leete, 1992). Persons with severe mental illness are known to have a diminished self-concept and a distorted sense of self-efficacy (Davidson & Strauss, 1992). Strong's study (1998) found that the act of working is powerful on creating and facilitating change in a person's self-concept and self efficacy. The participants of Strong's study with work experience redefined themselves that they were competent through daily and persistent efforts at work. Strong (1988) concluded that one way to facilitate recovery is by helping the persons with mental illness to link up the meaningful occupations and to experience challenges and successes in the context of meaningful work. Markowitz (2001) highlighted the significant effect of employment on the recovery process of persons with mental illness. The study of Markowitz (2001) suggested that treatment programs that are effective in developing social and vocational skills may introduce a dynamic process of recovery. A higher level of social well-being including employment would be achieved by improving social and vocational skills. And the promoted social well-being would result in an increase of sense of esteem and efficacy, which in turn decreases the symptoms of illness and leads to further increase of social well-being. Unfortunately, most studies emphasized on identifying the relationship between supported employment and the vocational outcomes while limited studies aimed at exploring effects of SE on participants in their self-esteem, control in psychiatric symptoms, quality of life and psychosocial wellbeing (Bond et al., 2001; Bryson, Lysaker & Bell, 2002; Chiu & Tsang, 2002; Dawis, 1987; Fabian, 1992; Hackett & Betz, 1995; Marwaha & Johnson, 2005; Mowbray, et al, 1995;

Scheid & Anderson, 1995; Tsang, 2003; Wong, Chiu, Chiu & Tang, 2001). It is therefore recommended to examine the effect of supported employment services, both ISE and IPS on participants' self-efficacy and self perceived wellbeing.

Regarding the duration of follow-up period of the supported employment programs, although the results of vocational outcomes including the employment rates and job tenure of the follow-up study are positive, the 15-month follow up may not be enough to determine if the long term effect of the programs. In addition, the complication for exploring the non-vocational outcomes of vocational programs is that the time for building up the effect is much longer (Greden, 1998). Given this important fact, we are not surprised to see that studies to address the long term non-vocational outcomes of supported employment are even more limited. The duration of follow-up period in our study was 15 months which might be too short to observe the non-vocational outcome and it was not possible to observe the long term vocational outcome of the supported employment program. It is therefore necessary to carry out more extensive follow-up studies investigating the long term effects of the ISE model on both vocational and non-vocational outcomes.

5.9 LIMITATIONS

Despite encouraging results from the present study, there are limitations that need to be considered. First, one of the screening criteria is that the participants were medium to high functioning. We fully understand that this does not concur with the essential IPS principles. Nevertheless, it is the policy set out by the government in

Hong Kong. The organizations where we recruited the participants need to follow this regulation. Second, we included a category so-called “partially competitive” which is also counted as competitive employment. Although this may not the same how successful competitive employment is counted when similar studies are conducted in western societies. However, as supported employment is still at the early stage of development in Hong Kong and employers in Chinese communities are more stigmatizing than western society which is demonstrated by our study (Tsang et al., under review), we included this special category as indication of successful employment to better reflect the Asian context. This in fact is also officially recognized by the Health and Welfare Bureau of the government of the HKSAR. Despite these operational limitations, the findings of this study laid the foundation for future research for the Integrated Supported Employment approach (Tsang, 2003). Another limitation in our study was the period of our study was 15 months which might be too short to observe the long term vocational outcomes and it was therefore not possible to observe the long term outcomes of the supported employment programme. Fortunately, a long tem study funded by Health and Health Service Fund which in fact is the extension of this study is now underway by the same team in the Department of Rehabilitation Sciences at The Hong Kong Polytechnic University to investigate the long term vocational and non-vocational outcomes of supported employment in Hong Kong.

5.10 CONCLUSION

We developed the service protocol of ISE by merging IPS and WSST with funding from this study. Meanwhile, the RCT proposed was completed with success. The hypothesis that ISE program would augment the vocational outcomes of supported employment in terms of employment rate and job tenure was confirmed in this study. This paved a solid foundation for the extension study being at the moment.

CHAPTER 6 APPENDIX

6.1 CONTRIBUTION TO THE STUDY

MPhil study is part of a series of funded projects on supported employment with my supervisor as the Principal Investigator. Although I am not the original designer of the study, I have made significant contributions to the study. The followings summarize my main contributions to the study:

1. My primary contribution to the present study was to figure out the ISE implementation protocol and facilitate its implementation throughout study. As the generalization of skills the participants learnt in WSST to workplace is so important, I developed the standardized procedures of skills generalization during obtaining employment and follow along support which is presented in Figure 2. The procedures of skills generalization include 1. Revising the content of WSST, 2. Setting behavioural goals according to the interpersonal needs of the workplace, 3. Discussing appropriate behaviours to achieve the behavioural goals, 4. Providing behavioural rehearsal and practical assistance to generalize the skills in workplace, 5. Conduct performance appraisal / review, 6. Keeping

records of behavioural progress, and 7, Upgrading behavioural goals and fade out assistance. Moreover, I designed a record system for checking skills generalization. The behavioural goal, any appropriate behaviours, and ratings of the performance during role play exercise and real situation were written down on a record card. The record card was small in size and portable so that the participants may put it in their pocket or carry it in their purse. In this way, they could may revise the appropriate behaviours to achieve the goal and review their progress anytime during the day.

2. I also have played a role in quality assurance of the implementation protocol. As mentioned previously, there was a 15-item fidelity scale to ensure the quality of supported employment service (Bond et al., 2002). I met with my supervisor at the 1^{st}, 4^{th}, 9^{th}, and 15^{th} month of the study and used the scale to check for the adherence of the two protocols to the principles of supported employment.
3. I was responsible to train the independent and blind assessor how to conduct the assessments appropriately.
4. After collecting the data, I performed data analysis using appropriate statistical analysis for different outcome measures in liaison with my supervisor and the departmental biostatistician.
5. Moreover, I have made significant contributions in writing up the report including introduction, methodology, results, discussion and conclusion.

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THE HONG KONG
POLYTECHNIC UNIVERSITY
香港理工大學

有關資料

研究計劃題目:

精神病人綜合輔助就業與傳統輔助就業的認識和比較: 三年跟進研究的長遠成果

誠邀閣下參加由香港理工大學康復治療科學系副教授曾永康博士負責執行的研究計劃。

此項研究的目的是發展和評估支持就業草案，此草案旨在幫助香港精神病人在本地勞工市場尋找工作和維持就職。 你的參與包括:

1. 於訪問中提供個人資料
2. 准許研究員從本人的檔案中得到有關資料
3. 參與爲期三個月指定的治療草案
4. 參與爲期三十六個月每四個月一次由合資格的研究員引導的訪問評估

這項測試不會引起任何不適的感覺。凡有關閣下的資料均會保密, 一切資料的編碼只有研究人員知道。

閣下享有充分的權利在研究開始之前或之後決定退出這項研究, 而不會受到任何對閣下不正常的代遇或責任追究。

如果閣下有任何對這項研究的不滿,請隨時親自或寫信聯絡與香港理工大學人事倫理委員會秘書(地址:香港理工大學人力資源辦公室M1303室轉交)。

如果閣下想獲得更多有關這項研究的資料,請與曾永康博士,電話2766 6750。

謝謝閣下有興趣參與這項研究。

曾永康博士

THE HONG KONG
POLYTECHNIC UNIVERSITY
香港理工大學

參與研究同意書

研究計劃題目:

精神病人綜合輔助就業與傳統輔助就業的認識和比較: 三年跟進研究的長遠成果

本人 _____ 同意參加由香港理工大學康復治療科學系副教授曾永康博士負責執行的研究項目。

我理解此研究所獲得的資料可用於未來的研究和學術交流。然而我有權保護自己的隱私,我的個人資料將不能洩漏。

我對所附資料的有關步驟已經得到充分的解釋。我理解可能會出現的風險。我是自願參與這項研究。

我理解我有權在研究過程中提出問題,并在任何時候決定退出研究而不會受到任何不正常的待遇或責任追究。

參加者姓名 _____.

參加者簽名 _____.

父母姓名或監護人姓名 (如需要) _____.

父母或監護人簽名 (如需要) _____.

研究人員姓名 _____.

研究人員簽字 _____.

日期 _____.

THE HONG KONG
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香港理工大學

INFORMATION SHEET

TITLE OF RESEARCH PROJECT:

Understanding and Comparing Long Term Outcomes of Individual Placement and Support (IPS) and Integrated Supported Employment (ISE) Service Protocols for Individuals with Mental Illness: A Three Year Follow-up Study

You are invited to participate on a study conducted by Dr. Hector Tsang, who is an Associate Professor the Department of Rehabilitation Sciences in The Hong Kong Polytechnic University.

The aim of this study is to develop and evaluate the long-term outcome of a supported employment protocol that can be used to help persons with mental illness in Hong Kong to get and hold a job in the local job market. Your involvement includes:

1. Providing relevant information via interviews
2. Allowing researchers to obtain relevant information from my case file.
3. Taking part in a treatment protocol as assigned which lasts for three months.
4. Being assessed via interviews conducted by qualified research assistant at four months interval for a period of 36 months.

The above procedures should not result in any undue discomfort. All information related to you will remain confidential, and will be identifiable by codes only known to the researcher.

You have every right to withdrawn from the study before or during the measurement without penalty of any kind.

If you have any complaints about the conduct of this research study, please do not hesitate to contact Mr. Eric Chan, Secretary of the Human Subjects Ethics Sub-Committee of The Hong Kong Polytechnic University in person or in writing (c/o Human Resources Office in Room M1303 of the University).

If you would like more information about this study, please contact Dr. Hector Tsang on tel. no. 2766 6750.

Thank you for your interest in participating in this study.

Dr. Hector WH Tsang
Principal Investigator

THE HONG KONG
POLYTECHNIC UNIVERSITY
香港理工大學

CONSENT TO PARTICIPATE IN RESEARCH

TITLE OF RESEARCH PROJECT :

Understanding and Comparing Long Term Outcomes of Individual Placement and Support (IPS) and Integrated Supported Employment (ISE) Service Protocols for Individuals with Mental Illness: A Three Year Follow-up Study

I _____ hereby consent to participate in the captioned research conducted by Dr. Hector Tsang, Associate Professor, Department of Rehabilitation Sciences, The Hong Kong Polytechnic University.

I understand that information obtained from this research may be used in future research and published. However, my right to privacy will be retained, i.e. my personal details will not be revealed.

The procedure as set out in the attached information sheet has been fully explained. I understand the benefit and risks involved. My participation in the project is voluntary.

I acknowledge that I have the right to question any part of the procedure and can withdraw at any time without penalty of any kind.

Name of participant _____

Signature of participant _____

Name of Parent or Guardian (if applicable) _____

Signature of Parent or Guardian (if applicable) _____

Name of researcher _____

Signature of researcher _____

Date _____

Appendix 2: Medical History, Work History, and Demographic Data

PERSONAL DATA SHEET

Interviewer: _____

Date of interview: _____

Office Use

Participant Number : ( ) 1_____

I. Personal Particulars

1. Name: _____

2. Sex: ☐ Male ☐ Female 2_____
(Please ▲ appropriate box)

3. Age: _____ 3_____

4. Educational level:

☐ Below primary
☐ Primary
☐ Secondary
☐ Post-secondary 4_____
(Please ▲ appropriate box)

II. Medical and Occupational History

5. Diagnosis: _____ 5_____

6. Have you ever been admitted to psychiatric hospital?
(Please ▲ appropriate box)

☐ Yes
☐ No 6_____
(If the answer for question 6 is "yes", go to question 7. If "no", go to question 8.)

7. List the number of admissions: _____ 7_____

8. Have you ever been employed in a job longer than three months? (Please ▲ appropriate box)

Office Use

☐ Yes
☐ No

8_____

(If the answer for question 8 is "yes", please go to question 9. If "no", then go Section III.)

9. Details of previous occupation

9.1 If yes, for how many jobs? _____

9_____

9.2 Please list the duration the longest three jobs:

1st: _____ (months)

10_____

2nd: _____ (months)

11_____

3rd: _____ (months)

12_____

10. When is your last employment?

Date: _____

13_____

Employment Outcome Checklist

A. Demographic Data

1. Name: _____

2. Gender: _____ 3. Age _____

4. Diagnosis: _____ 5. Marital Status: _____

	No formal education	Primary	Secondary	Post Secondary
6. Education Level				

B. Employment Status

1. Previous Experience in open employment: _____ year _____ months

	Open Employment	Supported Employment	Sheltered Workshop	Transient Employment	Unemployed *** (go to Section D directly)
2. Present Employment Status: (Put a ✓ in the appropriate box)					

C. For those who are employed

(including open employment, supported employment, sheltered workshop and transient employment)

1. Employment Details

1.1 Job Title: _____

1.2 Job Nature (e.g. duties and responsibilities, etc.) _____

_____

1.3 Income: $ _____ per month

1.4 Working hours per day: _____ Hour

1.5 Absenteeism: _____ days per month

	Very Satisfied	Satisfied	Average	Unsatisfied	Very Unsatisfied
1.6 Overall satisfaction with present Job/ Training (Put a ✓ in the appropriate box)					

1.7 Source of Satisfaction/dissatisfaction: _____
(e.g. income, companion, esteem, occupation etc)

1.8 Employment History in the last month

	Job/training	period	earning	Reason for Change/quit Job
i.				
ii.				
iii.				

1.9 Length of time spent in job search: _____ (no. of weeks)

1.10 No. of attempts leading to successful job search : _____

2. Social Support

	Once per week	1 - 3 times per week	4-5 times per week	6-7 times per week	more than 7 times
2.1 Frequency of social activities (Put a ✓ in the appropriate box)					

2.2 Nature of social activities : _____

	Very Good	Good	Average	Poor	Very Poor
2.3 Relationship with colleagues (Put a ✓ in the appropriate box)					

	Very Good	Good	Average	Poor	Very Poor
2.4 Relationship with					

supervisors

(Put a ✓ in the appropriate box)

3. Work Stress

	Yes	No
3.1 Do you feel any work stress in the last month? (Put a ✓ in the appropriate box)		

	Very high	High	Moderate	Mild
3.2 Degree of Work stress: (Put a ✓ in the appropriate box)				

3.3 Source of Work Stress: _____

(e.g. workload, discrimination form colleagues, demand on output etc)

D. For those who are unemployed

1. Employment Details

1.1 Employment History in the last month

	Job/training	period	earning	Reason for Change/quit Job
i.				
ii.				
iii.				

	Very Satisfied	Satisfied	Average	Unsatisfied	Very Unsatisfied
1.2 Overall satisfaction with previous Job(s)/ Training (Put a ✓ in the appropriate box)					

1.3 Source of Satisfaction/ dissatisfaction: _____

1.4 No. of attempts in job search

2. Social Support

	Once per week or less	1 - 3 times per week	4-5 times per week	6-7 times per week	more than 7 times
2.1 Frequency of					

social activities

(Put a ✓ in the appropriate box)

2.2 Nature of social activities : _____

	Very Good	Good	Average	Poor	Very Poor
2.3 Relationship with colleagues of previous job/s (Put a ✓ in the appropriate box)					

	Very Good	Good	Average	Poor	Very Poor
2.4 Relationship with supervisors of previous job/s (Put a ✓ in the appropriate box)					

Date of assessment: _____ *Assessor:* _____

--- End ---

應付工作壓力量表

下列項目是應付工作壓力的方法，想想你如何應付工作壓力，然後按下列準則回答每個項目。

1=極少這樣做
2=間中這樣做
3=較常做
4=經常做
5=幾乎天天做

項目	1	2	3	4	5
1. 與上司聚在一起討論工作上遇到的壓力					
2. 與有關人士(上司以外)傾談					
3. 嘗試視這種情況爲有機會去學習和發展新技能					
4. 告訴自己我會把事情辦到對自己有利					
5. 爲我的工作付出更多時間和精力					
6. 想想在這種情況下我能找到的挑戰					
7. 嘗試做得更快捷和有效率					
8. 盡我最大的努力去達成我認爲對我的期望					
9. 向有能力爲我做一點事的人尋求幫助					
10. 向一位沒有牽涉在這種情況內的人徵詢意見，他不一定有權力，但能幫助我想出辦法應付對我的期望					

項目	1	2	3	4	5
12. 如果我能夠的話，避免牽涉在這種情況內					
13. 告訴自己由時間去改變或改善這情況					
14. 嘗試不要靠近這類情況					
15. 提醒自己工作並不代表一切					
16. 預測負面的結果以作最壞打算					
17. 盡量將自己與弄致這種情況的人分開					
18. 嘗試不去管它					
19. 盡我所能恰當地脫離這種情況					
20. 接受這種情況因爲我做什麼都不能改變它					
21. 以我希望做的訂立優先次序					

姓名: _____

日期: _____

Appendix 5: The Chinese Job Termination Checklist (CJTC)

日期: _____
康復者編號: _____
面談員:_____

結束工作面談 – 康復者

謝謝你抽空與我會面，我會問你一些關於結束工作的問題，請作實回答，一切資料將保密處理。

A.1. 你的職銜是甚麼? _____

A.2. 工作在何時結束? _____

A.3. 工作結束的性質是甚麼? (請圈出合適者)

1. 辭職　　2. 解僱　　3. 裁員
4. 工作期滿　　5. 調派其他工作　　6. 其他_____

我會讀出一些一般人結束工作的原因，請告訴我哪些與你的情況有關，並加以解釋。 (請選出適用的原因，並填上解釋。)

A.4.1. ___ 就學。請解釋:

A.4.2. ___ 開始另一份工作。請解釋:

A.4.3. ___ 照顧家庭。請解釋:

A.4.4. ___ 交通方面的困難。請解釋:

A.4.5. ___ 工作時間編排的問題。請解釋:

A.4.6. ___ 工作環境的問題。請解釋:

A.4.7. ___ 失去福利。請解釋:

A.4.8. ___ 精神病的問題。請解釋:

A.4.9. ___ 身體健康的問題。請解釋:

A.4.10. ___ 濫用藥物的問題。請解釋:

A.4.11. ___ 缺乏特別工作技能。請解釋:

A.4.12. ___ 缺乏興趣。請解釋:

A.4.13. ___ 上班不準時 / 缺席。請解釋:

A.4.14. ___ 個人儀容 / 衛生的問題。請解釋:

A.4.15. ___ 精力不足。請解釋:

A.4.16. ___ 工作質素的問題。請解釋:

A.4.17. ___ 工作數量的問題。請解釋:

A.4.18. ___ 與其他員工相處的問題。請解釋:

A.4.19. ___ 與上司相處的問題。請解釋:

A.4.20. ___ 缺乏監督。請解釋:

A.4.21. ___ 缺乏就業員工的支援。請解釋:

A.4.22. ___ 其他原因。請解釋:

A.5. 你結束工作的基本原因是甚麼?

A.6. 有甚麼因素可改善這一次的工作經驗?

A.7. 請問有沒有其他意見?

本問卷到此爲止, 謝謝你的參與。

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Appendix 7: Brief Psychiatric Rating Scale (BPRS)

Brief Psychiatric Rating Scale (Overall & Gorham)

Patient _____ Rater _____

0= not present 1= very mild 2= mild 3= moderate 4= mod. severe 5= severe 6= extremely severe

		1( ) date	2( ) date	3( ) date	4( ) date
1	somatic concern -preoccupation with physical health, fear of physical illness, hypochondriacs	☐	☐	☐	☐
2	anxiety - worry, fear, overconcern for present and future	☐	☐	☐	☐
3	emotional withdrawal - lack of spontaneous interaction, isolation, deficiency in relating to others	☐	☐	☐	☐
4	conceptual disorganization - thought processes confused, disconnected, disorganized, disrupted	☐	☐	☐	☐
5	guilt feelings - self-blame, shame, remorse for past behaviour	☐	☐	☐	☐
6	tension - physical and motor manifestations or nervousness, overactivation, tension	☐	☐	☐	☐
7	mannerisms and posturing - peculiar, bizarre, unnatural motor behaviour (except tic)	☐	☐	☐	☐
8	grandiosity - exaggerated self-opinion, arrogance, conviction of unusual power or abilities	☐	☐	☐	☐
9	depressed mood - sorrow, sadness, despondency, pessimism	☐	☐	☐	☐
10	hostility - animosity, contempt, belligerence, disdain for others	☐	☐	☐	☐
11	suspiciousness - mistrust, belief others harbor malicious or discriminatory intent	☐	☐	☐	☐
12	hallucinatory behaviour - perceptions without normal external stimulus correspondence	☐	☐	☐	☐
13	motor retardation - slowed, weakened movements or speech, reduced body tone	☐	☐	☐	☐
14	uncooperativeness - resistance, guardedness, rejection of authority	☐	☐	☐	☐
15	unusual thought content - unusual, odd, strange, bizarre thought content	☐	☐	☐	☐
16	blunted affect - reduced emotional tone, agitation, increased reactivity	☐	☐	☐	☐
17	excitement - heightened emotional tone, agitation, increased reactivity	☐	☐	☐	☐
18	disorientation - confusion or lack of proper association for person, place, or time	☐	☐	☐	☐
	Total score	☐	☐	☐	☐