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# Enhancing employment opportunities of people with mental illness through an Integrated Supported Employment approach of Individual Placement and Support and Social Skills Training

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## Key Messages

1. We developed the Integrated Supported Employment (ISE) service protocol by merging the Individual Placement and Support model (IPS) with work-related social skills training.
2. After 15 months of service implementation, participants of ISE out-performed participants of IPS and traditional vocational rehabilitation service (TVR) in terms of employment rate, job tenure, and some of the non-vocational outcomes.
3. Non-vocational outcomes of participants including personal well-being and self-efficacy improved after receiving the ISE programme compared with IPS and TVR.
4. The data suggest that ISE is an effective supported employment model to help people with mental illness gain and keep competitive employment.

## Introduction

Work has long been regarded as an important aspect of the lives for mankind. Apart from generating income, it is associated with positive mental health as it provides opportunities for skills development, social contacts, and participation in the community. Interest of mental health professionals and researchers in vocational rehabilitation is growing rapidly, because the impact of employment on mental health is becoming obvious and evidence-based. Numerous studies indicate the positive physiological and psychological outcomes of employment in one's life. Unfortunately, few people with severe mental illness (SMI) are competitively employed. The employment rates of discharged psychiatric patients are surprisingly low, ranging from 15 to 30%. The rates of people who suffer from schizophrenia are even lower.

In the United States and in many other countries, including Hong Kong, vocational services offered through the public rehabilitation system typically involves a stepwise, 'train then place' approach that includes comprehensive vocational assessment and pre-vocational training. Frequently, individuals with SMI in Hong Kong in receipt of traditional services experience prolonged pre-vocational training through various forms of work groups and workshop training, such as clerical, computer, and cleaning activities. The limitation of this stepwise approach is that it has little sustained impact on competitive employment for individuals with SMI.

In view of the unsatisfactory outcomes for the traditional model, supported employment, particularly Individual Placement and Support (IPS), was developed to help people with SMI obtain competitive employment.<sup>1</sup> This IPS represents a synthesis and standardisation of seven key principles of supported employment: (1) a single-minded focus on competitive employment; (2) eligibility for services based solely on client choice, with no exclusion on the basis of work readiness, substance use problems, lack of motivation, treatment non-compliance, etc; (3) rapid job search upon programme admission; (4) attention to client preferences in the job search, rather than dependence on a pool of available jobs; (5) close integration between the employment services and the mental health treatment team; (6) ongoing, individualised support after clients obtain employment; and (7) systematic benefits counselling. Consistently, there was strong evidence of superior competitive employment outcomes for supported employment, compared to a variety of alternative vocational approaches.

Although the effectiveness of supported employment in returning people with SMI to competitive employment has been reinforced by numerous randomised controlled trials, in terms of job tenure and non-vocational outcomes, it does not offer much advantage when compared to traditional vocational rehabilitation (TVR). Recent research trends have therefore focused on various forms of enhanced supported employment by psychosocial rehabilitation service, specifically designed to improve vocational outcomes.

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Our team attempted to improve job tenure of participants of IPS by improving their social competence in the workplace. According to available evidence, interpersonal difficulties are the most frequently reported job problems leading to unwanted job terminations. Furthermore, available studies suggest that social competence is a consistent and significant predictor of gainful employment.

We hypothesised that the vocational outcomes of IPS would be augmented if an evidence-based social skills training module is incorporated into the strategies available to help participants apply the skills learned into actual employment settings. Based on this contention, we developed the Integrated Supported Employment (ISE) model by combining the IPS model and the Work-related Social Skills Training (WSST) to help persons with SMI obtain and maintain competitive employment.<sup>2</sup> Work-related Social Skills Training was developed based on a conceptual framework validated by Tsang and Pearson and guided by the basic principles of social skills training.<sup>3,4</sup> The major difference between ISE and IPS was that the social functioning of participants was enhanced in the ISE programme by means of WSST together with generalisation of social skills during the follow-up period of the supported employment service. Social skills essential to keeping a job (including maintaining a good working relationship with supervisor and co-workers) are conveyed to the participants. These interventions equip them with the social skills to cope with specific situations in the workplace that may cause problems due to interpersonal work conflicts. Continued support of the ISE programme focuses on building and strengthening of relationship with relevant supervisors and co-workers. Emphasis is given to generalisation of social skills learnt in the module.

### **Aims and objectives**

Our present study aimed at developing the ISE service protocol and conducting a randomised clinical trial to assess and compare the vocational and non-vocational outcomes of IPS and ISE service protocols. A control group following the TVR model was also involved. We hypothesised that the effectiveness of such ISE in terms of the employment rate, job tenure, and work-related outcomes such as job stress coping and job mobility of participants would be better than that achieved with IPS and TVR.

The specific objectives of our study were: (1) to study the vocational and non-vocational outcomes of IPS and ISE in terms of employment rates, job tenure, job stress coping, and job mobility, and (2) to compare the vocational outcomes of the three different vocational services (TVR, IPS, and ISE).

### **Methods**

This study was conducted from October 2002 to September

2004.

### **Participants**

Altogether 163 participants were recruited, only 127 completed the study. 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) diagnosis of a SMI, (2) with at least 2 years of major role dysfunction, (3) with moderate-to-high functioning and free from serious role dysfunction for the past 3 months, (4) being unemployed, (5) willingness 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, and (7) completion of primary education. The participants underwent testing with the Global Assessment of Functioning Scale<sup>5</sup> and Brief Psychiatric Rating Scale<sup>6</sup> to ensure similar functional level of all. The 163 participants were randomly assigned to three different vocational services: ISE (n=52), IPS service (n=56), and TVR service (n=55).

### **Outcome measures**

The outcomes of the study were measured by psychometrically valid instruments. The medical history, work history, and demographic data were entered into a specially designed demographic data sheet and was pilot-tested with psychiatric patients. The Employment Outcome Checklist was used to assess employment outcome of participants including: type, duration, and employment wage. The Chinese Job Stress Coping Scale was used to assess stress coping strategies of participants in the workplace. The Chinese Job Termination Checklist was adopted to collect information regarding job terminations. Personal Well-being Index (PWI) was used to assess subjective well-being of our participants and the Chinese General Self-efficacy Scale (CGSS) was applied to tap respondents' perceived abilities to deal with novel or demanding situations.

### **Intervention protocols**

Participants joined the IPS programme, which was a specific model of supported employment to help people with SMI obtain competitive employment.<sup>7</sup> The protocol of IPS included: (a) referral; (b) building a relationship; (c) vocational assessment; (d) individual employment plan; (e) obtaining employment; and (f) continued support. The seven key principles of supported employment that were adhered to included: (1) a single-minded focus on competitive employment; (2) eligibility for services based solely on client choice, with no exclusion on the basis of work readiness, substance use problems, lack of motivation, treatment non-compliance, etc; (3) rapid job search upon programme admission; (4) attention to client preferences in the job search, rather than dependence on a pool of available jobs; (5) close integration between the employment services and the mental health treatment team; (6) ongoing, individualised support after clients obtain employment; and (7) systematic benefits counselling.

The ISE programme refers to the protocol merging IPS and WSST. The actual implementation followed the steps of a typical IPS programme. The seven principles of supported employment were also followed as in the IPS protocol. The WSST consists of a structured programme to teach participants basic social and social survival skills, interview skills, and communicating skills with supervisors, co-workers, and customers. The social skills training was provided to ISE participants before stepping out to obtaining employment. Apart from the WSST programme, the general social skills learned were strengthened by the continued support. Special emphasis was given to providing assistance on ways to develop and maintain good, cooperative working relationships with fellow workers, supervisors, and customers.

Each of the employment specialists received the same proportion of participants in IPS and ISE programmes to minimise the variance of service delivery by different employment specialists in these two programmes. The frequency of contacts and hence the amount of support received by the participants from employment specialists was the same between the IPS and ISE groups, and followed the operational principle set out in the fidelity scale.

The TVR participants took part in 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 within the sheltered environment. The workshop-based training aimed to provide training in specific work skills and work habits, for later upgrading to sheltered workshops or open employment.

### **Data collection**

From the commencement of the 3-month initial service provision, the whole programme lasted 15 months, for both the ISE and IPS groups. Participants in the TVR group received traditional vocational service for 15 months altogether, to mirror the other two groups. Assessments using instruments listed above were conducted at a different time before and after (a) completion of the 3-month service, as well as (b) the 7-month, (c) the 11-month, and (d) the 15-month follow-ups.

### **Service team and quality assurance**

Altogether we involved three registered occupational therapists as employment specialists to implement either the ISE or IPS protocol. Social workers were also involved with the ISE and IPS groups; they referred cases to our study. During their visit to Hong Kong in 2002, Professor Bob Drake and Ms Debbie Becker provided training to the employment specialists on the IPS protocol. The training on ISE was given by the principal investigator, who is also the originator of ISE. The 15-item supported employment fidelity scale was adopted to confirm the quality of our supported employment service. The principal investigator

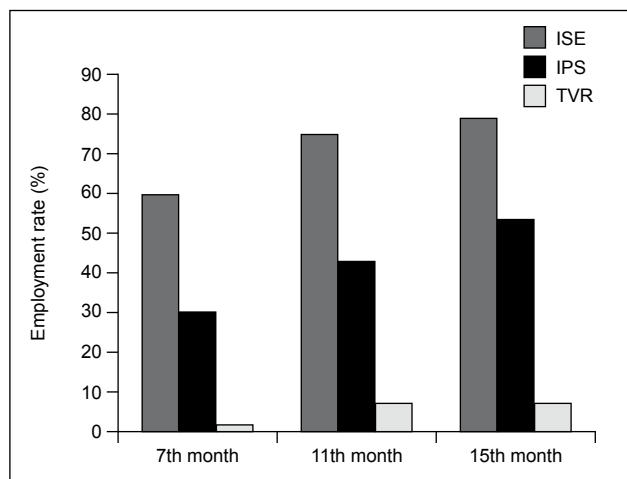
met with the employment specialists at the first, fourth, ninth, and 15th month of the study and used the scale to check adherence of the two protocols to the principles of supported employment. The fidelity score of IPS ranged from 65 to 68 out of 75 (87-91%) and for ISE ranged from 64 to 67 out of 75 (85-89%). On the whole, the two protocols are considered good for support for employment implementation as indicated by the scale. An independent assessor, who was also a registered occupational therapist but blinded to the research design and group status of the participants, administered the follow-up assessments. For the TVR group, services were provided by the service centres by their staff members that also included occupational therapists and social workers.

### **Programme attrition**

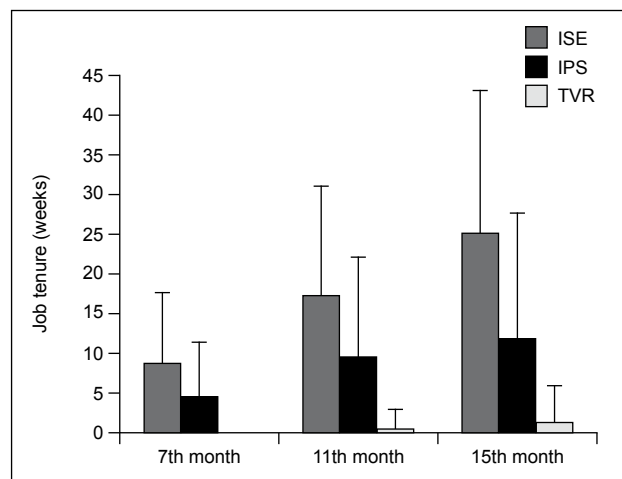
Among the 163 participants randomly assigned to three different vocational programmes, 153 (94%) completed the 3-month service, 144 (88%) the 7-month service, 132 (81%) the 11-month service, and 127 (78%) the entire 15-month service. In all, 96% of ISE participants received the first 3 months of service, 92% until the seventh month, 87% until the 11th month, and 83% until the 15th month. As to the IPS group, 91% of participants received the first 3 months of service, 82% up to the seventh month, 77% up to the 11th month, and 73% up to the 15th month. For the TVR group, 95% participants received the first 3 months of service, 91% up to the seventh month, 80% up to the 11th month, and 78% up to the 15th month. Chi squared analyses indicated that the attrition rate did not differ significantly across the three groups at the third month ( $\chi^2=1.28$ ,  $df=2$ ,  $P=0.53$ ), seventh month ( $\chi^2=3.23$ ,  $df=2$ ,  $P=0.20$ ), 11th month ( $\chi^2=1.72$ ,  $df=2$ ,  $P=0.42$ ), and 15th month ( $\chi^2=1.41$ ,  $df=2$ ,  $P=0.49$ ).

### **Data analyses**

Pre-service assessment scores and the demographic variables were compared by analysis of variance or Chi squared tests to detect significant differences among the participants in the three groups. Repeated measures analysis of covariance (ANCOVA) with post-hoc analysis was used to determine if significant difference occurred among the three groups between baseline and different stages in each of the outcome measures. Psychiatric symptoms were treated as covariates in the repeated measures ANCOVA. The baseline of the vocational outcomes including employment rate, job tenure, number of job terminations, and salary was operationally defined as the third assessment at the seventh month. In some of the employment outcomes, comparisons were only made between IPS and ISE groups in consultation with our departmental biostatistician. This was because there were too few subjects in the TVR group, as inclusion of the latter subjects lead to substantial error. We defined success in competitive employment as having continuously worked in the job with at least 20 hours per week, for 2 months or more. Competitive employment in this study was operationally classified into 'fully' and 'partially'. Fully competitive employment referred to jobs that our subjects had to compete for with the public.



**Fig 1. Employment rates of Integrated Supported Employment (ISE), Individual Placement and Support (IPS), and traditional vocational rehabilitation (TVR) groups at three different stages of follow-up**



**Fig 2. Job tenure of Integrated Supported Employment (ISE), Individual Placement and Support (IPS), and traditional vocational rehabilitation (TVR) groups at three different stages of follow-up**

Partially competitive employment referred to those jobs that our subjects had to compete for only with individuals with disabilities. The Chi squared test was used to analyse the employment rate of the three groups at different time levels, according to the job's nature, type of job, and reasons for job terminations. Analyses were based on an alpha value of 0.05 with Bonferroni adjustments applied to all post-hoc comparisons.

## Results

### Employment rates

The ISE participants obtained a competitive employment rate of 79%, whereas 54% of IPS group and 7% of TVR group were competitively employed at or after the 15th month. Figure 1 summarises the employment rates of the three groups at different stages of the study. Exact logistic regression showed that employment rates of the ISE group were significantly higher than the TVR group at the seventh month ( $P<0.001$ ), 11th month ( $P<0.001$ ), and 15th month ( $P<0.001$ ) of follow-up. Similarly, employment rates of IPS group were significantly higher than the TVR group at the seventh month ( $P=0.003$ ), 11th month ( $P<0.001$ ), and 15th month ( $P<0.001$ ). More importantly, more participants in the ISE group were employed than in the IPS group at the seventh month follow-up ( $P=0.003$ ), 11th month ( $P=0.002$ ), and 15th month ( $P<0.001$ ).

### Job characteristics

There was no significant difference in the job nature and types of jobs among the three groups. For those who were competitively employed, 56% of ISE participants ( $n=36$ ), 39% of IPS participants ( $n=18$ ), and all the TVR participants ( $n=3$ ) worked full-time. Besides, 75% (27/36) of ISE participants and 94% (17/18) of IPS participants worked for fully competitive jobs in the open market. The rest of the employed ISE and IPS participants worked for jobs

that were partially competitive. There was no significant difference in salaries among ISE and IPS participants ( $F=1.19$ ,  $df=2$ , 21,  $P=0.32$ ). The majority of the participants in this study worked for jobs at entry level such as security guard, cleaning worker, office assistant, and delivery worker, which was consistent with the literature.

### Job tenure

Group  $\times$  time interaction showed overall significance in job tenure among the three groups ( $F=11.94$ ,  $df=4$ , 244,  $P<0.001$ ) with psychiatric symptoms treated as the covariate. Post-hoc comparison showed that the ISE group had longer job tenure than the TVR group between seventh month and 11th month ( $P<0.001$ ) and between seventh month and 15th month ( $P<0.001$ ). Comparison between the IPS and TVR groups followed the same pattern. The ISE group had longer job tenure than the IPS group ( $P<0.001$ ) between seventh and 15th month (Fig 2).

### Job termination

There was no significant difference in the number of unwanted job terminations among ISE group and IPS group ( $F=1.57$ ,  $df=2$ , 42,  $P=0.22$ ) although there was a trend towards ISE participants having a lower job turnover rate. The number of job terminations in the ISE group is  $0.34 \pm 0.81$  times and in the IPS group is  $1.76 \pm 1.92$  times at the 15th month. As to the reasons of job terminations, 25% of IPS participants were related to interpersonal problems such as poor relationship with supervisor and co-workers whereas only 8% of ISE participants were due to interpersonal problems. Participants of ISE had less interpersonal difficulties in the workplace than those of IPS although significant difference was not achieved at this stage.

### Job stress coping

Since there were only three participants employed in the

TVR group, we only compared the stress-coping strategies of participants in ISE group and IPS group. No significant difference was found in the score of Job Stress Coping Scale among ISE group and IPS group throughout the study ( $F=1.10$ ,  $df=4$ ,  $78$ ,  $P=0.36$ ).

### ***Non-vocational outcomes***

We compared the PWI and CGSS data for participants in IPS and ISE. Longitudinally, participants in ISE had higher mean scores in both PWI and CGSS than the IPS participants. No overall significant difference on PWI scores between the two groups was shown ( $F=1.22$ ,  $df=4$ ,  $78$ ,  $P=0.31$ ) at different stages of the study. Comparison of CGSS scores indicated that ISE group had significantly higher scores than the IPS group ( $F=3.15$ ,  $df=4$ ,  $78$ ,  $P=0.02$ ). Post-hoc comparison showed that ISE group had higher score in CGSS than the IPS group between baseline and the 15th month ( $P=0.001$ ).

## **Discussion**

### ***Applicability of Individual Placement and Support model to Chinese communities***

Numerous empirical reports on supported employment demonstrate enhanced vocational outcomes of individuals with SMI in the United States. However, not much is known about programme outcomes and applicability in the Chinese communities. The present study provides evidence as to the effectiveness of IPS for SMI in Hong Kong and probably mainland China, which has about 16 million people with SMI. This is increasingly relevant to contemporary China, which is rapidly transforming itself from a planned to a market economy. According to a recent study, it is also a concern of employers in Beijing, when it comes to hiring individuals with mental illness, and shares many commonalities with Hong Kong and the United States, including the general appearance of applicants, as well as their qualifications, skills, and social competence.

### ***Employment rate***

Some 79% of ISE participants successfully achieved competitive employment for 15 months, compared to 54% of IPS participants and 7% of the TVR group. The employment rate of IPS participants in our study was in line with data obtained from other studies, reporting a mean rate of 58%.<sup>8</sup> Our findings provide added evidence about the effectiveness of IPS in improving the employment rate of people with SMI. In addition, it provides the first evidence that the innovations incorporated into ISE augment the employment rate of subjects with SMI. As social competence is one of the most significant predictors of employment outcome among individuals with mental illness, it makes perfect sense that more ISE participants need special training in job-seeking social skills so as to gain competitive employment. We envisaged that the major factor contributing to successful job finding among ISE participants would be improved job interview skills. These skills were delivered to the participants during

the skills training session, and practised with them again before they attended real job interviews. Our employment specialists performed appraisals with them after each failed job interview, hoping to enable a better performance in the next job interview. Our findings have been echoed by a similar study, showing that only WSST plus relevant in-vivo practice resulted in a 46.2% employment rate among participants with SMI in Hong Kong.<sup>9</sup>

### ***Job tenure and job terminations***

The job tenure of ISE participants up to 15 months was significantly longer than those receiving IPS. Our hypothesis was confirmed by the findings that ISE was superior to IPS in helping persons with mental illness keep their jobs. Social skills play a critical role in the process of job searching and retention among subjects with SMI. The major difference between ISE and IPS was that in the former, social functioning was enhanced by a WSST module with applicability throughout the entire follow-up period. Job-retaining social skills, including maintaining a good working relationship with supervisors and co-workers, formed the core of the strategy. These social skills equipped participants to cope with interpersonal conflicts in the workplace that might have caused them to leave their jobs. Continuous support from ISE focuses on improving and maintaining relationships with supervisor and co-workers, with an emphasis on general social skills. Whenever ISE participants had problems with their supervisor or co-workers, the employment specialist reminded them of the social skills learned in the WSST programme. The employment specialist set behavioural goals in cooperation with the participants. Such a goal was specific and related to the workplace; examples include building up relationships with supervisors and co-workers when starting a new job, or maintaining and improving social relationships in the workplace if they encountered conflicts or interpersonal difficulties. The specialist discussed appropriate behaviours in dealing with the social problems, using a social problem-solving approach, performed behavioural rehearsals, and provided practical assistance to enable participants to bridge the gap in generalising skills to their workplace. Both the behavioural goal and the specific behaviours were recorded, to remind subjects of their 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, and at the same time the specialist discussed upgrading of the behavioural goals. On the other hand, if they could not handle the problems well, the specialist provided further assistance and practised coping behaviours with them again, until they were able to deal with work situations. The results of this study supported our view that improving the social functioning of people with mental illness could prolong their job duration. As to the reasons of job terminations, 25% of those affecting IPS participants were related to interpersonal problems. However, we see that only 8% of ISE participants terminated their jobs because of social problems in the workplace over

the ensuing 15 months. Although a significant difference in terms of interpersonal reasons between IPS and ISE participants was not achieved at this stage, there was an obvious trend showing that ISE participants experienced less interpersonal workplace difficulties.

### ***Job characteristics***

For other vocational outcomes including job titles, job nature, and salary, no significant differences were noted. This may have been because our participants had similar educational and socio-economic backgrounds, which enabled them to find similar jobs in the open market with similar benefits.

### ***Non-vocational outcomes***

Participants in the ISE group had better improvements in terms of self-efficacy after receiving the service for 15 months. Better non-vocational outcomes would be expected for a longer period of service provision, which is currently being assessed in other studies.

### **Implications and conclusion**

The findings of our study provide evidence that supported employment and skills training are compatible and produce better vocational outcomes. Numerous studies have suggested that stepwise approaches with prolonged prevocational training do not lead to better employment outcomes. However, this study suggests that some training programmes are integrative with the supported employment model. Increasingly, there is a need to develop strategies that enhance the effectiveness of the supported employment model.

Our study suggests that integrating WSST with clearly spelt-out generalisation strategies to embrace ISE approach, which could further enhance the effectiveness

of the supported employment model. We suggest that additional research is needed to explore other psychosocial and vocational services that could be incorporated into the integrated model.

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