Work-Related Social Skills Training for People With Schizophrenia in Hong Kong

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Abstract

This article describes a prospective blinded outcome study of a vocational social skills training program developed in Hong Kong for people affected by chronic schizophrenia. The aim was to improve their ability to find and keep a job. Participants were randomly assigned to three groups: a social skills training group with followup support, a social skills training group without followup support, and a comparison group who received standard after-care treatment. Participants who had participated in either of the training groups statistically outperformed those in the comparison group. Those receiving the training plus followup were statistically much more successful at finding and keeping a job than participants in either of the other two groups. A comparatively small amount of followup contact (a monthly group meeting or phone call) for 3 months after the training finished had a very significant effect on participants' success rate.

Keywords: Social skills training, schizophrenia, vocational.

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The need to work goes beyond simply the necessity to earn money. Our self-esteem is firmly rooted in being valued through our ability to contribute to our families and, in a more general sense, to our community. The experience of being unemployed, especially over the long term, is profoundly destructive to the self. In Hong Kong, work has additional significance. It is still common for young adults, single or married, to live with parents. Thus the developmental stage of adulthood is marked not by moving away and establishing a separate household but by going out to work and contributing to the family income. People who are unable to work, despite having reached the appropriate age, are trapped in limbo between who they are and who they ought to be.

People, especially men, who have developed schizophrenia are often in this position. Research (McCreadie 1982; Watts 1983; Cohen 1984) as well as clinical experience shows that people with schizophrenia experience significant difficulties in securing and retaining employment. Because work serves an important function in a person's life, impairments in vocational ability (which includes choosing, getting, and keeping a job in the community) are considered to be a central feature of mental disorders (Massel et al. 1990). Results of surveys on employment rates of persons discharged from psychiatric hospitals show that the figures for full-time competitive employment range from 20 percent to 30 percent (Goldstrom and Manderscheid 1982; Anthony and Jansen 1984; Wayslenki et al. 1985; Dion and Anthony 1987). For those who are more chronically ill, the figure drops to about 15 percent (Unger and Anthony 1984).

The situation in Hong Kong is similar. A recent survey revealed that employers are in general reluctant to employ people with mental illness (Ip et al. 1995). Difficulties with work that people with schizophrenia experience are rooted in a number of factors, not all of which can be addressed through treatment or training. For example, the social environment tends to be suspicious at best and hostile at worst to this group of people. But other employment problems of people with schizophrenia are a result of lacking appropriate general social competence and social skills necessary in the workplace (Wehman et al. 1982; Solinski et al. 1992; Bell and Lysaker 1995; Lysaker et al. 1995). Research in Hong Kong supports this finding (Tsang & Pearson 1996).

Social skills training has been widely used as an effective means of counteracting the social deficits of schizophrenia patients for a number of years (Kelly 1982; Wilkinson and Canter 1982; Curran 1985; Liberman et al.

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1989; Douglas and Mueser 1990; Bellack and Mueser 1993; Mueser et al. 1997). However, most of these programs do not place particular emphasis on the social competencies needed for acquiring and maintaining a job. An exception to this is described in Mueser et al. (1986). In recent years, it has been pointed out that social skills and social skills training need to be related closely to specific situations (Liberman et al. 1986; Douglas and Mueser 1990). Social skills acquired in one situation are not easily generalized to another. The problem of transferability has been widely demonstrated (Wong et al. 1993; Leblanc and Matson 1995). Consequently, there has been a trend toward tailoring training to meet the demands of specific situations or instrumental roles: family relationships, work settings, friendships, and so on. Previous experiences (Tsang and Tsang 1988; Tsang 1992) have shown that general social skills training is not specific enough to help people with schizophrenia cope with problematic social situations at work. This article describes a training program design based on a three-tier indigenous model of work-related social skills developed by Tsang and Pearson (1996). In addition, a controlled evaluation was conducted to test the effectiveness of the training program in equipping the participants to find and keep a job.

Training Program

The design and content of the training program follow the configuration and proposed constructs of the indigenous model described by Tsang and Pearson (1996). In brief, hierarchical stages of learning were established based on a foundation of basic social skills (e.g., facial expression, gestures) and basic social survival skills (e.g., personal appearance, tidiness), followed by core work-related skills, including those related to job securing and job retaining. We asked three groups of people (those in remission from schizophrenia who were living outside a hospital, blue-collar trade union members, and professional mental health workers) to identify the skills they thought were essential. We considered this preferable to attempting to identify on our own the skill elements thought to be essential for getting and keeping work. Agreement between the groups was close, and their suggestions guided us in the choice of elements included in the program (e.g., asking the boss for a day's leave at short notice). What is described here concerns the implementation and evaluation of the core components of the work-related social skills program.

The program consisted of ten weekly group sessions lasting 1.5 to 2 hours, with approximately 6 to 8 members in each group. Each training group was facilitated by a trained occupational therapist assisted by an untrained welfare worker experienced in working with this client group. All group participants had already proceeded through the basic social skill and basic social survival skill components of the model. In brief, these consisted of training in nonverbal and verbal components of communication, assertiveness, grooming and self-presentation, and greeting and basic conversational skills.

The ten sessions related to the core program (finding and keeping a job) started with a review of these basic skills. The program then moved through skill learning related to job finding and retaining (e.g., phoning to ask for a job interview, performance at interview), skills related to specific situations at work that might cause problems (e.g., handling conflict, destructive gossip), and problem-solving skills. The program focused on the need to be able to generalize skills from one situation to another through practicing in real life the skills that had been learned in the training group. Each session included the standard components of the social skills training: warm-up activities, instruction, demonstration, role play, feedback, and homework assignments (Wallace et al. 1980; Wilkinson and Canter 1982; Shepherd 1983). Examples, such as those used in role plays, were taken from jobs that people with schizophrenia in Hong Kong tend to be offered, such as security guard or cleaner. In total, nine courses of the complete training package were run.

Research Design

A three-group before-and-after experimental design, as described by Kerlinger (1986), was adopted. Participants who met the selection criteria were assigned to one of the three groups. Participants were recruited from nine community-based, staffed residential facilities for ex–mentally ill people. The vast majority of residents had had schizophrenia at some point in their lives. All nine facilities were run according to set government standards and had very similar admission criteria. Programs within each facility varied little, and none of the participants were simultaneously engaged in another vocational training exercise. Randomization was achieved by randomly assigning each of the nine residential facilities to one of the three group conditions. Thus, each group had members drawn from three specific centers. As will be seen later, this system did lead to some unevenness in numbers between groups. With help from the staff person in charge of each center, all potential participants were informed about the training program, its goals, what they could expect to gain from it, and the commitment that would be required of them if they agreed to participate. All participants were asked for their consent to participate in a research study on helping people in their situation to find and keep a job. All of them were Hong Kong people of

Chinese descent who spoke Cantonese but not English. (Ninety-eight percent of Hong Kong residents are Chinese, and Hong Kong is a predominantly Chinese culture, despite 155 years of British administration.)

Each of the three groups represented one level of the independent variable: the intensity of the social skills training program given to the participants. The dependent variables were self-perceived work-related social competence and work-related social skills in simulated social situations. The generalizable variable was success in job hunting and job keeping 3 months after the completion of the training program. Training group 1 received the social skills training plus followup contact with group members and the trainer. Training group 2 received the same social skills package but no followup. The third group acted as the comparison group and received standard psychiatric care on an outpatient basis.

The participants in the training groups with followup support that lasted for 3 months gathered at a monthly meeting conducted by one of the occupational therapists who had run the training groups. These occasions were not as structured as the program itself, and participants were encouraged to share their experiences of job hunting and job keeping—both successes and difficulties. Participants helped each other to develop positive strategies and provided moral support. If a participant did not attend a group meeting, the leader phoned that participant to keep him or her informed of what had been discussed and to check whether all was well. Three months after the training program was completed, each participant in each of the training conditions was contacted by phone to collect the information needed for the followup questionnaire.

All three groups were assessed with validated measures before and after the social skills training. A further assessment, using the same measures and involving all three groups, was conducted 3 months after the social skills program finished. During the entire process of data collection, all participants and those responsible for rating participants' performance were blind as to the research design. The raters were blind to the group status of the participants, and participants did not know that there were groups with and without followup. This should have minimized possible bias.

Hypotheses. There were three hypotheses:

1. The self-perceived social competence in work-related situations of participants in the two training groups would be higher than for those in the comparison group.
2. After participation in the training program, the work-related social skills of the participants in the two training groups would be higher than those of participants in the comparison group.

3. Training group 1 would be more successful in job hunting and job keeping than training group 2, who in turn would be more successful than the comparison group.

Methodology

Participants. Ninety-seven participants were recruited from halfway houses and sheltered workshops run by nongovernmental agencies in Hong Kong. The selection criteria were as follows:

- willingness to participate in a work-related social skills program;
- age between 18 and 50;
- work status: unemployed;
- previous occupation: blue collar, low-level clerical, or service industry;
- education level: no less than 5 years of primary school and no more than 5 years of secondary school (on the grounds that the vast majority of those using psychiatric services in Hong Kong fit these parameters);
- no less than 1 cumulative year of hospitalization;
- diagnosis of schizophrenia made by a medical practitioner registered in Hong Kong; and
- no learning disability.

These participants were randomly assigned to one of three groups: training with followup ($n = 30$), training with no followup ($n = 26$), and comparison ($n = 41$). The demographic characteristics of the participants in each of the three groups are given in table 1. No statistical differences between the three groups were found in age, sex, gender, education, previous occupation, and length of unemployment.

Assessment Instruments. Assessment instruments for this study consisted of a two-part measure for work-related social competence, a motivation checklist, and a followup questionnaire developed and validated for a Hong Kong population (Tsang and Pearson, in press).

Two-part measure of work-related social competence. The first part is a self-administered checklist that assesses patients' subjective perception of their competence in social skills related to job securing and job retaining. The checklist consists of ten items (Appendix). The items were derived from the results of the survey questionnaire concerning situations that may be encountered by people with schizophrenia in the workplace and when they are looking for a job. Participants rate each of the ten items according to the degree of difficulty they experienced in handling each situation. They make a judgment about the current level of difficulty for them of each of the ten items based on a six-point scale ranging from very frequent difficulty to no difficulty, with 1 = very frequent

Table 1. Demographic characteristics of participants

	Treatment group with followup contacts (*n* = 30)	Treatment group without followup contacts (*n* = 26)	Control group (*n* = 41)
Sex			
Male, *n* (%)	17 (56.7)	14 (53.8)	29 (70.7)
Female, *n* (%)	13 (43.3)	12 (46.2)	12 (29.3)
Education			
Primary, *n* (%)	8 (26.8)	8 (30.8)	13 (31.7)
F.1–F.3, *n* (%)	10 (33.3)	7 (26.9)	11 (26.8)
F.4–F.5, *n* (%)	10 (33.3)	8 (30.8)	16 (39.0)
Above F.5, *n* (%)	1 (3.3)	3 (11.5)	1 (2.4)
Missing	1 (3.3)	0	0
Previous occupation			
Unskilled or semiskilled worker, *n* (%)	12 (40.0)	14 (53.8)	32 (78.0)
Skilled worker, *n* (%)	5 (16.7)	3 (11.5)	4 (9.8)
Clerical worker, *n* (%)	5 (16.7)	7 (26.9)	1 (2.4)
Sales, *n* (%)	4 (13.3)	2 (7.7)	1 (2.4)
Others, *n* (%)	1 (3.3)	0	1 (2.4)
Missing, *n* (%)	3 (10.0)	0	2 (4.9)
Age, mean ± SD	34.8 ± 9.4	37.3 ± 7.3	34.9 ± 9.6
Duration of unemployment (mos), mean ± SD	39.3 ± 36.7	47.8 ± 38.0	35.7 ± 35.7

Note.—F = Form or grade level; SD = standard deviation.

difficulty and 6 = no difficulty. The higher the score, the more competent individuals perceive themselves to be.

The second part is a simple role-play exercise that assesses participants' social performance in simulated job-related situations. It consists of two situations: participating in a job interview and requesting 1 day of leave at short notice from a supervisor. These two situations, which are representative of job-finding and job-keeping situations, were selected because they were identified by blue-collar workers, people who had recovered from schizophrenia, and professional mental health workers as highly relevant.

The participant is asked to take part in the role plays with a well-briefed person (either an occupational therapist or a social worker in our research) who acts as the interviewer in the first role play and the supervisor in the second. The role play is recorded with a videocamera and rated by an independent rater who has been trained for this task. Behaviors rated include basic social survival skills; basic social skills related to voice quality and nonverbal and verbal communication; and overall performance based on the two situations (i.e., job interview and request for leave). The rater used a five-point scale in which 4 indicated normal performance and 0 poor performance, with either excesses or deficiencies in the desired behaviors. To ensure that the scoring process was objective and fair, the rater had to follow a set of rating guidelines for each item.

Two groups of respondents were approached in order to test the reliability and validity of the instrument. The first group consisted of 80 people with schizophrenia recruited from service centers of nongovernment rehabilitation organizations. The second consisted of 60 ordinary workers, of whom 18 were recruited through trade unions and 42 from 90 random approaches by means of street interviews in industrial zones of Hong Kong. Both groups were tested with the newly developed measure for work-related social skills. The internal consistency and reliability of the self-administered questionnaire was 0.80 ($p <$ 0.01). The correlation coefficient between the test and retest scores (over an interval of 2 weeks) was 0.78 ($p <$ 0.01). The difference between the total scores of people with schizophrenia and those without was statistically significant at the $p < 0.05$ level ($t = 2.51$, $df = 138$). The internal consistency and reliability of the role-play test was 0.96 ($p < 0.01$). The correlation coefficient of the total scores between the two independent raters who were blind as to the group status of the participants was 0.80 ($p = 0.01$). The difference between the total scores of people with schizophrenia and those without was significant at the $p < 0.01$ level ($t = 2.58$, $df = 58$). These results indicate that the measure had acceptable reliability and differentiated between known groups (criterion validity).

Motivation checklist. This simple checklist was intended to assess the motivation of the participants in joining the work-related social skills program, their atti-

tude toward the program prior to joining it, and their motivation to seek competitive employment. In the section that focused on their motivation to participate, ten items were used. Three were general statements concerning their willingness and motivation to join the training program and their motivation to get a job. In addition, seven pairs of adjectives were used to describe participants' feelings on the grounds that feelings affect motivation: anxious-relaxed, sad-happy, bored-excited, dull-challenging, easy-difficult, useless-useful, and pessimistic-optimistic. The participants had to rate these according to a seven-point scale, with points 1–7 representing the two extremes. The motivation checklist was intended to monitor for any differences in participants' motivation to get a job before the training began. Motivation was not intended to be an outcome measure, so there is no discussion of it in the posttraining assessment results section.

Followup questionnaire. This questionnaire was designed to assess the outcome for the participants in relation to their employment status after the completion of the training program. The questionnaire asked about 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 relationships with colleagues. We did not attempt to verify their responses but, based on previous experience, did not consider that there was much likelihood of them lying about their employment status. Nor did we ascertain how long it took the participants to find a job, as the total assessment period was only 3 months long.

Data collection. Pretraining assessment was conducted using the two-part instrument and the motivation checklist after participants were recruited. Assistants who were qualified occupational therapists and blind to the research design conducted the assessment on an individual basis. The performance of the participants in the role-play exercise was recorded using a videocamera and was rated later by blinded independent raters. Posttraining assessment was carried out about 1 week after participants had completed their training program, and the two-part instrument was again completed.

Results

Pretraining Assessment. One-way analysis of variance (ANOVA) showed no significant differences in total scores and only three significant differences on the subtotal scores of the three groups out of a total of ten items in the motivation checklist. These were anxious-relaxed ($F = 6.70$; $df = 2.94$; $p = < 0.01$), bored-excited ($F = 5.13$, $df = 2.94$; $p = < 0.01$), and pessimistic-optimistic ($F = 3.46$, $df = 2.94$; $p = < 0.05$). Post hoc comparisons showed that the

scores of the training without followup group were significantly higher than those of the other two groups. This difference may be simply a matter of chance in the random sampling process. On the whole, the results indicate that the three groups did not differ in terms of their motivation to participate in the training program. No gender differences in motivation were detected when checked for by t tests. However, there were other gender differences on pretraining scores in role-play tests. The female participants were significantly better than the males in basic social survival skills (10.9 mean [M] + 1.7 standard deviation [SD] vs. 9.8 M + 2.1 SD, $t[88] = 4.32$, $p < 0.01$), nonverbal skills (48.7 M + 6.3 SD vs. 42.1 M + 7.4 SD, $t[88] = 4.32$, $p < 0.01$), verbal skills (38.1 M + 7.8 SD vs. 35.35 M + 8.3 SD, $t[88] = 2.06$, $p < 0.05$), subtotal of basic social skills ($t[88] = 2.73$, $p < 0.01$), subtotal of situation-specific ratings ($t[88] = 2.09$, $p < 0.05$), and total score ($t[88] = 2.85$, $p < 0.01$).

One-way ANOVA demonstrated that, with one exception, the item and total scores on the self-administered checklist showed no statistical differences between the three groups. The exception was arranging a job interview over the phone ($t[2.87] = 3.28$, $p < 0.05$). Post hoc comparison showed that the training group without followup scored significantly higher than the comparison group (4.2 + 1.5 vs. 3.0 + 2.0). However, there were no statistically significant differences between the training group with followup (3.5 + 1.6) and the other two groups.

Posttraining assessment. Table 2 shows comparisons of posttraining scores of the self-administered checklist by one-way ANOVA or one-way ANCOVA. The covariance procedure was intended to adjust the effect of pretraining differences (as reported earlier) in the item concerning arranging a job interview over the phone. Participants in the training groups scored higher than the comparison group on the majority of the items at either the 0.01 or 0.05 levels of significance. The only exception was "instructing a new colleague." Post hoc comparisons indicated no significant differences between the two training groups. Comparisons of posttraining scores showed no gender differences in performance in the self-administered checklist.

The posttraining scores of the role-play test for the three groups of participants are shown in table 3. All the scores among the three groups of participants were significantly different at the 0.01 level. Post hoc comparisons showed that the scores of both training groups were significantly higher than the comparison group. Comparisons of the postassessment scores showed that female participants scored higher than the male participants in nonverbal skills (58.0 + 7.76, $t[42] = 2.96$, $p < 0.01$) and the subtotal score on basic social skills (139.8 + 21.2 vs. 132.1 + 23.5, $t[42] = 2.10$, $p < 0.05$).

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Table 2. Comparisons of posttraining scores of the self-administered checklist by one-way ANOVA

	Treatment group with followup contacts	Treatment group without followup contacts	Control group	F (df = 2,87)
Arrange job interview[1]	4.58	4.86	2.75	6.60**
Participate in job interview	4.42	4.90	3.05	10.61**
Dress appropriately in job interview	5.42	5.14	4.20	4.47*
Ask for leave	4.42	5.24	2.90	17.24**
Resolve conflict with supervisor	4.29	4.67	3.00	8.13**
Resolve conflict with colleagues	4.50	4.52	2.80	10.27**
Avoid gossip	5.58	5.24	4.50	4.80*
Cooperate in group tasks	4.92	4.90	3.85	3.71*
Refuse to work overtime	4.50	4.76	3.15	7.67**
Instruct new colleague	4.88	5.14	4.05	3.12
Total score	38.00	39.88	18.77	14.79**

Note. — ANOVA = analysis of variance; ANCOVA = analysis of covariance.
[1] ANCOVA.
* $p < 0.05$; ** $p < 0.01$

Table 3. Posttraining scores of the role-play test for the three groups of participants

	Treatment group with followup contacts	Treatment group without followup contacts	Control group	F (df = 2,69)
Basic social survival skills	13.78	13.06	11.01	13.07**
Basic social skills				
Voice quality	34.39	33.76	28.86	10.84**
Nonverbal components	57.00	55.09	46.96	16.83**
Verbal components	46.48	45.71	34.64	29.79**
Situations-specific ratings				
Chance of being employed	6.39	5.86	2.71	44.50**
Request for urgent leave	12.57	12.57	9.03	14.56**
Total score	170.61	166.05	133.21	26.86**

** $p < 0.01$

Followup Assessment. Three months after completion of the training program, 14 out of 30 participants in the training group with followup support were gainfully employed, constituting a success rate of 46.7 percent. In the training group without followup support, 6 out of 26 were gainfully employed, a success rate of 23.1 percent. For participants in the comparison group, only 1 was employed, and the success rate was only 2.4 percent. A chi-square test (20.02, df = 2) of the three groups was statistically significant at the $p < 0.001$ level.

The 14 participants in the training group with followup support who were successfully employed worked in various jobs (e.g., caretaker, security guard, waiter, junior clerk). Six of them (42.8%) had attended only one job interview, and that interview had led to their current employment. Seven of them (50%) had been working for 1 to 2 months. Twelve of them (87.7%) had not changed their employment in the previous 3 months. Thirteen of them (92.8%) were satisfied

with their job and described their relationship with their supervisor as good. Similarly, most of them (85.7%) regarded their relationship with their colleagues as good and had no plans to change or quit their present job.

Discussion

The findings support the view that a social skills approach to behavior change can be effective in a Chinese culture and with a traditionally "hard to help" group. Participants in the two training groups perceived themselves as having greater competence in work-related situations. This view was supported in the "laboratory" situation by the posttraining role-play assessment and, much more important, in the real-life situation shown by their employment status. It should be made clear that all the participants went job hunting by themselves. They used the normal channels for job finding, such as newspaper advertisements,

the labor department, and personal contacts. No special connections or arrangements were made for them. The comparison group, who were receiving standard outpatient help and community services, experienced no change in their work-related social competence. These findings support the view that gains in skill are generalizable and transferable under the right conditions, which include a very clear focus and a highly desired end product that is perceived to be achievable (Shepherd 1977, 1978; Brown 1982; Trower 1982; Kopelowicz et al. 1998).

Perhaps the most exciting finding, at least from our point of view, concerned the issue of followup support. Over the past 25 years, social work practice has moved toward favoring time-limited intervention strategies that are goal directed and focused. This was a reaction to demands for increased financial accountability and demonstrable effectiveness, and a move away from the long-term psychotherapeutic casework approach that had previously characterized social work. While this change has been largely beneficial, there are some groups who would benefit from more continuous forms of contact and who may suffer from what has become an almost automatic desire to close cases. In this research, the amount of followup support offered was minimal. Three months of followup was the only condition that varied between the two training groups, whose sociodemographic features, motivation levels, and experience of illness showed no statistical differences. Formally, followup consisted of one meeting a month, or a phone call if a participant missed a meeting. Informally, some of the participants called the facilitator between meetings to seek support or advice. Objectively speaking, this does not seem to be a great deal of followup, and yet it appears to have been sufficient to lead to employment for twice as many people in the followup group (almost half) as in the training group without followup (almost one quarter). Both of these figures greatly exceed those in the comparison group, where, despite the stated objectives of the standard services provided to discharged psychiatric patients, the employment success rate was almost nil. Given the previously discussed importance of employment in the lives of former psychiatric patients, this situation is in urgent need of improvement.

We can only speculate as to why the followup services that were provided generated such an effect. Two factors appear to partly explain the effect. The first is that participants received what might be called technical guidance on handling difficulties in the real situation as a part of attending the groups or through telephone contact. This may have helped participants defuse potential difficulties and maintain determination in the face of obstacles that would otherwise have derailed job-seeking attempts. The second factor has to do with emotional support. As part of a group, participants

were almost certain to benefit from the "all in the same boat" phenomenon of mutual aid. In addition, they were not left with the sense of abandonment felt by people who have undergone a program but are left to sink or swim by their own efforts once it finishes. Our clinical experience suggests that it is not helpful to define the end of treatment as the end of the formal program. Admittedly, intangible factors are hard to measure, but we are quite certain that they played an important role in successful job finding and job keeping. Such factors would include the participants' perception of the therapist as being committed and sincere, and the pleasure that the participants took in each other's efforts and success.

In addition, another feature of the employment profile of chronically mentally ill people in Hong Kong was not observed: job hopping (Ku 1984). Obviously, job hopping is not only due to factors related to the individuals themselves. After all, there must be jobs to which to hop. Clinical experience, in addition to research, supports the view that it was not necessarily difficult for our client group to find jobs in Hong Kong. It was, however, much more difficult for them to keep jobs. This was due to the difficulties that they experienced with colleagues, the discipline required for working, and the problems that coworkers had with the job holders. The training program combined with the followup support appears to have significantly reduced this phenomenon.

It is common wisdom in social science that women are generally more socially skilled than men (Mueser et al. 1990), although the males in our study did not share this view. Our scorers rated the male participants as worse at handling simulated work-related social situations than the female participants, while the male and female participants rated themselves at similar levels. In the pretraining phase of the current study, men significantly underperformed women, which was very definitely in line with our expectations. However, we also anticipated that this differential would have been maintained in the posttraining scores, even though both men and women were expected to improve their skill level. This was not the case. Male participants must, in fact, have outperformed the females because their final scores showed almost no significant differences from females' scores; clearly, the males "came from behind." This can only be good news for men; it is never too late to change! This finding was in line with that of Mueser et al. (1990).

Limitations of Study

Using an experimental design to test the efficacy of a psychological intervention is not easy. To produce reliable statistical results, sample size has to achieve a minimum level. At the same time, a training package that requires ten small-group sessions plus followup meetings con-

sumes significant amounts of professional time. There is also the likelihood of at least a few participants dropping out of the program for a variety of reasons (which should be considered an entirely normal occurrence). Although our sample size was sufficient to perform reliable statistical tests, it clearly would have been desirable to have been able to enlarge the numbers of those who had participated in the training package. A larger sample would have allowed us to analyze the gender differences with greater sophistication, for instance by allowing us to treat gender as one of the covariates.

Much the same point could be made about the length of the followup period. Ideally, we would have liked to have stayed in touch with participants for 1 year and produced quarterly assessments. Thus, although we have demonstrated very clearly that continuing contact after the training finishes has a positive effect on finding and keeping jobs, we do not know how long this benefit lasts. Nor do we know much about the comparative efficacy of different kinds and frequencies of after-training group contacts. We confined ourselves to whether participants had been able to find and keep a job. In future work on this topic, extending outcome measures to include the more qualitative issues of job satisfaction and self-assessment of job performance would be highly desirable. It seems likely that people will stay in a job longer if they find it satisfying and feel competent.

The research was carried out at a time of labor shortages in Hong Kong in 1996. The availability of standard jobs was therefore never an issue. By 1999 the economic situation was very different and a vocational training program might have needed to identify and target a niche market. Extraneous environmental and economic factors must be taken into account when planning this kind of intervention.

Conclusions

As we pointed out in the introduction, the ability and opportunity to work are essential on both the individual and societal level. Although the concept of social skills training is familiar to mental health professionals in Hong Kong, it has not been applied in a systematized way. In particular, training programs that specifically address vocational problems are extremely scarce. The positive findings in this study show a clear way ahead. This training program, developed to be relevant to the needs of Hong Kong, could (and, we would argue, should) form an integral part of a typical rehabilitation program in psychiatric hospitals, sheltered workshops, day hospitals, and halfway houses.

The more structured, goal-directed methods of social skills training, despite being an import from the West, do seem well suited to Chinese culture. In view of this, a training manual in Chinese has been produced based on this research. The manual gives very specific guidelines, including individual session content. It is designed to be used by people who have had little formal training in psychiatric rehabilitation but who do have a wealth of practical experience. This should make it a valuable resource not only in Hong Kong but also in China. There, rehabilitation work of all sorts has received a significant boost since the founding of the All China Federation for the Disabled, headed by Deng Pufang (the paraplegic son of the erstwhile Paramount Leader, Deng Xiaoping).

We have shown that the theory base of social skills training as well as the structure of learning within the program needed no alteration for Hong Kong. At the same time it is very necessary to ensure that the content is based on relevant cultural considerations. Simply "lifting" a program from overseas is likely to create unnecessary difficulties and possibly unjustifiably bring the theory and structure into question when it is merely the content that needs to be modified. For many years a debate has been conducted about whether insight-based "psychotherapy" as a diffuse, nonfocused, emotion-based, lengthy intervention is suitable for Chinese people. One might equally well ask whether there are not more effective and efficient ways of approaching treatment for everybody (Pearson, in press).

Appendix. Self-administered checklist

Item Number	Items
1	Make an appointment over the phone for a job interview
2	Participate appropriately in a job interview
3	Dress appropriately to attend a job interview
4	Request urgent leave from supervisor
5	Resolve a conflict with supervisor
6	Resolve a conflict with a colleague
7	Avoid involvement in destructive gossip
8	Cooperate with colleagues to perform a group task
9	Refuse request from supervisor to work overtime when you have family responsibility or previous commitment
10	Help to instruct or demonstrate a task to a new colleague

References

Anthony, W.A., and Jansen, M.A. Predicting the vocational capacity of the chronically mentally ill: Research and policy implications. *American Psychologist,* 39(5):537–544, 1984.

Bell, M.D., and Lysaker, P.H. Psychiatric symptoms and work performance among persons with severe mental illness. *Psychiatric Services,* 46(5):508–510, 1995.

Bellack, A.S., and Mueser, K.T. Psychosocial treatment for schizophrenia. *Schizophrenia Bulletin,* 19(2):317–336, 1993.

Brown, M. Maintenance and generalization issues in skills training with chronic schizophrenics. In: Curran, J.P., and Monti, P.M., eds. *Social Skills Training: A Practical Handbook for Assessment and Treatment.* New York, NY: The Guilford Press, 1982. pp. 90–116.

Cohen, C.I. Schizophrenia and work. *Hospital and Community Psychiatry,* 35(10):1040–1041, 1984.

Curran, J.P. Social skills therapy: A model and a treatment. In: Turner, R.M., and Ascher, L.M., eds. *Evaluating Behavior Therapy Outcome.* New York, NY: Springer, 1985. pp. 122–145.

Dion, G.L., and Anthony, W.A. Research in psychiatric rehabilitation: A review of experimental and quasi-experimental studies. *Rehabilitation Counseling Bulletin,* March:177–203, 1987.

Douglas, M.S., and Mueser, K.T. Teaching conflict resolution skills to the chronically mentally ill: Social skills training groups for briefly hospitalized patients. *Behavior Modification,* 14:519–547, 1990.

Goldstrom, I., and Manderscheid, R. The chronically mentally ill: A descriptive analysis from the uniform client data instrument. *Community Support Services Journal,* 2:4–9, 1982.

Ip, F.; Pearson, V.; Ho, K.K.; Lo, E.; Tong, H.; and Yip, N. *Employment for People with a Disability in Hong Kong: Opportunities and Obstacles.* Hong Kong: University of Hong Kong, 1995.

Kelly, J.A. *Social Skills Training: A Practical Guide for Interventions.* New York, NY: Springer Publishing Company, 1982.

Kerlinger, F.N. *Foundations of Behavioral Research.* New York, NY: CBS College Publishing, 1986.

Kopelowicz, A.; Corrigan, P.; Schade, M.; and Liberman, R. Social skills training. In: Mueser, K., and Tarrier, N., eds. *Handbook of Social Functioning in Schizophrenia.* Boston, MA: Allyn and Bacon, 1998. pp. 307–326.

Ku, E.Y.H. Social rehabilitation of the ex-mental patient: An exploratory study of a group of young schizophrenic patients. Unpublished Master of Social Work dissertation, Department of Social Work and Social Administration, University of Hong Kong, 1984.

Leblanc, L.A., and Matson, J.L. A social skills training program for preschoolers with developmental delays: Generalization and social validity. *Behavior Modification,* 19(2):234–246, 1995.

Liberman, R.P.; DeRisi, W.J.; and Mueser, H.K. *Social Skills Training for Psychiatric Patients.* New York, NY: Pergamon Press, 1989.

Liberman, R.P.; Mueser, K.T.; Wallace, C.J.; Jacobs, E.; and Mueser, H.K. Training skills in the psychiatrically disabled: Learning coping and competence. *Schizophrenia Bulletin,* 12(4):631–647, 1986.

Lysaker, P.H.; Bell, M.D.; Zito, W.S.; and Bioty, S.M. Social skills at work: Deficits and predictors of improvement in schizophrenia. *Journal of Nervous and Mental Disease,* 183(11):688–692, 1995.

Massel, H.K.; Liberman, R.P.; Mintz, J.; Jacobs, H.E.; Rush, T.V.; Giannini, C.A.; and Zarate, R. Evaluating the capacity to work of the mentally ill. *Psychiatry,* 53:31–43, 1990.

McCreadie, R.G. A review and reformation of the concept of social skills. *Behavioral Assessment,* 4:1–33, 1982.

Mueser, K.T.; Bellace, A.S.; Morrison, R.L.; and Wade, J.H. Gender, social competence, and symptomatology in schizophrenia: A longitudinal analysis. *Journal of Abnormal Psychology,* 99:138–147, 1990.

Mueser, K.T.; Drake, R.E.; and Bond, G.R. Recent advances in psychiatric rehabilitation for patients with severe mental illness. *Harvard Review of Psychiatry,* 5(3):123–137, 1997.

Mueser, K.T.; Foy, D.W.; and Carter, M.J. Social skills training for job maintenance in a psychiatric patient. *Journal of Counseling Psychology,* 33:360–362, 1986.

Mueser, K.T.; Levine, S.; Bellack, A.S.; Douglas, M.S.; and Brady, E.U. Social skills training for acute psychiatric inpatients. *Hospital and Community Psychiatry,* 41:1249–1251, 1990.

Pearson, V. Words mean what I want them to mean: The analects meet Alice. *Transcultural Psychiatry,* 36:228–230, 1999.

Shepherd, G. Social skills training: The generalization problem. *Behavior Therapy,* 8:1008–1009, 1977.

Shepherd, G. Social skills training: The generalization problem—some further data. *Behavior Research and Therapy,* 16:287–288, 1978.

Shepherd, G. Introduction. In: Spence, S., and Shepherd, G., eds. *Development in Social Skills.* London, U.K.: Academic Press, 1983. pp. 1–20.

Solinski, S.; Jackson, H.J.; and Bell, R.C. Prediction of employability in schizophrenic patients. *Schizophrenia Research,* 7:141–148, 1992.

Trower, P. Toward a generative model of social skills: A critique and synthesis. In: Curran, J.P., and Monti, P.M., eds. *Social Skills Training: A Practical Handbook for Assessment and Treatment.* New York, NY: The Guilford Press, 1982. pp. 399–428.

Tsang, S., and Tsang, H.W.H. Social skills training group for psychiatric out-patients. *Journal of Hong Kong Psychiatric Association,* 7:34–38, 1988.

Tsang, H.W.H. Social performance, work success, and social skills training for schizophrenics in Hong Kong. Unpublished Master of Philosophy dissertation, City University of Hong Kong, 1992.

Tsang, H.W.H., and Pearson, V. A conceptual framework on work-related social skills for psychiatric rehabilitation. *Journal of Rehabilitation,* 62(3):61–67, 1996.

Tsang, H.W.H., and Pearson, V. Reliability and validity of a simple measure for assessing the social skills of people with schizophrenia necessary for seeking and securing a job. *Canadian Journal of Occupational Therapy,* 67(4): 250–259.

Unger, K.V., and Anthony, W.A. Are families satisfied with services to young adult chronic patients: A recent survey and a proposed alternative. In: Pepper, B., and Ryglewicz, H., eds. *Advances in Treating the Young Adult Chronic Patients* (New Directions for Mental Health Services, No. 21). San Francisco: Jossey-Bass, 1984. pp. 91–97.

Wallace, C.J.; Nelson, C.J.; Liberman, R.P.; Aitchison, L.D.; Elder, J.P.; and Ferris, U. A review and critique of social skills training with schizophrenic patients. *Schizophrenia Bulletin,* 6(1):42–63, 1980.

Wayslenki, D.A.; Goering, P.N.; Lancee, W.J.; Ballantyne, R.; and Farkas, M. Impact of a case manager program on psychiatric aftercare. *Journal of Nervous and Mental Disease,* 173:303–308, 1985.

Watts, F.N. Employment. In: Watts, F.N., and Bennett, D.H., 'eds. *Theory and Practice of Psychiatric Rehabilitation.* New York, NY: John Wiley and Sons, 1983. pp. 215–240

Wehman, P.; Hill, M.; Goodall, P.A.; Cleveland, P.; Barrett, N.; Brooke, V.; Pentecost, J.; and Bruff, B. Job placement and follow-up of moderately and severely handicapped individuals: An update after three years. In: Wehman, P., and Hill, M. eds. *Vocational Training and Placement of Severely Disabled Persons.* Vol. 3. Richmond, VA: Virginia Commonwealth University, 1982.

Wilkinson, J., and Canter, S. *Social Skills Training Manual: Assessment, Programme Design, and Management of Training.* New York, NY: John Wiley and Sons, 1982.

Wong, S.E.; Martinez-Diaz, J.A.; Massel, H.K.; Edelstein, B.A.; Wiegard, W.; Bowen, L.; and Liberman, R.P. Conversational skills training with schizophrenic in-patients: A study of generalization across settings and conversants. *Behavior Therapy,* 24:284–304, 1993.

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