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Enhancing staff attitudes, knowledge, and skills in supporting the self-determination of adults with intellectual disability in residential settings in Hong Kong—A pretest-posttest comparison group design

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Abstract

Background The ecological perspective recognizes the critical role that is played by rehabilitation personnel in helping people with intellectual disability (ID) to exercise self-determination, particularly in residential settings. In Hong Kong, the authors developed the first staff training program of its kind to strengthen the competence of personnel in this area. The purpose of this study was to examine the effectiveness of staff training in enhancing residential staff's attitudes, knowledge, and facilitation skills in assisting residents with ID to exercise self-determination.

Methods A pretest-posttest comparison group design was adopted. Thirty-two participants in an experimental group attended a six-session staff training program. A 34-item self-constructed scale was designed and used for measuring the effectiveness of the staff training.

Results The results showed that the experimental group achieved statistically significant positive changes in all domains, whereas no significant changes were found in the comparison group.

Conclusions The findings provided initial evidence of the effectiveness of staff training that uses an interactional attitude-knowledge-skills model for Chinese rehabilitation personnel. The factors that contributed to its effectiveness were discussed and recommendations for future research were made.

Keywords: self-determination, staff training, intellectual disability, attitude-knowledge-skills model, instructional strategies, Hong Kong.

Introduction

In recent years, organizations that represent people with intellectual disability (ID) (e.g., People First and the Arc) have become increasingly outspoken about the need for people with ID to have personal control and self-determination. The Arc (1998) stresses that people with ID can become self-determined if they are given adequate support, learning opportunities, and experience from significant people in their lives, such as family and paid carers. This belief is shared by those who support the ecological perspective. Abery and Stancliffe emphasize that people's face-to-face interactions within the microsystem environment greatly affect individuals' attainment and exercise of self-determination (Abery, 1994; Abery & Stancliffe, 1996). In a residential setting, interacting with residents around the clock, residential staff inevitably play a vital role in influencing residents' daily experiences and opportunities (Larson et al., 1994). Hence, effective staff training programs are necessary to help staff members become competent in facilitating residents' self-determination. Although staff training is vital, there are very few studies that concern staff training for self-determination in the disability field (Cooper & Browder, 2001). In Hong Kong, the present study is the first of its kind. The purpose of this study was to examine the effectiveness of a staff training

program for enhancing the competence of residential staff members in supporting the self-determination of adults with moderate grade ID.

Perspectives in Self-Determination

The concept of self-determination arose in the early 1940s in the field of personality psychology (Wehmeyer, 1998). There appears to be two major interlocking perspectives of self-determination. While one perspective focuses on self-determination as an intra-personal construct that involves motivation, attitudes, and skills in exercising self-determination, the other perspective stresses the importance of environmental factors in influencing self-determination. According to Deci and Ryan (1985), self-determination is a motivational construct that is regarded as an intrinsic need. Essentially, the exercise of self-determined behaviors is influenced by a person's intrinsic motivations, extrinsic motivations (involving a continuum of degrees of autonomy - integration, identification, introjection, and external regulation), or amotivation (Deci & Ryan, 1985). Wehmeyer and colleagues propose a functional theory of self-determination and suggest that a self-determined person possesses specific attitudes (i.e., psychological empowerment and self-realization) and abilities (i.e., behavioral autonomy and self-regulation), and consistently performs self-determined actions (Wehmeyer, 1996; Wehmeyer, 2003; Wehmey et al., 1998). They categorize self-determined behaviors into 12 components, which include choice-making skills, goal-setting and attainment skills, and independence. This functional model of self-determination emphasizes

that self-determined behaviors are intrinsic and can be learned and enhanced. Mithaug et al. (2003) suggest that this learning process is self-regulatory. In other words, an individual will try to maximize his or her self-determination learning by actively negotiating with the environment to create learning opportunities.

On the other hand, Abery and Stancliffe (2003a) emphasize the role of environment in facilitating self-determination. They describe an ecosystem that consists of four levels of environmental factors that influence self-determination: the microsystem, mesosystem, exosystem, and macrosystem (Abery & Stancliffe, 1996; Stancliffe et al., 2000b). They propose that self-determination occurs as a result of ongoing interplay, across the life span, between individuals and their multiple environments (Abery & Stancliffe, 2003a). residential setting, which is considered a microsystem, an individual's self-determination can be enhanced in the following ways: (1) fulfillment of a basic need, (2) respect and acceptance, (3) opportunities for self-determination, (4) positive reinforcement for attempts to exercise personal control, (5) participation and inclusion, (6) the availability of role models, and (7) individualized programming and support (Abery & Stancliffe, 2003b). This study adopted the environmental perspective that is proposed by Abery and Stancliffe, and attempted to modify a major environmental factor – staff of residential services – at the microsystem level by enhancing their attitudes, knowledge, and skills in facilitating the self-determination of residents with ID.

The Roles of Environment and Staff in Self-Determination

Stancliffe et al. (2000b) compared the degree of personal control that is exercised by adults with ID who had no guardian or conservator with that of adults who had a guardian or a conservator. Their findings suggested that individuals with no guardian or conservator exercised more personal control than those with a conservator, and those with a conservator exerted more personal control than those with a guardian. The authors suggested that people who were close to individuals with ID (e.g., support staff) might consciously and/or unconsciously provide fewer opportunities for personal control to individuals with ID.

Other studies conducted by Stancliffe and colleagues examined staff-related and environmental factors that contributed to self-determination and personal control (Stancliffe, 1997; Stancliffe et al., 2000a; Stancliffe et al., 2000b). In one study, Stancliffe (1997) found that the presence or absence of staff was significantly related to residents' choice making. This might be because residents felt free to do what they liked and no permission from staff was needed. In another study to identify the microsystem environmental variables (i.e., living environmental variables, staff autonomy, and staff characteristics) that are associated with self-determination, Stancliffe and his colleagues (2000a) found that living environmental variables (e.g., program operation and daily routines) made a significant contribution to residents' personal control. Residents who exercised more personal control in settings in which the policies and practices supported residents' autonomy demonstrated greater

individualization. The authors recommended that environmental interventions such as staff training and improving staff working practices be implemented in these community settings.

With regard to the relationships between the size of a living unit and the degree of restrictiveness in the environment and self-determination, studies suggest that a small-sized living unit (i.e., 1 to 5 persons) is significantly related to self-determined behaviors (e.g., Stancliffe, 1997; Tossebro, 1995). In a longitudinal study that was conducted by Stancliffe and Abery (1997) to compare the level of opportunity for choice making between a group of "movers" (participants with severe/profound developmental disabilities who had moved from the institutions to community residential settings), and a group of "stayers" (those who stayed behind in the institutions), the researchers found that the movers had more opportunities to exercise choice making than had the stayers. In another study, Wehmeyer and Bolding (1999) found that there were significant differences in the levels of self-determination, autonomy, and opportunities to make choices between those individuals who lived or worked in non-congregate community-based settings and those who lived in institutions. and Bolding (2001) also examined the level of change in self-determination that was reported by individuals with ID who had moved from a more restrictive to a less restrictive work or living setting. Their findings suggested that there was significant positive change in self-determination after a move to a less restrictive environment. The cited studies show that individuals with ID enjoy a higher degree of self-determination in a smaller sized and less

restrictive living environment.

In Hong Kong, the community-based residential services for people with ID are usually larger in size. The hostels under consideration in our present study have a standard provision of 56 adults with moderate ID per hostel. Each resident lives with 6 to 7 other residents in one of the several quarters that are housed in a block in a public housing estate. Communal facilities for dining and social activities are standard practice in a hostel. Under these conditions, there is a need to ensure the proper functioning of the hostels and residents involved. Indeed, the staff members of these residential services have to be creative in facilitating self-determination among the residents. Moreover, the concept and practice of self-determination on people with ID are relatively new in Hong Kong. Traditionally, 'Chinese socialization was described as including training for obedience to authority, for proper conduct, for impulse control, while a relative lack of emphasis is given to independence, assertiveness and creativity' (Wu, 1996, p.148). In addition, in order to preserve interpersonal harmony and avoid open conflicts, the Chinese tend to adopt an unassertive style of communication in interpersonal interactions (Gao, Ting-Toomey & Gudykunst, 1996). Indeed, according to Wu (1996), these traditional values appear to have 'an enduring historical and cultural continuity' (p. 154). These traditional values may affect the facilitation of self-determination among the staff who are working with people with ID in the following ways. First, the staff adhering to these traditional

values of "discipline and obedience" would need to learn to understand and accept the importance of such values as choice making and assertiveness for people with ID. Secondly, staff may need to learn the actual skills in facilitating self-determination as many of them have not been culturally socialized to do so. Lastly, people with ID may need a lot of encouragement and opportunities for them to learn the concept and practices of self-determination as they are not culturally prepared to do so. Thus, staff training to improve the working attitudes and practices of facilitating self-determination is perhaps especially important in Hong Kong, because a facilitative environment enables residents to have more opportunities to exercise self-determination.

An Interactional Attitude-Knowledge-Skills Model

Historically, studies on staff training in the rehabilitation field focus on skills enhancement of staff (e.g., Cooper & Browder, 2001; Parsons et al., 1993; Sigafoos et al., 1992). However, skills training without enhancing attitudes and knowledge may not be able to foster the commitment of the individual staff members who are involved (Tittnich, 1986). Because self-determination is a relatively new concept in the field of intellectual disability in Hong Kong, residential staff have very little knowledge or skills in facilitating the self-determination of people with ID. Moreover, they may not see the importance of fostering self-determination and may resort to their own values and behavioral patterns to handle residents' daily issues. Taking reference from the cognitive dissonance theory (Festinger,

1957), this staff training program recognizes that staff look for consistency in their own attitudes, beliefs, knowledge, and behavior. Thus, an effective staff training program enables staff to evaluate their old values and behavioral patterns, and develop new values and behavioral patterns that are consistent with the new knowledge that has been acquired during the training (Tittnich, 1986). In the case of staff training for workers in facilitating self-determination for people with ID, the training must provide opportunities for self-examination of one's attitudes and practices in facilitating self-determination for people with ID. It must also help staff members to acquire the knowledge and skills to recognize and respond to their residents' spoken and unspoken preferences, and become proficient in supporting residents in decision making, goal setting, problem solving, and so on.

Our approach to staff training stresses the interaction of attitudes, knowledge, and skills. It covers the rationales for supporting the self-determination of people with ID, knowledge on self-determination (e.g., personal preferences, choice making, decision making, problem solving, goal setting, and attainment), and staff skills in facilitating residents to exercise self-determination.

The objective of this study is to examine the effectiveness of a staff training program that uses an interactional attitude-knowledge-skills model. The hypothesis is that participants in the experimental group will have significantly higher scores in positive attitudes, knowledge, and skills in facilitating self-determination than will the participants in the comparison group.

Method

Research Design and Participants

This study adopted a pretest-posttest comparison group design. The study participants were 45 hostel staff members. This was the entire complement of staff (including social workers, direct carers, and support staff) from three hostels that are operated by the same non-governmental organization. Each of these three hostels has the same service nature and size, and provides residential service for 56 adults with moderate ID who are working in supported employment settings or sheltered workshops. Two hostels out of three were randomly chosen and all of the thirty-two staff members from the two hostels became members of the experimental group, and attended a six-session staff training program, while the thirteen staff members of the third hostel comprised the comparison group and did not receive any training during the research period. The researcher provided the same training to participants who were in the comparison group after the research was completed.

Instrumentation

All participants completed a questionnaire before and after the staff development program. Based on the work of Abery and Stancliffe (1996), Deci and Ryan (1985), and Wehmeyer et al. (Wehmeyer, 1996; Wehmeyer et al., 1998), and with the Hong Kong context in mind, a self-constructed scale on attitudes, knowledge, and skills in facilitating the self-determination of people with intellectual disabilities (abbreviated to the 'scale on

self-determination') was established and was administered by the trained interviewers. The scale had 34 items and was used to assess participants' attitudes towards, knowledge of, and skills in facilitating the self-determination of residents. A seven-point Likert scale and vignette scenarios were used in this scale. The use of the vignette scenarios aimed to reduce the social desirability effect. They were carefully developed for the Hong Kong context, and were based on ideas that were generated by a focus group that consisted of residential staff and on the authors' clinical experiences. The vignettes were written to reflect local conditions and practices. For examples, in one vignette, the typical daily routine of a hostel when residents have to go out for physical exercise at night was used. Participants were tested on the extent to which they allowed the residents to choose to go or not to go out for physical In another vignette, we selected a typical regular meeting in the hostel as the exercise. scenario and asked the participants how they would facilitate the expression of self-determination of the residents.

The Attitudes Domain

The *attitudes* domain contained 19 items that examined the participants' attitudes towards the self-determination of people with ID. Sixteen items were presented in a seven-point Likert scale. Each of these items consisted of a statement (e.g., "People with ID have the right to self-determination") and the participants were invited to answer to what extent they agreed with the statement. On the scale, '1' represented 'absolutely disagree' and

'7' represented 'absolutely agree.' The other 3 items were questions that concerned the participants' attitudes towards the vignette scenarios (e.g., "What would you do if their decision involves a certain amount of danger?"). The participants were invited to answer in their own words. These answers were then evaluated according to the scoring scheme that was developed by the authors. A high score reflected a positive attitude towards the self-determination of people with ID. The maximum score for this domain was 118.

The *Knowledge* Domain

The *knowledge* domain contained 7 items that examined the participants' fundamental and practical knowledge of facilitating people with ID to exercise self-determination. Six items were presented in a seven-point Likert scale. Each item consisted of a statement (e.g., "Self-determination is a sign of being mature and independent") and the participants were invited to answer to what extent they agreed with the statement. This domain also contained an open-ended question that concerned the participants' knowledge of the component elements of self-determined behavior. The participants' answers were again evaluated according to the scoring scheme. A high score reflected a high level of knowledge of facilitating people with ID to exercise self-determination. The maximum score for this domain was 54.

The Skills Domain

The *skills* domain contained 8 items that examined the participants' skills in facilitating

people with ID to exercise self-determination. All items were related to the participants' facilitation skills in responding to the vignette scenarios (e.g., "A resident told you he/she dislike the current job in the sheltered workshop. What would you do?"). The participants were invited to give their own answers. These answers were then evaluated according to the scoring scheme. A high score reflected a high level of facilitation skills. The maximum score for this domain was 23 (see Appendix A).

Validity and Reliability of the Scale

The face and content validity of this scale was reviewed by a panel of experts that consisted of professorial staff in social work, two social workers, and two welfare workers who have much experience in the field of ID. They were invited to comment on the relevance and appropriateness of the scale. A pilot test was also carried out to explore the content validity. A hostel that is run by another agency and that has the same service nature and capacity as the participating hostels was used to carry out the pilot test. No major problems were encountered in the pilot test, but it was decided that some minor changes in the wording of the questionnaire would give the participants a more concrete understanding of the questions. The vignette scenarios were also tested. The participants in the pilot test consistently agreed that the vignette scenarios typified the difficult situations that concern the self-determination issues which are faced by residents with ID in their hostel life. The scoring scheme of the questionnaire was also finalized after taking into account the comments that

were received following the pilot test. The preliminary validation of the scale was thus carried out through these review processes.

In this study, the scale achieved good reliabilities. The Cronbach's alpha coefficient of the *attitude* domain was 0.76; of the *knowledge* domain, 0.71; and of the *skills* domain, 0.60; and the total score was 0.83.

Training of Interviewers

To prevent the potential bias that is inherent in the self-reported format, with the participants casting favorable results to the training, we decided to recruit independent interviewers to administer the questionnaire to the participants. A three-hour training session for interviewers was held in late March 2003. All interviewers were social workers who were working or had previously worked in the field of ID. During the training session, participants studied the interviewing manual and the scoring scheme, discussed these items, practiced interviewing and scoring, reviewed the session, and gave relevant feedback. In the pretest, all interviewers rated the staff of the hostel together with the principal researcher and author. Further analyses showed a high concordance rate of 93% between the interviewers and the principal researcher.

To strengthen the reliability of data, a second training session for interviewers was held in late June 2003 to give the interviewers a revision session before the posttest.

Data Collection

Forty-five participants, members of both the experimental and comparison groups, took part in the pretest in late March 2003. They were individually interviewed by the trained interviewers. The average time for completing the scale was 45 minutes. Forty-four participants participated in the posttest in early July 2003. One participant in the experimental group left the job in the time between the tests.

Intervention

Structure of the Staff Training

The entire intervention consisted of six 3-hour sessions that were held biweekly. Each staff member in the experimental group was required to attend all six sessions. The intervention was implemented in a workshop format. The training workshops were run between early April and the end of June 2003.

Curriculum of the Staff Training

The objectives and content of the staff training program are to help participants (i.e., staff members) (1) to build positive attitudes towards self-determination; and (2) to enhance both fundamental and practical knowledge. The fundamental knowledge includes basic assumptions of self-determination: what self-determination is, why self-determination is important for people with ID (Deci & Ryan, 1985; Loon & Hove, 2001; Nirje, 1972; O'Brien, 1981; Wehmeyer & Schalock, 2001; Wehmeyer & Schwartz, 1998), and how environment

influences people's self-determination (Abery, 1994; Abery & Stancliffe, 1996). The practical knowledge includes how to promote a supportive environment for residents, what self-determination skills are (Wehmeyer et al., 1998), and how to learn effective communication and facilitation skills. In the area of communication skills, both verbal and non-verbal feedback are covered. Verbal feedback encompasses non-controlling feedback, recognition, encouragement, rationale giving, and acknowledging feelings (Deci & Chandler, 1986). Non-verbal communication includes gestures, postures, touch, social distance, facial expression, eye contact, and vocal cues (e.g., tone, pitch and volume, inflection and accent) (Noels et al., 2003). Effective facilitation skills include: a) engaging skills—engaging residents and understand their needs and unspoken preferences; b) visual cues and pictorial presentation—presenting choices to residents; c) effective presentation skills—helping residents understand situations; d) participation enhancement techniques—facilitating residents' involvement in the activity process; and win-win negotiating techniques—reaching a commonly accepted decision among conflicting needs.

Instructional Strategies for Staff Training

Instructional strategies for staff training are as important as the training model and its training contents. Jurow (2001) suggests a climate for learning that includes five conditions: level of participation, respect, collaboration, reflection and practice, and empowerment. Others suggest that multiple instructional techniques for staff training are more effective than

a single technique (Cooper & Browder, 2001; Demchak, 1987). Scholars in the staff training field suggest that effective training should take into consideration the learning style (i.e., activist, reflector, theorist, pragmatist) and characteristics (e.g., past experience and behavioral patterns, personal belief system and attitudes, task-oriented) of adult learners (Knowles, 1990; Rogers, 2001). Moreover, personal control and self-determination are not the dominant cultural values that are adopted by the Chinese (Sha, 1988; Wu, 1996), so we designed many experiential and interactive activities in the staff training to maximize participants' learning. For example, stimulating & experiential games, group exercises, and group discussions were used to encourage the active participation of participants; role-play and videotaped episodes of daily hostel life were used to facilitate reflection; and homework assignments between sessions served to empower participants by providing them with opportunities for application. Three strategies are discussed below.

Role-play

Role-play is an efficient method that allows participants to directly practice their skills in a simulated real-life situation in which they can make mistakes without having to worry about the consequences (Rogers, 2001). The interaction and feedback giving between role-players and observers can help generate a number of solutions to a problem (Milroy, 1982; Rogers, 2001). For example, we conducted a role-play exercise for which the scenario was a room meeting among a number of residents. One of the volunteer role-players acted as a staff

member, while others acted as residents and assumed different personalities and characteristics. In the debriefing section that immediately followed the role-play, the author first invited the role-players to share their feelings about playing the part of a resident or staff member. Then all of those who observed the role-play were invited to share their feelings and suggestions about how self-determination could be facilitated. The participants had the chance to see a situation from the residents' point of view, and to experience what a resident might feel in that situation. They could then differentiate between the kinds of interactions that support autonomy and those that do not, thus leading to a change in their attitudes.

Reflection sessions using videotaped episodes

Based on the idea of 'visual playback' in social skills training, a research assistant randomly and freely videotaped episodes of day-to-day interactions between the residents and the participants (staff). These episodes included mealtimes, leisure activities, group activities, room meetings, and residents' meetings. The authors then selected relevant episodes that were related to the concept of self-determination and used them as good or bad examples of self-determination.

One advantage of this type of activity over a role-play is that the episodes that were videotaped were real-life situations that involved the participants and residents. It was a powerful way to facilitate self-reflection and increase the self-awareness of the participants.

Another advantage is that the videotape of the episode could be rewound and reexamined

(Milroy, 1982). This method also provided a valuable opportunity for peer exchange. In the reflection session, a discussion following the playback was initiated to foster collaboration among the participants. Participants who performed well in the video acted as role models for others. Those who appeared in the videos could seek comments and suggestions for further improvement. Brainstorming for creative alternatives could also take place. It is believed that such peer exchange gives staff a fresh and exciting learning experience.

Homework Assignments

Homework assignments help learners transfer the skills learned in the training session to their real-life situations (Wilkinson & Canter, 1982). The trainer giving feedback on learners' homework assignments in a following session enable learners to gain a *powerful incentive to improve* (Wilkinson & Canter, 1982).

The authors gave participating staff a homework assignment in every session, offering them the chance to immediately put into practice what they learned about facilitating their residents' self-determination. Equally, the assignment itself helped give the residents the experience of exercising self-determination. At a subsequent session, staff members were required to report on their homework assignments. During the debriefing, staff shared and discussed their experiences in applying the new skills and methods.

Results

Profile of Participants

In total, 45 staff members completed the pretest, but only 44 completed the posttest. The average attendance rate was 96%. There were 39 female and 6 male participants, who held various positions at the hostels. Most of them provided direct care and support to the residents in daily hostel life (n = 33, 73.3%), and 5 participants (11.1%) held top managerial or middle managerial positions. The remainder included supporting staff members such as clerks, cooks, and cleaning staff.

Twenty-nine of the participants had been working in the field of ID for over 5 years (64.4%), and the rest had less than 5 years' experience (n = 16, 35.6%). Half of the participants had not obtained secondary school qualifications (n = 23, 51.1%). Nine participants had a secondary or matriculation education (20%), and 13 participants held diplomas or degrees (28.8%). Half of the participants were middle-aged, between 40 and 49 years old (n = 25, 55.6%). Six participants were aged between 20 and 29 (13.3%), eight between 30 and 39 (17.8%), and six between 50 and 59 (13.3%). Nearly half of the participants had never heard of the concept of self-determination for people with ID (n = 21, 1)Table 1 shows that the mean scores of the participants who were previously aware 46.7%). of the concept of self-determination were significantly higher than the mean scores of those who were not in the Attitude domain (p=0.01), the Skills domain (p=0.00) and the total score (p=0.00). However, further analysis shows that there was no statistical significance between participants who had and had not heard of the concept of self-determination, with 40.6% (13 out of 32) of the participants in the experimental group and 61.5% (8 out of 13) of the participants in the comparison group who had never heard of this concept (Chi-square = 0.20). Thus, the profile of our participants is comparable to that of the staff of a standard hostel for adults with moderate ID in terms of staffing composition and educational levels.

Pre- and Post-training Change

Comparison of Pre-test Mean Scores for Experimental and Comparison Groups

Independent samples *t*-tests were used to examine the differences at pretest between the experimental and comparison groups. The results show that there was no difference between the two groups in all domains or in the total scores (see Table 2), which indicates that the performances of the two groups at pre-test were comparable.

Between-group Differences between Experimental and Comparison Groups at Posttest

The differences between the experimental and comparison groups were examined employing analysis of covariance (ANCOVA), with the baseline value of each dependent variable treated as the covariate, so that the post-group outcome could be adjusted with respect to the baseline severity. The tests for regression slope homogeneity were assessed before ANCOVAs were performed. For all analyses of post-training outcomes, there was no evidence for the homogeneity of regression assumption to be violated, which indicates that the baseline severity was not differentially predictive of the outcomes for the experimental

and comparison groups. The ANCOVAs show significant differences between the two groups in the *attitude* domain, the *knowledge* domain, the *skills* domain, and in the total score (see Table 3).

Further effect size analyses showed a medium magnitude of change in the *attitude* domain (Cohen's d = .48), the *knowledge* domain (Cohen's d = .70), the *skills* domain (Cohen's d = .66), and the total score (Cohen's d = .63) between participants in the experimental and comparison groups at posttest (see Table 4).

Discussion

The findings of this study suggest that 24 participants (53.3%) were aware of the concept of self-determination. However, their actual scores in the knowledge domain were not significantly greater than those of the participants who had never heard of the concept before the training. This echoes the findings of the study that was conducted by Wehmeyer et al. (2000), which revealed that although over 90% of the teachers realized that self-determination is important to students with disabilities, 41% admitted that they did not have sufficient knowledge in the area. Thus, even though rehabilitation personnel in this study might have come across this concept through brief talks and/or basic training in rehabilitation, they might not have obtained a full comprehension of this concept, such as "the component elements of self-determined behaviors" proposed by Wehmeyer (1996).

The preliminary findings of this study suggest that our staff training program was able to

help participants gain the knowledge, attitudes, and skills to facilitate the self-determination of residents with ID. The results of our focus group interview of participants after the training indicate that the participants considered that the training enhanced their competence in supporting residents to exercise self-determination (Wong, 2003). On a scale of 1 to 5 (5 = "have learnt a lot") the participants said that they had experienced substantial increases in their attitudes (M = 4.20), knowledge (M = 4.27), and skills (M = 3.97) to facilitate self-determination. One reason that may be ascribed to these positive changes is the creative use of the multiple instructional strategies. The results are consistent with those of prior studies in which positive changes in staff performance were demonstrated after staff received staff training that used multiple instructional techniques (Coopers & Browder, 2001; Parsons & Reid, 1995). Effective staff training may also result from connecting the content of the program to the daily and ongoing activities of the workplace, and by providing participants with opportunities for application between sessions (Field & Hoffman, 1996). In this study, the authors used the daily events and routines that took place in the hostels to devise role-play scenarios, and designed homework assignments that helped participants to immediately apply what they had learned in the sessions to their daily work. In addition, Huang (1996) asserts that visualization helps Chinese people to learn abstract concepts. It is believed that the reflection sessions that used videotaped episodes which were used in this staff training program provided a stimulating way for the participants to learn. Through the playback of videotaped episodes, the participants could visualize how they could support or might hinder residents in expressing themselves and exercising self-determination. Golden & Reese (1996) discovered that staff responded positively to training when they found that their newly learned skills were acceptable to other colleagues. During training, their newly acquired thoughts and skills were shared and recognized in the workplace during that period. Indeed, the agency's strong commitment and support to its staff who received training possibly contributed much to the positive results. Therefore, it is recommended that the design of any staff training program on self-determination adopt this interactional attitude-knowledge-skills model and use multiple instructional strategies.

This study did not measure self-determination among the residents of the hostels, nor did it measure whether the size of the living unit affected self-determination among the residents. Despite the fact that there is an international trend to provide small group homes or hostels for people with ID, there is no indication that the Hong Kong government is going to downsize the number of residents in a hostel. Given the fact that studies have demonstrated that a larger size residential unit might limit the opportunities for self-determination (e.g., Stancliffe, 1997; Stancliffe & Abery, 1997; Stancliffe et al., 2000a; Wehmeyer & Bolding, 1999; 2001), it is necessary for the agency personnel who work with people with ID to develop creative means to facilitate the exercise of self-determination of residents. In Hong Kong, a key worker system has been established to provide individualized attention to people with ID in

many hostels. These key workers have frequent and personalized contact with individual residents. It would seem logical for these agencies to provide staff training to all key workers so that they can be equipped with the knowledge, attitudes, and skills to facilitate self-determination among residents with ID.

Despite the positive findings of this study, caution must be taken when interpreting the results that relate to the skills domain. Although the Cronbach's alpha for the skills domain reached an acceptable level for an exploratory study (0.6), it was lower than the recommended coefficient of 0.7 for a good and reliable scale or subscale. One reason that may ascribe to this relatively low reliability score is that, the study sample was not a homogenous one (Shrout, 1998). Since the participants in the training were comprised of social workers, direct carers, and support staff, there might be a greater chance of variation in their responses. To increase the reliability of this skills domain, it would be advisable to focus our training on one specific group of staff in the hostels and to increase the sample size of the participants.

Lastly, it is also important to state the limitations of the study. This study was taken as an initial attempt to study the effectiveness of a staff training program in enhancing staff's attitudes, knowledge, and skills in facilitating the self-determination of people with ID. A larger scale study which measures the longer-term effect of this staff training programme is definitely needed for future research. Because the hostels, rather than individual members,

were randomly assigned to the experimental and comparison groups, biased findings could have resulted from the culture and everyday practices of the individual hostels. It is recommended that randomization of individual staff be carried out in future research. Although the self-constructed self-determination scale underwent initial reliability and validity tests, the use of other validity tests, such as construct validity, is highly recommended for further and more rigorous testing of the scale. Likewise, other reliability tests such as inter-rater reliability and test-retest reliability are recommended in future studies. Lastly, this study measured the staff outcomes only, and did not examine the change in self-determination among the residents as a result of the staff training. Future studies are suggested to test the changes in residents in the hostels.

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TABLE 1
Comparison of the Mean Scores of Participants Who Were Already Aware and Unaware of the Self-Determination Concept at Pretest

	Aware (n=24)			Unaware (n=21)	
Domain	M	SD	M	SD	p
Attitude Domain	80.17	11.10	73.62	7.07	0.01
Knowledge Domain	31.38	3.94	30.86	3.47	0.32
Skills Domain	12.08	4.05	8.29	2.78	0.00
Total Scores	123.63	16.09	112.76	9.82	0.00

Note. Significance level at p<.05

TABLE 2
Comparison of Pretest Scores for the Experimental and Comparison Groups

	Experimental Group (n = 32)		Comparison Group $(n = 13)$		
Domain	M	SD	M	SD	p
Attitude	76.22	10.28	79.31	8.89	0.49
Knowledge	30.75	3.25	32.08	4.63	0.10
Skills	10.50	3.69	9.85	4.72	0.15
Total Score	117.47	13.99	121.23	15.84	0.59

Note. Significance level at p < .05.

TABLE 3
Comparisons between the Experimental and Comparison Groups in All Domains and Total Score

	Experimental Group $(n = 31)$		Compa Group (rison $(n = 13)$		
Domain	M^a	SD	M^a	SD	F	p
Attitude	80.48	8.99	76.47	7.69	3.96	0.05
Knowledge	32.23	3.45	29.68	3.93	5.33	0.03
Skills	11.44	3.78	9.10	3.28	4.74	0.04
Total score	123.92	13.55	116.20	10.98	6.36	0.02

^a Adjusted means after the effect of the covariate (i.e., the baseline value of each outcome variable) was statistically removed.

Note. Significance level at $p \le .05$.

TABLE 4
Effect Size of the Training at Posttest

Domain	Cohen's d
Attitude domain	0.48
Knowledge domain	0.70
Skills domain	0.66
Total score	0.63

Note. Small magnitude of change = 0.0 - < 0.3.

Medium magnitude of change = 0.3 - < 0.8.

Large magnitude of change = 0.8 - 2.0.

Appendix A

Sample Items of the Scale on the Attitudes, Knowledge, and Skills in Facilitating the Self-Determination of People with Intellectual Disabilities

The instrument has a total of 34 items arranged in 3 domains and was used to assess residential staff's attitudes towards, knowledge of, and skills in facilitating the self-determination of residents. A 7-point Likert scale ('1' represents 'strongly disagree' and '7' represents 'strongly agree'), vignette scenarios, and an open-ended question were used. A few sample items with their means and standard deviations are shown below for each domain.

Item	M	SD
Examples from the <i>Attitude</i> domain (19 items)		
People with ID have the right to self-determination.	5.84	1.21
 When you let residents make decisions, you are afraid that they may make mistakes or may not choose what is best for them. 	4.93	1.29
 When the behavior of a resident is out of bounds according to your own standard, you put a stop to it. 	4.07	1.32
 Residents do not ask for self-determination. 	2.87	1.31
In a meeting, you are planning an outdoor activity with the residents for next month. What would you do if their decision involved a certain amount of danger? (Vignette item with scoring key.)	0.36	0.48

- 0 Staff member shows that he/she would not allow residents to take any risk.
- 1 Staff member shows his/her open-mindedness and actively seeks a win-win solution.

Examples	from	the	Know	vledoe	domain	(7 items)	١
LAumpics	110111	u	ILIUV	vicuec	aomani	(/ 1101115/	,

- The self-determination ability of a person with ID can be enhanced through learning.
 The self-determination of a person with ID is affected by 6.07 0.96
- The self-determination of a person with ID is affected by whether the people around him/her support this idea. 6.07

Examples from the Skills domain (8 items)

• When a resident tells you happily, "I have a crush on so and so – I want to date him/her," what is your usual verbal response? (Please use exact wording.)

0.14

0.33

- 0 Controlling or negative feedback; demeaning terms.
- 1 Positive but controlling feedback.
- 2 Positive feedback; listens to and acknowledges the resident's needs and feelings
- In a meeting, you are planning an outdoor activity with the residents for next month. The cognitive ability of individual residents varies. How do you start the discussion?
 - 0 Staff member gives only a verbal introduction, and does not use any visual cues/pictorial presentation. He/she does not invite every resident to speak.
 - 1 Staff member encourages and invites every resident to express his/her preferences and ideas, but does not use visual cues/pictorial presentation.
 - 2 Staff member uses visual cues/pictorial presentation to facilitate the understanding and expression of every resident.