

Training in Social Problem Solving Among Persons With Schizophrenia

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Introduction by the column editors:

The specificity of the different curricula used for training persons with schizophrenia in the wide spectrum of skills they need is both a strength and a limitation. By separately teaching skills for each domain of community adaptation, clinicians using behavioral learning principles have overcome most symptomatic and cognitive barriers to learning. It is axiomatic in behavior therapy that "you get what you teach"; hence it has been necessary to adopt arduous training in many areas to bring about improvements in social functioning (1).

Although social skills training has yielded excellent acquisition and durability of skills, generalization to other domains of functioning has to be carefully programmed. One way to promote generalization is to teach persons with schizophrenia a general social problem-solving method. In the modules for training social and independent living skills produced by Liberman's UCLA group, problem solving is embed-

ded in two of the eight learning activities for each skill area, which may account for the durability and generalization of skills reported in recent studies of the modules (2-4). Information about the modules for teaching social and independent living skills is available on the Web site of Psychiatric Rehabilitation Consultants at www.psychrehab.com.

Problem solving is a core element in a wide variety of interventions for anxiety, mood, and schizophrenia spectrum disorders (5,6). Developing the ability to identify and cope with stressors, interpersonal conflicts, and other obstacles blocking achievement of goals is a key aspect of most psychological treatments. We describe a module for teaching interpersonal problem-solving skills, its use with outpatients who have schizophrenia, and the impact of the training as measured by the Assessment of Interpersonal Problem Solving Skills (7).

Evaluation of the module

Sample

Participants were 75 individuals with a DSM-III-R diagnosis of schizophrenia or schizoaffective disorder confirmed by the Structured Clinical Interview for DSM-III-R (SCID) and other clinical sources. The diagnosticians were trained to high levels of reliability and accuracy (8). Participants were assigned to receive either four months of weekly group sessions of training in social problem solving (N=38) or an equal amount of supportive group therapy (N=37).

Because the study was conducted with outpatients at a Veterans Affairs

(VA) hospital, 90 percent were male. Forty-eight percent were African American, 13 percent Hispanic, 2 percent Asian, and 37 percent Caucasian. The mean±SD age of the sample was 38.7±8.8. More than 85 percent had never been married. The mean number of years of education was 12.3. The mean duration of illness was 13.2±8.9 years. No significant differences were found between the persons assigned to the two treatment conditions on any of the demographic or clinical variables, including chlorpromazine-equivalent dosages of antipsychotic medication. Each group consisted of four to six patients recruited from among stabilized outpatients living in residential care homes or their own apartments.

Interventions

The module consists of a trainer's manual and a videocassette. The manual has step-by-step, prescriptive instructions for the therapist or trainer on how to conduct each group session. The aim of the module is to teach participants how to identify and successfully cope with problems encountered in everyday life. The videocassette demonstrates each step of social problem solving. The steps are identifying the problem, generating alternative solutions, weighing the pros and cons of each alternative, selecting a feasible solution, and planning to implement the selected alternative. The videocassette depicts 15 interpersonal scenes that serve as prompts to evaluate the participant's mastery of the technique (Table 1).

In a typical session, the trainer might tell the participants: "Let's pretend that you are applying for a job.

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Table 1**Scenarios used in the module for teaching interpersonal problem-solving skills**

Location	Transaction
Restaurant	A woman at adjacent table is smoking. The woman continues to smoke despite being told that she is seated in a non-smoking area.
A home	A friend is helping another with homework from a class. The class conflicts with their plans to attend a concert. The friend suggests that the other miss class for their date.
Doctor's office	The doctor says he wants the patient to swim for half an hour every day to improve her health. The patient tells the doctor that she dislikes swimming. The doctor insists that swimming is the best form of exercise.
Restaurant	The waitress brings the wrong order.
Office	The boss asks his secretary to remain after hours to complete an assignment. The secretary says she cannot stay because she has a prior commitment. The boss insists that she work overtime.
Appliance store	A customer asks to see a sale item. The salesperson demonstrates the deluxe model, which is out of customer's price range. The customer indicates that he prefers the sale item. However, the salesperson insists that he purchase the deluxe model.
A home	Two friends get together to watch a football game. Just as the game is about to begin, the friend changes the channel. The other friend changes the channel back and says he is not finished watching another program.
Social Security office	A disability recipient has not received her monthly check. She informs a clerk that her rent is past due and asks her to look into it. The clerk suggests that the check has probably been delayed in the mail and turns her attention to the next person in line.
Restaurant	A customer informs the waiter that he has forgotten his wallet and does not have money to pay the check. The waiter says disrespectfully, "We do not give away free food here."
Electronics store	A customer returns the day after purchasing a stereo because it does not work. The salesperson says there is nothing she can do.
Home	Two friends have plans to attend a concert. One has paid for the tickets and now cannot attend the concert. He tells the other that he is going to sell both tickets to someone else.
Doctor's office	A man informs the receptionist that he is present for his 1:30 p.m. appointment with his doctor. Shortly after, another person informs the receptionist that she is there for a 2:00 p.m. appointment. The receptionist takes the second person out of turn.
Electronics store	A customer approaches a salesperson to ask for assistance. The salesperson, who is on the phone, tells him she will be right with him. Another customer arrives just as the salesperson finishes her call. The salesperson offers to help the second person before the first.
Office	A man and woman conversing discover that they share golf as a common interest. The woman invites the man to play on Saturday. He says he has plans to play with someone else on Saturday.
Restaurant	A waitress takes down a customer's order. It becomes evident that she has taken down the order incorrectly when she reads the order back to the customer.

You arrive on time for the interview but are told by the receptionist that the interviewer has gone home for the day. The problem here is that an obstacle has been thrust in your pathway to achieving your immediate

goal, which was the job interview. In learning to do problem solving, the next step is to come up with alternatives that might enable you to remove the obstacle; for example, you might ask the receptionist if there's another

person in the office with whom you can interview. Not only is what you say to the receptionist important in determining her response but also how you say it with verbal and non-verbal expressiveness."

Then the trainer shows the group a segment of the videocassette that provides both poor and good examples of coping with social problems. The trainer then uses the manual as a guide to engage the participants in a Socratic dialogue to ensure that they assimilated and comprehended the material on the video. Role playing with coaching and feedback follows until the participants achieve satisfactory ratings of their problem-solving skills.

In the comparison group, participants were led in an open-ended discussion of the problems they were experiencing in their lives, but no structured method was presented for coping. Instead the therapist, an experienced doctoral-level psychologist, encouraged participants to share their ideas for helping each other deal with the problems presented. Informal problem solving was done, but the therapist studiously avoided any structured approach.

Assessment

A psychometrically sound interview and role-play instrument, the Assessment of Interpersonal Problem-Solving Skills (AIPSS), was administered to the participants in both treatment conditions before and after the interventions (7). The AIPSS consists of 13 videotaped vignettes, ten of which depict a problem between two people. The other three are neutral scenes that do not represent problems.

In administering the test, the rater instructs the subject to take the part of the protagonist in the videotaped scene and to respond to a series of questions that correspond to the problem-solving steps, such as "Was there a problem in that scene?" (identification of a problem), and "Please tell me what you would do or say if you were in that situation" (generating alternatives).

Results

Fifty-three participants completed the two interventions and the pre- and postintervention AIPSS.

The baseline level of accuracy in identifying problems in the scenarios from the AIPSS was very high for participants in both groups. More than 80 percent of the responses were correct in identifying whether a problem existed in the scenes. After the interventions, accuracy of identification increased significantly, to almost 90 percent in both groups ($F=8.29$, $df=1, 51$, $p=.006$). Patients in both groups also significantly improved in their ability to describe the problems, including the obstacles and goals faced by the protagonists. The range of correct responses rose from 68 to 73 percent before the interventions to 83 to 86 percent afterward ($F=25.47$, $df=1, 51$, $p<.001$).

However, the patients who received the module training demonstrated significantly greater improvements in the other four dimensions of social problem solving than did their counterparts in supportive group therapy. In the generation of alternatives, improvement was 22 percent for module training versus 9 percent for supportive therapy ($p<.03$). In the selection of an alternative, improvement was 19 percent for module training versus 7 percent for supportive therapy ($p<.02$). In the quality of the verbal and nonverbal skills of the subject in a role play of the selected solution, improvement was 20 percent versus 6 percent ($p<.04$). In the overall quality of the role-played performance, improvement was 23 percent versus 6 percent ($p<.02$).

Discussion and conclusions

In this group of outpatients with schizophrenia, the capacity for identifying and describing common problems involving individuals in everyday life situations was excellent and not different from that shown by persons without mental disorders (6). This finding is perhaps surprising, because biological and neurocognitive studies of patients with schizophrenia often report that they show substantial deficits in laboratory tests of social perception. More challenging for the patients in this study were aspects of social problem solving that required them to generate solutions and the expressive skills required to put a solution into effect. In these dimen-

sions, structured and systematic training in social problem solving made a significant difference in ameliorating the deficits.

Because the training module included scenarios that were different from those in the assessment instrument, it is possible to conclude that four months of systematic training in social problem solving can yield generalizable outcomes that may be helpful to the patients in many other realms of functioning. In fact, studies have found generalization of skills to a wide array of community activities when this approach to training skills has been used for six months or longer (3,4).

We believe that teaching individuals with psychotic disorders social problem solving, especially when such training is done through "over-learning" or "errorless learning," may inoculate them against stress-induced relapse. Moreover, regular use of problem solving in everyday life can enhance social functioning and empower individuals to attain more of their personal goals.

Afterword by the column editors:

Some clinicians might argue that teaching persons with schizophrenia a structured mode of social problem solving is artificial and inappropriate because normal people do not go through these stepped progressions. However, many persons with schizophrenia have neurocognitive deficits that make it difficult for them to conceptualize spontaneously and think flexibly when stymied by obstacles. Providing them with an auxiliary method of social problem solving may be just as helpful and constructive, albeit as "artificial," as providing a wheelchair to a person with a spinal cord injury.

Moreover, just as people with severe spinal cord injuries learn how to maneuver their wheelchairs through experience and practice, an individual with schizophrenia must be given the opportunities and coaching to use newly acquired skills in novel situations. The UCLA Social and Independent Living Skills modules were designed to facilitate such learning and have been demonstrated to achieve these ends in a number of

randomized controlled trials (9). However, our society must do for people with schizophrenia what it has done for wheelchair-bound individuals—namely, to recognize the moral imperative to make therapeutic accommodations to the needs of this disabled and highly stigmatized population that enable them to actively and effectively participate in everyday community life. ♦

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References

1. Liberman RP, Wallace CJ, Blackwell G, et al: Innovations in skills training for the seriously mentally ill: the UCLA Social and Independent Living Skills Modules. *Innovations and Research* 2:43-60, 1993
2. Wallace CJ, Liberman RP, MacKain SJ, et al: Effectiveness and replicability of modules for teaching social and instrumental skills to the severely mentally ill. *American Journal of Psychiatry* 149: 654-658, 1992
3. Marder SR, Wirshing WC, Mintz J, et al: Two-year outcome of social skills training and group psychotherapy for outpatients with schizophrenia. *American Journal of Psychiatry* 153:1585-1592, 1996
4. Liberman RP, Wallace CJ, Blackwell G, et al: Skills training vs psychosocial occupational therapy for persons with persistent schizophrenia. *American Journal of Psychiatry* 155:1087-1091, 1998
5. Nezu CM, Nezu AM, Houts PS: Multiple applications of problem-solving principles in clinical practice, in *Cognitive Therapies in Action*. Edited by Kuehlwein KT, Rosen H. San Francisco, Jossey-Bass, 1993
6. Bellack AS, Sayers M, Mueser KT, et al: Evaluation of social problem-solving in schizophrenia. *Journal of Abnormal Psychology* 103:371-378, 1994
7. Donahoe CP, Carter MJ, Bloem WD, et al: Assessment of interpersonal problem-solving skills. *Psychiatry* 53:329-339, 1990
8. Ventura J, Liberman RP, Green MF, et al: Training and quality assurance with the Structured Clinical Interview for DSM-IV (SCID-IV). *Psychiatry Research* 19:163-173, 1998
9. Heinsen RK, Liberman RP, Kopelowicz A: Psychosocial skills training for schizophrenia: lessons from the laboratory. *Schizophrenia Bulletin* 26:21-46, 2000