

# In-Home Psychosocial Skills Training for Patients With Schizophrenia

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**Objective:** The purpose of this study was to test an intervention that adapted the University of California, Los Angeles (UCLA) social and independent living skills program for application in the patient's home and in an outpatient setting in Spain. **Methods:** An intervention group of 32 patients with schizophrenia was selected for comparison with a matched control group of patients who were undergoing conventional outpatient treatment for schizophrenia during six-month treatment periods. The Positive and Negative Syndrome Scale (PANSS) scoring system was used to compare the two groups, with a pretest-posttest design. **Results:** Analysis of variance indicated a significant phase-by-treatment interaction effect of the intervention on PANSS scores. **Conclusions:** The results of this study suggest that a combination of outpatient follow-up care and in-home care centered on psychosocial skills training is more effective than conventional treatment in improving general symptoms among individuals with schizophrenia. (*Psychiatric Services* 57:260-262, 2006)

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The treatment of schizophrenia has evolved from traditional biomedical treatment and institutionalization to psychosocial and pharmacologic interventions carried out in the community. This concept of community treatment made it necessary to formulate a multidisciplinary approach to the illness by using combined treatments centered on two main pillars: medication as a fundamental aspect of treatment, and techniques, treatments, and therapeutic modules that are applied to each patient on an individual, group, or family basis. The most important of these modalities include social and independent living skills programs, behavioral-cognitive techniques, treatment groups, psychoeducation, and relapse prevention (1-4). In practice, however, several techniques are normally used in combination (5,6).

In Spain, mental health care is provided free by the public health care system to all the country's inhabitants. These services are centered around district mental health care teams, which provide outpatient treatment for anyone with mental health problems. There are also child and adolescent mental health care units. One of the most important services of the Spanish system is the general hospital mental health units, for psychiatric emergencies and brief hospitalizations in emergency cases. There are also units for intermediate stays as well as therapeutic communities for chronic situations, multiple relapses, and intermediate hospital stays (approximately six months to one year). Finally, rehabilitation activities are carried out in day hospitals and reha-

bilitation units, which serve as intermediate units between internment and the community setting. Other psychosocial units and services include clubs and family associations, sheltered employment, and other residential resources and assisted-living apartments.

The number of services provided depends directly on the number of inhabitants in the area. In day-to-day practice, patients with a diagnosis of schizophrenia undergo pharmacotherapy and have periodic follow-ups—usually monthly or twice-monthly check-ups—although they do not always benefit from combined treatment.

We used an adapted version of the University of California, Los Angeles (UCLA) social and independent living skills program (1,7) and applied it in the patient's home for six months. Our principal objective was to determine whether treatment outcomes, as measured by the Positive and Negative Syndrome Symptom Scale (PANSS) (8), differed significantly between the experimental group and a matched control group.

## Methods

Sixty-four patients were randomly selected from a mental health center in Córdoba, Spain. A matched control sample was later selected to guarantee an equal distribution of sexes in both groups, given that there were substantially fewer female than male clients at the center. Each of the two groups had 32 participants (27 men and five women in each). All the patients were receiving outpatient treatment with neuroleptics. Both groups were given diagnoses of schizophre-

nia according to the Structured Clinical Interview for DSM-IV (SCID) (9,10). A combined intervention was applied to the experimental group within a home care program. Participants in the control group continued to have periodical outpatient visits to the psychiatrist. After six months—from October, 2001, to April, 2002—both groups were compared by using the PANSS scoring system in a pretest-posttest design.

The PANSS consists of seven positive and seven negative symptom items and 16 general psychopathology items. All items are rated on a 7-point symptom severity scale ranging from 1, absent, to 7, extremely severe. The PANSS results can also be expressed as the total score of the sum of its 30 items. In our study we used the total score to compare both groups.

The UCLA social and independent living skills program, developed by Liberman (1), consists of a number of modules: medication management, symptom management, recreation for leisure, basic conversation skills, and community reentry. The techniques used to teach the skills are based on a range of behavioral learning principles that are known to help persons with serious and persistent mental illness overcome their learning disabilities. The program was adapted for individual application in the patient's home and has been approved by the Spanish Ministry of Social Affairs and the Provincial Government of Córdoba.

In the first phase of the intervention, contact was made with the family and patients of the experimental group. The health care team, which included a psychologist, a social worker, and nonparamedic personnel, proposed that the patient and his or her family members participate voluntarily in an in-home intervention with the aim of improving overall symptoms and quality of life. Once the patients agreed to participate they were provided with general information about the intervention, including visits by the team to the family home to work with the patients either individually or in conjunction with the family on certain tasks.

The participants and family mem-

bers were also informed about the basic objectives of the intervention to make them aware of the key role family members play in the treatment process. Issues covered included family behavior toward the patient, reinforcement of achievements, the generalization process, problem solving, and maintenance of results after treatment. Finally, during the treatment phase family members met with the psychologist on a weekly basis to resolve any aspects, doubts, or questions that arose during the intervention. An individualized intervention plan was designed to treat each participant on the basis of the application of therapeutic and behavioral modification techniques.

The members of the team visited the patient's home daily during the first week of treatment. Later, visits were spread out and divided among the different professionals. Both the psychologist and the social worker visited the patient's home once or twice a week, with each visit lasting 1.5 hours and the nonparamedic personnel being directly responsible for a majority of care.

The participants from both groups saw their psychiatrist for an equal amount of time (one appointment per month), and the amount of time that the participants from both groups were exposed to the various types of staff did not differ significantly, given that the patients in the control group attended the day center with which the professionals were affiliated and took part in mainly psychoeducational, leisure, and free-time activities. The total time of exposure was almost identical; the only difference was that the activities were not carried out in the patient's home, and clearly these activities were different (mainly related to leisure and entertainment).

We compared baseline demographic characteristics between the two groups by using chi square tests for qualitative variables and *t* tests for quantitative variables. A  $2 \times 2$  repeated-measures two-way analysis of variance was performed to evaluate the statistical significance of any differential change between groups in mean total PANSS scores, using SPSS, version 11.

The study was approved by an institutional review board of the Spanish Ministry of Social Affairs.

## Results

Demographic characteristics did not differ significantly between the two groups. The mean $\pm$ SD age was  $33.78 \pm 6.82$  years in the experimental group and  $34.94 \pm 7.67$  years in the control group. The mean age at onset of illness was  $24.19 \pm 4.26$  years in the experimental group and  $23.88 \pm 4.78$  years in the control group, and the mean duration of illness was  $9.63 \pm 5.96$  years in the experimental group and  $10.69 \pm 7.76$  years in the control group. The mean number of hospitalizations was  $2.03 \pm 1.73$  in the experimental group and  $2.31 \pm 2.42$  in the control group.

No differences were observed in the diagnosis of different types of schizophrenia: paranoid, 22 participants (69 percent) in the experimental group and 20 (63 percent) in the control group; disorganized, three participants (9 percent) in the experimental group and four (12 percent) in the control group; and undifferentiated, seven participants (22 percent) in the experimental group and eight (25 percent) in the control group. Likewise there were no significant differences in marital status: unmarried, 26 participants (81 percent) in the experimental group and 21 (65 percent) in the control group; married, four participants (13 percent) in the experimental group and seven (22 percent) in the control group; and separated or divorced, two participants (6 percent) in the experimental group and four (13 percent) in the control group.

The analysis then used  $2 \times 2$  repeated-measures ANOVA to verify the existence of significant differences in the pretest-posttest total scores obtained on the PANSS by the participants in both groups. The mean $\pm$ SD PANSS score before the intervention was  $104.03 \pm 21.06$  in the experimental group, compared with  $96.06 \pm 22.79$  in the control group; after the intervention, the mean scores were  $79.19 \pm 18.21$  and  $97.09 \pm 23.33$ , respectively. The results confirmed that there was no significant effect for factor 1 (phas-

es) or factor 2 (treatments) but did indicate a significant phase-by-treatment interaction effect ( $F=23.682$ ,  $p<.01$ ).

### Discussion and conclusions

Our analyses indicated low PANSS scores for the patients who received the in-home psychosocial skills training intervention for six months compared with a control group of patients who received conventional treatment at their mental health facility.

During the intervention, the health care team noted some interesting situations in the context of the in-home intervention. For example, throughout the treatment, patients, family members, and health care professionals detected premorbid symptoms. Once the symptoms were corroborated, the patient's medication was changed, which underlines the fact that in-home intervention can function as a protection factor for patients and consequently prevent relapses. Another aspect that should be highlighted is the commitment made by the patient, the health care professionals, and, chiefly, the family.

Task sharing and taking on responsibilities improved in the intervention group, and the incidence of blackmailing and manipulative behavior toward family members was considerably reduced. In a majority

of cases, the personal and social autonomy of the participant improved during treatment; a fundamental aspect in rehabilitation and symptom improvement.

We believe that the results of this intervention in the medium term and the long term will lead to an overall decrease in psychotic symptoms, fewer hospitalizations, greater family involvement, reinforcement of the psychoeducational aspects of the illness for the patient and his or her family members, fewer relapses, improved adherence to medications, increased autonomy, and an improved quality of life.

However, the economic and human resources costs could be an important limitation for this type of program, because it was the intensity of contact rather than the model itself that was associated with a more positive result. The approach would thus be less applicable in other countries and other contexts. It would be interesting for future research to compare the benefits of in-home care that applies other types of techniques or therapeutic packages according to the characteristics of each patient.

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