Psychosocial skills training on social functioning and quality of life in the treatment of schizophrenia: a controlled study in Turkey

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OBJECTIVE: This study assessed the impact of a psychosocial skills training program, consisting of psychoeducation, interpersonal group therapy and family education incorporated into social skills training, as an integrative approach on social functioning and quality of life of patients with schizophrenia, in comparison to standard care for an 8-month period.

METHOD: Thirty patients with DSM-IV schizophrenia were included in the study. Patients were assessed using the Positive and Negative Syndrome Scale (PANSS), Quality of Life Scale (QLS), Social Functioning Scale (SFS), and Global Assessment of Function (GAF) at baseline. Fifteen patients underwent an 8-month psychosocial skills training group program and another fifteen patients (waiting list) continued in standard care. Both groups were reassessed and analyzed at the end of the study.

RESULTS: Two groups were not statistically different in terms of total PANSS, QLS, SFS, GAF scores, and demographic characteristics at baseline. However, there was a significant improvement in the mean total QLS, SFS, GAF, and even in total PANSS scores (respectively from 64.46 ± 19.58 to 89.67 ± 24.10, P < 0.001, from 93.20 ± 22.85 to 132.60 ± 33.85, P < 0.002, from 57.40 ± 7.87 to 63.86 ± 7.57, P < 0.012, and from 63.53 ± 14.48 to 53.33 ± 15.71, P < 0.029) for those who underwent the PSST program, but there was no statistically significant change for those on standard care at the end of the study.

CONCLUSION: This study highlights the ‘social functioning’ and ‘quality of life’ benefits of the psychosocial skills training program for patients with schizophrenia. It can be concluded that this comprehensive psychosocial skills training program might be an important contribution to the functioning of the patients. (Int J Psych Clin Pract 2004; 8: 1–7)

Keywords
schizophrenia
psychoeducation
group therapy
quality of life
psychosocial rehabilitation
social skills training
social functioning

INTRODUCTION

Schizophrenia impairs the development of psychosocial skills needed for useful, independent living, social functioning, occupational skills, and self-care.1 Impairment of social functioning in schizophrenia is widespread and may reflect a primary impairment as well as a secondary disability.2 Although antipsychotic drugs reduce psychosis, protect against stressors and, taken life-long, prevent considerable relapse and re-hospitalization,3–5 the overall level of functional outcome of patients with schizophrenia has not been improved markedly.6 On the other hand, drug side effects and compliance in patients with schizophrenia is still a continuing problem in their treatment.7,8 The majority of patients with schizophrenia, even those who benefit from medication, continue to have disabling residual symptoms and impaired social functioning and will most likely experience a relapse despite medication adherence. Hence,
it is necessary to integrate psychosocial treatments into the
standard of care for this population.9,10 Psychosocial inter-
ventions for patients with schizophrenia aim at enhancing
interpersonal and social role functioning, promoting inde-
inendent living and community tenure, decreasing symptom
severity and associated comorbidities (e.g. substance abuse),
and improving illness management.11 As a holistic approach
to the treatment of schizophrenia, pharmacotherapy and
psychosocial interventions work together to reinforce one
another's efforts and improve the efficacy of coordinated
care.12–14

There are nine major approaches that are particularly
promising in psychosocial interventions in schizophrenia,
when provided in conjunction with neuroleptic medication:
(i) social skills training, (ii) psycho-education, (iii) cognitive
rehabilitation, (iv) cognitive-behavioral therapy, (v) family
therapy, (vi) personal therapy, (vii) group therapy, (viii) case
management (assertive community treatment program), and
(ix) vocational rehabilitation.10,11,15,16 From these ap-
proaches, social skills training, especially when it is com-
bined with psychoeducation, illness management techniques
(medication management and symptom management skills),
and family education, and continued for a long period, was
reported to be more effective than standard care, supportive
group therapy, and occupational therapy in respect to social
adjustment and the generalization of skills,17–19 but not
markedly more effective on symptom outcome and relapse
rate.20,21 Social skills training aims at improving the
individual's coping skills, promoting problem solving, enga-
ging in affiliative and instrumental relationships, mobilizing a
supportive network, and adherence to medication.22 Psy-
choeducation programs for patients with schizophrenia
target improving understanding and insight into psychotic
ilness itself and skills of self-management and medication
management.23 Family education aims to provide informa-
tion concerning the nature and course of schizophrenia, as
well as specific management strategies thought to be helpful
in coping with schizophrenic symptoms for family mem-
bers.24

The current status of psychosocial treatment of patients
with schizophrenia is nevertheless still unsatisfactory in
Turkey. Although there have been some endeavors since the
1970s,25 there is now no institutionalized or established
rehabilitation program for these patients even in the big
Mental Health Hospitals. As a relatively new effort, the
Medication Management26 and Symptom Management27
modules of the Social and Independent Living Skills were
studied in a sample of Turkish patients with schizophrenia
(with no control group), and it was concluded that these are
easily applicable and effective rehabilitative interventions28
for Turkish patients. There is a lamentable paucity of research
on the psychosocial treatment of schizophrenia and a lack of
well-controlled studies to evaluate the efficacy of such
interventions in Turkey. The impact of such programs on
social functioning, quality of life, psychopathology, and on
the course of the disorder still remains uninvestigated.
Another serious problem is the lack of skilled trainers or
therapist for patients and their families. Therefore, we need a
new treatment approach that should be comprehensive,
effective, and practical and that could be easily learned,
put into practice, and disseminated throughout the country,
which has few resources for the rehabilitation of schizo-
phrenia.

The psychosocial skills training (PSST) program used in
this study was prepared using the techniques explored in the
basic references.29–31 The program consisted of three
components of Social Skills Training (the basic model, the
social problem-solving model, and the cognitive remediation
model),32,33 psychoeducation,34 format, and family education.35 Its emphasis is
especially on the developing or improving of social skills,
problem-solving strategies, interpersonal relations, adaptive
interactions, insight into their illness and related problems,
coping strategies for the warning signs or persistent symp-
toms, and strengthening of ego functions of the patients by
engagement of the family as an ally in the treatment process
as an integrative approach.

The aim of this study was to investigate the role of the
comprehensive model of psychosocial skills training on
social functioning and quality of life of patients with
schizophrenia. The main hypothesis was that patients taking
PSST would be more likely to have increased social
functioning and increased quality of life when compared to
those taking standard care over the 8-month period.

METHODS

Subjects

Clinically stable (no psychiatric hospitalizations or changes
in psychiatric medications for 3 months prior to the study
entry) patients with schizophrenia according to DSM-IV36
from two different sites, University of Kocaeli and University
of Ege Hospital outpatient clinics, were included in the study.
Subjects were excluded if they had any of the following: (i)
evidence of an organic central nervous system disorder; (ii)
current alcohol or drug abuse or dependence; (iii) mental
retardation; (iv) were aged under 18 or over 65 years; (v)
had a high level of positive symptoms which could interfere with
the participation of a group; or (vi) had participated in any
group therapy or educational program beforehand. This
study was described verbally to each subject prior to
obtaining informed consent.

Study Design

Patients were assigned to two groups according to the
sequence of their admission in each center. The first 15
patients regardless of their demographic, clinical or func-
tional status were enrolled in a training group (Group I) and
the subsequent 15 patients (waiting list) were enrolled in a
standard care group (Group II). Family members who were
important for the patients were allowed to participate in the
family education. That is, Group I patients were assigned to psychosocial skills training including family education plus standard care, and Group II patients were assigned to standard care alone for 8 months.

**STANDARD CARE**

The patients assigned to standard care received the usual treatment provided to University Hospital clients. It includes pharmaco-therapeutic approaches and discussion for treatment issues with the patients and families. All patients visited the psychiatrists once a month for their treatment during the study.

**PSST Program**

The psychosocial skills training program is a structured educational training program that has a manual for trainers like the UCLA Social and Independent Living Skills training modules. This manual is a curriculum which includes specific skills areas (e.g. communication skills, coping skills for persistent symptoms) with a variety of structured activities that include role playing, problem solving, and other exercises (Table 1). The PSST program was administered for 8 months by one or two trainers, who were clinically experienced psychologists and nurses, to the patients (weekly for 90 minutes in two sessions) and to the families (biweekly for 90 minutes in one session) in a group room. Trainers were trained to administer the PSST in a competent manner for 1 week before the study, and supervised regularly every month during the study. Besides the education program, PSST program patients received standard care monthly.

**PSYCHOMETRIC ASSESSMENTS**

Patients were assessed using the Positive and Negative Syndrome Scale (PANSS), Global Assessment of Functioning (GAF), Social Functioning Scale (SFS), and Quality of Life Scale (QLS) in terms of symptom status, social functioning, and life quality at initial/baseline assessment and at the end of the study.

PANSS was used to obtain ratings for positive, negative, and general symptoms. Two experienced psychiatrists, who were blind to the study, administered the Turkish version of PANSS.

GAF is a 100-point rating scale that assesses psychological, social and occupational functioning. Two experienced psychiatrists, who were blind to the study, administered the GAF.

SFS is a 79-item scale designed to assess social functioning in seven areas (social, interpersonal communication, activities of daily living, recreation, social activities, competence at independent living, and occupation/employment) in schizophrenia. Family members completed the Turkish translation of this form.

QLS is a semi-structured interviewer-administered scale containing 21 items. It measures adjustment on four subscales: interpersonal relations, instrumental role functioning, intra-psychic foundations, and common objects and activities. The Turkish version of the QLS was administered by two experienced psychologist who were blind to the study.

<table>
<thead>
<tr>
<th>Skills areas in the PSST program</th>
<th>Learning and therapeutic techniques used in each skill area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Improving cognitive skills</td>
<td>1. Giving information about the skill area,</td>
</tr>
<tr>
<td>2. Improving communication skills</td>
<td>2. Sharing experiences,</td>
</tr>
<tr>
<td>3. Improving problem solving skills</td>
<td>3. Correcting wrong attitudes,</td>
</tr>
<tr>
<td>4. Understanding psychosis and schizophrenia</td>
<td>4. Modeling,</td>
</tr>
<tr>
<td>5. Learning antipsychotic drug therapy, and drug side effects,</td>
<td>5. Coaching,</td>
</tr>
<tr>
<td>6. Evaluating the treatment,</td>
<td>6. Shaping,</td>
</tr>
<tr>
<td>7. Learning to cope with persistent symptoms,</td>
<td>7. Role playing,</td>
</tr>
<tr>
<td>8. Recognizing warning signs and monitoring them,</td>
<td>8. Cognitive rehearsal,</td>
</tr>
<tr>
<td>9. Avoiding alcohol and street drugs,</td>
<td>9. Problem solving,</td>
</tr>
<tr>
<td>10. Avoiding unnecessary treatment seeking,</td>
<td>10. Here-and-now interpretation,</td>
</tr>
<tr>
<td>11. Learning to cope with stress,</td>
<td>11. Self-control,</td>
</tr>
<tr>
<td>12. Enhancement of self-esteem,</td>
<td>12. Self-expression,</td>
</tr>
<tr>
<td>13. Leisure time and daily living activities,</td>
<td>13. Self-monitoring,</td>
</tr>
<tr>
<td>14. Developing friendship, and</td>
<td>14. Coping techniques,</td>
</tr>
<tr>
<td>15. Participating in social activities.</td>
<td>15. Exercises,</td>
</tr>
<tr>
<td></td>
<td>16. Homework assignment, and</td>
</tr>
<tr>
<td></td>
<td>17. Family education.</td>
</tr>
</tbody>
</table>
The ratings of psychopathology and psychosocial function were made on two occasions. At the baseline and endpoint assessment all assessments were conducted within a 1-month period. The GAF and PANSS were administered in one session, and the SFS and QLS in another session. These sessions would occur on the same day. The same interviewers or family members conducted the same assessments.

Case records were used at the baseline and at the end of the study to obtain information about medication status before and after the intervention.

STATISTICS

SPSS for Windows (version 10) was used to analyze the data. Non-parametric tests were used for comparisons. Differences between the groups were assessed using the Mann–Whitney U-test. Wilcoxon Signed Ranks test was used to compare the initial and end point scores of the PANSS, GAF, SFS, and QLS for each group.

RESULTS

All patients (15 for PSST, 15 for standard care) completed the study for 8 months. There were no statistical differences between two groups with regard to the demographic characteristics (Table 2) and the total QLS \( (z = -1.269, P = 0.204) \), SFS \( (z = -0.976, P = 0.329) \), PANSS \( (z = -0.706, P = 0.480) \), and GAF \( (z = -0.929, P = 0.353) \) scores, even in the sub-scale scores of the PANSS, QLS, and SFS at baseline. However, there were prominent differences between two groups at endpoint (Table 3). These differences were also at a statistical level for all sub-scales of the QLS \( (z = -3.964, P = 0.001) \) for interpersonal relations, \( z = -2.103, P = 0.035 \) for instrumental role functioning, \( z = -3.366, P = 0.001 \) for intra-psychic foundations, and \( z = -3.083, P = 0.002 \) for common objects and activities.

With regard to the sub-scales of the SFS, although there were significant differences in interpersonal behavior, prosocial activities, recreation, and independence-performance (respectively, \( z = -3.117, P = 0.002, z = -2.806, P = 0.005, z = -3.127, P = 0.002, \) and \( z = -2.102, P = 0.036 \)), there were no significant differences in social withdrawal, independence-competence, and employment/occupation sub-scales (respectively, \( z = -1.368, P = 0.171, z = -1.749, P = 0.08, \) and \( z = -0.917, P = 0.359 \)) at the endpoint. There were no significant differences between the groups in regard to the PANSS positive \( (z = -1.033, P = 0.302) \) and general psychopathology \( (z = -1.246, P = 0.213) \) scores at the endpoint. There was a prominent decline in PANSS negative scores in the PSST group (from 19.07 ± 5.35 to 16.13 ± 6.81, \( z = -2.264, P = 0.024 \)), but not in the control group (from 22.13 ± 6.06 to 20.40 ± 6.52, \( z = -1.898, P = 0.058 \)), and the difference between two groups was significantly important \( (z = -2.037, P = 0.042) \) at the endpoint. The baseline and endpoint mean total scores of the scales for each group (Groups I and II) are shown in Table 3.

Table 2
Demographics and illness characteristics of both groups (Group I, psychosocial skills training group; Group II, standard care group)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Group I (n = 15)</th>
<th>Group II (n = 15)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>33.53 ± 10.47</td>
<td>29.80 ± 4.93</td>
<td>0.677</td>
</tr>
<tr>
<td>Education (years)</td>
<td>10.80 ± 2.40</td>
<td>9.80 ± 2.98</td>
<td>0.436</td>
</tr>
<tr>
<td>Age at onset (years)</td>
<td>21.67 ± 8.29</td>
<td>22.40 ± 5.49</td>
<td>0.440</td>
</tr>
<tr>
<td>Duration of illness (years)</td>
<td>10.73 ± 6.43</td>
<td>7.40 ± 6.02</td>
<td>0.081</td>
</tr>
<tr>
<td>Number of hospitalizations</td>
<td>2.33 ± 5.13</td>
<td>0.66 ± 0.72</td>
<td>0.545</td>
</tr>
<tr>
<td>Economic level</td>
<td>206.00 ± 103.18</td>
<td>183.33 ± 110.87</td>
<td>0.321</td>
</tr>
<tr>
<td>Mean dosage of medication b</td>
<td>Baseline</td>
<td>316.33 ± 72.22</td>
<td>0.216</td>
</tr>
<tr>
<td></td>
<td>Endpoint</td>
<td>306.67 ± 67.78</td>
<td>0.167</td>
</tr>
<tr>
<td>Gender (Male)</td>
<td>8</td>
<td>10</td>
<td>0.464</td>
</tr>
<tr>
<td>Marital status (non-married)</td>
<td>12</td>
<td>15</td>
<td>0.073</td>
</tr>
<tr>
<td>Type of disease</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paranoid</td>
<td>7</td>
<td>6</td>
<td>0.400</td>
</tr>
<tr>
<td>Residual</td>
<td>4</td>
<td>7</td>
<td>0.467</td>
</tr>
<tr>
<td>Undifferentiated</td>
<td>3</td>
<td>1</td>
<td>0.67</td>
</tr>
<tr>
<td>Disorganized</td>
<td>1</td>
<td>1</td>
<td>0.67</td>
</tr>
</tbody>
</table>

aAverage income per person in a family monthly as Turkish Lira (million).
bChlorpromazine equivalent.
There was no difference between the two groups with respect to the treatment change at the end of the study ($z = -0.372$, $P = 0.710$). Mean dosages of medications (chlorpromazine equivalent) used at baseline and end-point are shown in Table 2. There were no hospitalizations in either group during the study period.

**DISCUSSION**

We found a higher improvement in all dependent variables for the PSST group, compared to the control group, in all global assessments. Within the quality of life scale, all subscale scores, within social functioning scale interpersonal behavior, prosocial activities, recreation, and independence-performance and negative PANSS scores, were found to be significantly changed after the training program. It appears that the program has a strongly positive effect on the social functioning, quality of life, and negative symptoms of patients with schizophrenia compared to the standard treatment. Prominent benefits were provided by a combination of psychoeducation, interpersonal group therapy, and family education approaches incorporated into the social skills training. This indicates that psychosocial skills training of patients with schizophrenia can lead more rapidly to improvements in quality of life and certain areas of social functioning which are probably related to negative symptoms.

It is known that the functional outcome of patients with schizophrenia is not always the same as the clinical outcome. Social functioning of patients seems to be independent of the severity of psychotic symptoms and influenced by negative and cognitive symptoms. In our study, all functioning scales showed a prominent change in the PSST group compared with the standard care group. This could be related to the significant change in negative symptoms or independent of this change. It has been shown that schizophrenia patients with nondeficit negative symptoms are amenable to intensive social skills training. We didn’t evaluate the patients’ negative symptoms with respect to the deficit or non-deficit states. However, the PSST program has been found to have a positive effect on negative symptoms. The improvement in negative symptoms could be considered an interaction between therapeutic factors (i.e. more social interaction, more contact with the treatment team). The PSST, through improvements of self-esteem, motivation, leisure time and daily living activities, interpersonal relations, developing friendship, and participating in social activities, might have had an effect on the enhancement of competence and mastery feelings and hence to a better quality of life which is related to the negative symptoms and social functioning.

Long-term educational process together with skills training can provide a contribution to patients and families who recognize themselves as experts in their illness and management of the disorder. Using skills training methods helps participants to actively seek and implement their own solutions to their own problems. Patients are thought to recognize not merely their early symptoms, but also to cope with their persistent symptoms and stresses so that they can find ways of coping more efficiently when they experience excessive stress. The psychosocial skills training program, including the engagement of the family as an ally in the treatment process, could have positively influenced the psychosocial functioning of the patients. Information about skill areas and skills training was provided for families, as had been for the patients at the same time. Detailed information about schizophrenia and its management, such as improving communication, problem solving, medication compliance, crisis intervention, developing social support...
networks, and coping skills, might have led the family members to understand the patients and help them overcome their difficulties. In addition, lowering the expectations of the families, developing clear communication and problem-solving skills within the family group, might also have contributed to the reductions in patients’ negative symptoms and making them more social. Educating the family members about negative symptoms, and setting realistic limits may reduce the family's tendency to criticize the patient, which in turn may encourage the patients’ social engagement. 24,49

There is growing evidence that psychosocial treatments in schizophrenia must not be considered in the short term, and need to be planned for a long term intervention, and if possible should be continued by booster sessions for a very long period. 15 The PSST program showed beneficial effects on social functioning and quality of life in a period of 8 months. This is a moderate time for a program, hence its effect in the long run need to be evaluated using the same instruments. The study did not address the effects of the PSST program on global clinical outcomes, such as relapse and rehospitalization conditions, in the long term. The significant change of the total PANSS scores in PSST group at the endpoint, though mainly dependent on the change of the negative symptoms, can give some clues that the program might be useful in the prevention of relapse and recurrence of the disease.

Some methodological limitations of this study should be considered. The sample size was small. This study needs to be replicated with larger samples. Another limitation is that the standard care program did not include another therapeutic intervention. However, this program has comprehensive approaches that aimed to be incorporated to standard care. Randomization of patients could not be recognized well enough, because the first fifteen patients were selected for the PSST group and the second fifteen patients for the control group. This may not rule out that the members of the first group were more eager to participate in the study than the members of the second group. This could lead to a bias. The level of insight of the patients, which could be a confounding factor for the results, was not measured. Despite these limitations, the present study is one of the first that includes several treatment modalities in one program. This could be a practical tool for practitioners in the psychosocial treatment of schizophrenia. Whether treatment gains continue for a long time should be tested for this program in another study.

CONCLUSION

It can be concluded that when psychoeducation, interpersonal group therapy, and family education that were incorporated into the SST, were administered as in the PSST program, there is a better outcome than with standard treatment alone. Results clearly support the use of psychosocial skills training in the treatment of schizophrenia, particularly for enhancing social functioning, quality of life, and probably lessening negative symptoms, domains less affected by medication alone. Given its limitations, this study should be understood as an initial exploration of the potential for psychosocial skills training intervention in Turkey, which has few rehabilitation resources for schizophrenia patients. This study introduced promising results.

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REFERENCES


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| AQ2 | Ref. 35: where in CA is the publisher located? |