Early Intervention to Improve Clinical and Functional Outcome in Patients with First Episode-Psychosis

Marcelo Valencia
Division of Epidemiological and Psychosocial Research
National Institute of Psychiatry Ramon de la Fuente, Mexico City, Mexico

Francisco Juarez
Division of Epidemiological and Psychosocial Research
National Institute of Psychiatry Ramon de la Fuente, Mexico City, Mexico

Marcela Delgado
Division of Epidemiological and Psychosocial Research
National Institute of Psychiatry Ramon de la Fuente, Mexico City, Mexico

Alejandro Díaz
Division of Clinical Services
National Institute of Psychiatry Ramon de la Fuente, Mexico City, Mexico
1 Introduction

During the last two decades significant advances in the long-term clinical management of schizophrenia have demonstrated the importance of early treatment for first-episode psychosis. When early treatment is not provided the long duration of untreated psychosis has been associated with poor clinical and functional outcome (Melle et al., 2004; Norman & Malla 2001; Perkins et al., 2006); psychosocial decline (Jones et al., 1993; Lieberman et al., 2001), some degree of behavioral deterioration (McGlashan, 1988), lower overall functioning, lower quality of life, more severe positive and negative symptoms and as a consequence a reduced possibility of achieving remission (Marshall et al., 2005). These young individuals are usually actively psychotic for one o two years before they receive treatment (Beiser et al., 1993), 30% experience an onset of psychotic symptoms by age 18 (McGrath et al., 2008) and 70% can be expected to relapse after the first episode (Mueller, 2004), mostly related to non-adherence to medication (Robinson et al., 1999; Verdoux et al., 2000).

Over the last 20 years a new postulate has emerged, based upon studies of first episode psychosis that indicates that early intervention may result in better treatment outcome (Guo et al., 2010; Malla & Norman, 2002; Mattai et al., 2010). As a result, a new field of study has emerged known as “Early Psychosis” (Birchwood & Spencer, 2001), or “Early intervention for psychosis” (McGorry et al., 2007). In addition, numerous Early Psychosis Programs have been designed and implemented for first-episode psychotic patients and their relatives (Alvarez-Jimenez et al., 2008; Bird et al., 2010). The parameters of a model of treatment should advocate a broader approach considering that evidence-based treatment has recommended that individuals suffering from schizophrenia should be provided with a combination of various essential interventions: 1) optimal dose of antipsychotic medication, 2) psychosocial treatment, psychoeducation and family therapy for patients and for their caregivers, and 3) case management to resolve, prevent and handle crisis such as: exacerbation of symptoms, relapse and rehospitalizations (Dixon et al., 2010; Falloon et al., 2004).

Clinical research indicates that antipsychotic medications have shown to be effective in reducing positive psychotic symptoms (Emsley et al., 2007; Robinson et al., 2005) and now they are the mainstay of treatment for patients with schizophrenia (Freedman, 2003; Lieberman et al., 2005). However, these medications have limitations in their ability to improve overall outcome; therefore, adjunctive psychosocial interventions for first-episode psychosis have been recommended, since they have demonstrated when combined with medication that they may produce greater improvement in functional outcome compared with medication treatment alone (Addington et al., 2011; Power et al., 2007; Ruhrmann et al., 2010; Tang et al., 2010; Uzenoff et al., 2012).

Early treatment for first-episode psychosis can be divided in two categories: single and multi-element interventions (Edwards & McGorry, 2002). Single interventions include one component such as: pharmacotherapy, or individual cognitive behavior therapy, while multi-element interventions include multiple services components such as case management, community outreach, in-and out patients, and various therapeutic approaches that would constitute a comprehensive intervention.

In addition to low-dose antipsychotic medication, first-episode psychotic patients may benefit from a great array of psychosocial approaches: social skills training, cognitive behavioral therapy, housing, assertive community treatment, supportive therapy, psychoeducation, vocational assistance, case management, family therapy, supported employment, cognitive remediation, peer support and weight management (Henry et al., 2010; Bertelsen et al., 2008; Malla & Payne, 2005; Penn et al., 2005; Petersen et al., 2005). These services can be delivered considering each patient’s needs, during hospitalization or
when patients are living in the community using individual, couples, group or family format. Each intervention sets goals, evaluating improvements in specific components: cognitive functioning and quality of life (Malla & Norman, 2002), social functioning (Addington & Young, 2003) compliance with medication (Hudson et al., 2008), prevention of relapse (Bebbington et al., 2006), and reducing trauma secondary to psychosis and hospitalization (McGorry et al., 1996).

Taking into account all these previous considerations, it is worth mentioning that outcome has been a main issue in schizophrenia. Research outcome has been a key concern since it involves assessing several specific domains including clinical symptoms, response to treatment, remission, quality of life, social functioning, cognitive function, employment, recovery, and family burden. Maintained symptomatic remission and appropriate functioning should be considered as desirable therapeutic outcome (Figueira & Brissos, 2011). Three domains of outcome measurement have been included in this chapter: symptomatic remission, psychosocial functioning, and functional outcome as a result of the implementation of pharmacological and psychosocial treatments for first-episode psychosis patients. Remission was measured using the operational definition of symptomatic remission proposed by the Remission in Schizophrenia Working Group (Andreasen et al., 2005) that covers two components: 1) a threshold of symptom severity with a score of mild or less using eight key schizophrenia symptoms of the Positive and Negative Syndrome Scale (PANSS) (Kay et al., 1990), that represent the “core features” of the illness, and 2) a duration criteria of 6 months that must be maintained to achieve remission. On the other hand, psychosocial functioning has been considered as a necessary outcome criterion to measure success of pharmacological and psychosocial treatments of schizophrenia patients (Harvey & Bellack, 2009; Juckel & Morosini, 2008). Although, numerous scales have been developed to assess psychosocial functioning, the most frequently used is the Global Assessment of Functioning (GAF) (American Psychiatric Association, 1994; Burns & Patrick, 2007; Goldman et al., 1992). Good, adequate, appropriate or normal psychosocial functioning has been measured with the GAF using means scores of > 50 (Whitehorn et al., 2002), > 61 (Harding et al., 1987), > 65 (Torgalsboen, 1999), > 80 (Bobes et al., 2009) and at least 81 (San et al., 2007). Psychosocial functioning was measured with the GAF. To determine the effects of a multi-element intervention: Integrated treatment versus a single element intervention: Standard treatment, symptomatic remission and psychosocial functioning were assessed as indicators of functional outcome. A recent review that included 13 studies of first-episode psychosis showed that remission rates vary between 17% and 88% (Emsley et al., 2011) according to the “Remission in Schizophrenia Working Group” criteria. Rates of functional outcome for first-episode psychotic patients have been reported at 48% (Whitehorn et al., 2002); 50% (Harrison et al., 2001); 19.2% (Wunderinck, et al., 2009), and 31% (Henry et al., 2010).

We chose as an operational definition of functional outcome the combination of two elements: 1) symptomatic remission according to the “Remission in Schizophrenia Working Group” criteria with the use of the PANSS, plus 2) psychosocial functioning within a “normal range” according to the Torgalsboen criteria with a GAF score above 65 (Torgalsbøen, 1999; Torgalsbøen & Rund, 2010). The fulfillment of the definition of functional outcome was considered as favorable, otherwise unfavorable. The six-month time period of treatment was considered to be the duration criterion to achieve functional outcome. Assessments were at baseline and at 6 months follow-up. Additional clinical variables were measured, such as; relapse, re-hospitalization, medication compliance and therapeutic adherence. In this chapter, we report the results of a six-month randomized controlled trial of an early psychosis integrated program consisting of pharmacotherapy and psycho-social intervention for patients, and psycho-education for relatives, compared with a standard care of pharmacological treatment alone.
The aim was to compare a single versus multi-element interventions according to the two categories described by Edwards & McGorry, (2002) to determine clinical and functional outcome improvements. We hypothesize the following; a) that a greater proportion of patients receiving integrated treatment would meet remission criteria and would show higher psychosocial functioning improvement when compared to those receiving standard treatment; b) patients who fulfilled both criteria: symptomatic remission and a better level of psychosocial functioning, and as a result would be achieving functional outcome, will be significantly higher in the integrated treatment group.

2 Methods

2.1 Design of the Study and Participants

Antipsychotic-naive patients who met eligibility criteria participated in the study protocol. These were out-patients receiving pharmacological treatment for their first time at the Schizophrenia Clinic of the Hospital of the National Institute of Psychiatry in Mexico City. One hundred and twenty patients who fulfilled inclusion criteria were included in the study, all patients voluntarily accepted to participate. Patients were randomly assigned, in an alternate order, to two treatment conditions: 60 patients to integrated treatment and 60 to standard treatment (medication alone). Of the 120 patients who initiated treatment, six from integrated treatment (10%), (one started a full time job; two returned to school, three moved out of Mexico City for family reasons), and twelve patients from standard treatment (20%) (four moved out of Mexico City for family reasons; two returned to school, two started a full time job, and four decided to receive treatment in another psychiatric hospital) failed to complete the study protocol with a total of 18 patients (15%) for the total sample. The final sample was 102 patients: \( n = 54 \) in integrated treatment and \( n = 48 \) in standard treatment. Patients were recruited into the study when they met the following inclusion criteria: never been hospitalized for psychiatric reasons, taking anti-psychotic medication for the first time, allowing a period of no more than 15 days to demonstrate clinical stability in terms of psychotic symptoms (corroborated by a score lower than 60 in the PANSS), their diagnoses verified according to DSM-IV (American Psychiatric Association, 1994) criteria and corroborated with the CIDI (Robins et al., 1988), had completed at least six years of elementary education, range age between 16 to 50 years old, with no substance (drug or alcohol) abuse verified with their relatives before and during treatment, living in Mexico City's metropolitan area, and participation of at least one relative in psychoeducation and family sessions. The participant relative was the one with closest contact to the patient, the relative and the patients, both, should be living in the same household.

2.2 Procedures

The study protocol was approved by the Research Committee and the Ethics Committee of the National Institute of Psychiatry. A session was held where patients and relatives were informed about all therapeutic procedures. Afterwards, they voluntarily expressed in a written informed consent document their desire to participate in the research project.

Measures of outcomes were administered to patients: symptomatology, symptom remission, and psycho-social functioning at baseline and at the end of treatment. Independent interviewers that were blind to the two treatment conditions completed the assessments. The last procedure consisted that, patients and their relatives were randomly assigned either to integrated treatment or to continue with standard treatment (antipsychotic medication alone).
2.3 Integrated treatment

The integrated treatment can be defined as a comprehensive model including social skills training, psychoeducation for relatives, family therapy and pharmacotherapy.

2.3.1 Social skills training

Social skills training focused on four areas: a) medication management, b) symptom management, c) social relations, and d) family relations. Learning certain skills was set as a goal that included: learning about the illness, compliance with medication, identifying warning signs of relapse, developing a relapse preventive plan, learning skills to manage social relations, and learning problem-solving skills for better family relations. A therapist’s manual describes the areas including the skills corresponding to each area, and the training strategies for each session (Valencia et al., 2001). Two therapists were in charge of teaching patients skill acquisition using the “learning activities”. Six learning activities were utilized: 1) introduction and explanation of skills to be learned in each session; 2) skill demonstration by therapists that included a question-and-answer segment for clarification of skills to be learned; 3) patient practice of skills using role playing and other techniques; 4) feedback allowing patients to identify resources needed to use skills in the real world; 5) practice skills in the community; and, 6) each session began with verification of skills registered in a learning check-list. Of the seven originally proposed learning activities (Kopolowicz et al., 2003; Liberman & Corrigan, 1993; Wallace et al., 1992), six were utilized excluding video technology as it is being used in the United States since this type of technology has not yet been developed in Mexico. As a substitute of video technology live demonstration of the learning skills by the therapists were carried out during sessions.

A therapist evaluation form was used to verify that all treatment areas were conducted properly. Therapists’ competency during treatment was assessed by a specially trained research assistant. Before treatment, competency levels had to be demonstrated with at least a 90 percent level of efficacy. Monitoring for maintenance of fidelity occurred throughout the study. Group sessions, eight patients per group, were conducted weekly by two therapists with a time limit of 90 minutes during six-month of treatment.

Goals of the interventions included: 1) training patients to acquire social skills; 2) improving psychosocial functioning, 3) preventing relapse and rehospitalization, 4) promoting treatment compliance, and 5) achieving functional outcome measured by symptomatic remission and psychosocial functioning.

2.3.2 Psycho-education

Eight multi-family group sessions were held where relatives received information about schizophrenia, symptoms, medication management, side effects, compliance with medication, keeping appointments, and recognition and management of warning signs of relapse. As it was requested in the inclusion criteria, at least one relative per family had to participate, but if more relatives expressed their desire to participate, they were welcomed to psychoeducation and family sessions. Family therapy included four sessions for each patient and his family focused on problem solving and improving communication skills. Two family therapists were in charge of psycho-education and family sessions.

Integrated treatment included the following professionals: two psychiatrists for medication management, two clinical psychologists in charge of psychosocial treatment, and two family therapists for psycho-education and family sessions.
2.3.3 Standard treatment

Standard treatment consisted of the usual service provided to patients: pharmacological treatment that was provided at the Schizophrenia Clinic of the National Institute of Psychiatry. Patients of both groups under study attended 20-minute monthly consultations given by two clinical psychiatrists, who were blind to the two treatment conditions. In addition of controlling prescribed antipsychotic medication, the treating psychiatrists were in charge of registering attendance to consultations and verifying medication compliance with patients’ and their corresponding relatives during consultations.

2.4 Measures of outcome

Symptomatology was assessed with a validated Spanish adaptation of the Positive and Negative Syndrome Scale (PANSS) (Kay et al., 1990) composed of three subscales: positive (7 items), negative (7 items) and general psychopathology (GPS) (16 items). Each item is scored from 1 (absence of psychopathology) to 7 (extremely severe).

Symptomatic remission was assessed according to the Remission in Schizophrenia Working Group (RSWG) criteria (Andreasen et al., 2005) using eight core symptoms in psychotisism, disorganization and negative symptoms of the Positive and Negative Syndrome Scale (PANSS). Maintenance of all scores has to be 3 (mild) for at least six months.

Psychosocial functioning was assessed with the Global Assessment of Functioning Scale (GAF) (American Psychiatric Association., 1994). This scale measures the combination of symptom severity and the level of impairment in psychological, social and occupational functioning on a mental health-illness continuum which indicates the level of functioning ranging from 1-100. Scores above 65 are considered within the “normal psychosocial functioning” range (Torgalsboen, 1999; Torgalsbøen & Rund, 2010).

Independent raters evaluated the two groups under study at baseline and at the end of treatment. They were properly trained for the application of all research instruments. Raters had no participation in the treatment team and had no knowledge of the research project. Hence, they were blind to the two treatment conditions.

Another set of clinical variables were assessed during treatment such as relapse, and rehospitalization rates, compliance with medication and therapeutic adherence. When patients experienced significant exacerbation of psychotic symptoms considered as warning signs of relapse they received immediate consultation from their treating psychiatrist, who then made necessary adjustments in their antipsychotic medication to avoid relapse. A psychotic relapse was considered when patients had at least a 20% worsening on the PANSS total score from baseline evaluation. Similar criteria have been utilized by other researcher when assessing relapse (Csernansky & Schuchart, 2002; Lipkovitch et al., 2007). Patients were hospitalized when psychotic symptom exacerbation could not be controlled nor stabilized with antipsychotic medication. Compliance with antipsychotic medication was assessed by the treating psychiatrist during monthly consultations for pharmacological management. Compliance was assessed as a result of a consensus between the patient and a relative participating in psycho-education. Compliance was registered when patients had at least taken 90 percent of prescribed antipsychotic medication; otherwise, non-adherence was assessed.

2.5 Statistical Analysis

Data handling and analysis were carried out using the Statistical Package for Social Sciences for Windows version 20 (IBM SPSS Statistics, 2010). We performed descriptive and Chi square analysis to com-
pare percentages, Student t tests to verify that there were no significant differences between the two groups under study in their initial levels of symptomatology, and psychosocial functioning. At baseline, Student t tests were used to verify that no statistically significant differences existed between the two groups regarding the PANSS and GAF scores. Analysis of variance for repeated measures (ANOVA) was used to detect pre-post differences within and between the two study groups. We calculated the standardized estimate of effect sizes using Cohen’s $d$ formula defined as: $d = (x_1 - x_2) / s$ where $x_1$ and $x_2$ are the means at baseline and at end of treatment of the two groups under study, and $s$ is the pooled within-group standard deviation (SD) (Cohen, 1977). Three levels of effect size were considered: small $= 0.25$, medium $= 0.50$ and large $= 1.00$ irrespective of the sign (+ or −) of the number (Kazdin, 1999).

### 3 Results

Demographic and clinical characteristics of the sample are shown in Table 1. Patients in both treatment conditions were similar with no demographic differences for any of these variables. No statistically significant differences were found at study entry between the two groups under study in symptomatology, (PANSS) or psychosocial functioning (GAF).

<table>
<thead>
<tr>
<th></th>
<th>Integrated treatment ($n = 54$)</th>
<th>Standard Treatment ($n = 48$)</th>
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</thead>
<tbody>
<tr>
<td><strong>Gender, $n$ (%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>42 (77.8)</td>
<td>37 (77.1)</td>
</tr>
<tr>
<td>Female</td>
<td>12 (22.2)</td>
<td>11 (22.9)</td>
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<tr>
<td><strong>Marital status, $n$ (%)</strong></td>
<td></td>
<td></td>
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<tr>
<td>Single</td>
<td>54 (100)</td>
<td>46 (95.8)</td>
</tr>
<tr>
<td>Married</td>
<td>--</td>
<td>1 (2.1)</td>
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<tr>
<td>Separated/divorced</td>
<td>--</td>
<td>1 (2.1)</td>
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<tr>
<td><strong>Occupation, $n$ (%)</strong></td>
<td></td>
<td></td>
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<tr>
<td>Employed</td>
<td>10 (18.5)</td>
<td>10 (20.8)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>44 (81.5)</td>
<td>38 (79.1)</td>
</tr>
<tr>
<td><strong>Age, years, $\bar{x}$ (s)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>26.9 (4.8)</td>
<td>26.7 (5.0)</td>
</tr>
<tr>
<td><strong>Education, years, $\bar{x}$ (s)</strong></td>
<td></td>
<td>11.1 (2.0)</td>
</tr>
<tr>
<td><strong>Age at onset, years, $\bar{x}$ (s)</strong></td>
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<td>19.5 (3.5)</td>
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</table>

**Table 1**: Demographic and clinical characteristics of the study sample.

Significantly statistical improvements in symptomatology were found over 6 months of treatment according to mean changes scores, as rated by the PANSS, in positive and negative symptoms, general psychopathology and in total PANSS score for both groups under study. Group-by-time analysis demonstrated significantly greater improvement in patients of integrated treatment when compared with patients receiving medication alone. Comparison of the effect sizes were large for integrated treatment patients on the total PANSS score, positive scale, negative scale, and in the general psychopathology scale. Effect sizes were medium for all score scales of the standard treatment group. Significant improvement in psychosocial functioning was also found for patients of integrated treatment but not for patients of standard treatment since they remained at the same level of functioning ($41 \text{–} 50$) as rated by the GAF, from baseline to
post treatment assessment. Standard treatment patients improved two levels of functioning from 41 – 50 at baseline to 61 – 70 at the end of treatment. Effect size was large for integrated treatment and small for standard treatment (Table 2).

<table>
<thead>
<tr>
<th></th>
<th>Integrated treatment</th>
<th>Standard treatment</th>
<th>Statistics(^b)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>(n = 54)</td>
<td>(n = 48)</td>
<td></td>
<td>Main effect for time</td>
<td>Main effect for group</td>
<td>Interaction of group and time</td>
</tr>
<tr>
<td><strong>PANSS(^a) overall score, (\bar{x} (s))</strong></td>
<td>Baseline 90.1 (39.8)</td>
<td>81.4 (34.1)</td>
<td>(p &lt; .001)</td>
<td>--</td>
<td>(p &lt; .01)</td>
<td></td>
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<tr>
<td></td>
<td>Post 41.6 (10.0)</td>
<td>54.0 (15.9)</td>
<td></td>
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</tr>
<tr>
<td><strong>Effect size</strong></td>
<td>-1.2</td>
<td>-0.8</td>
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<tr>
<td><strong>PANSS positive(^a), (\bar{x} (s))</strong></td>
<td>Baseline 20.4 (11.0)</td>
<td>17.7 (10.0)</td>
<td>(p &lt; .001)</td>
<td>--</td>
<td>(p &lt; .01)</td>
<td></td>
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<tr>
<td></td>
<td>Post 8.8 (2.1)</td>
<td>11.0 (4.2)</td>
<td></td>
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<td></td>
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<tr>
<td><strong>Effect size</strong></td>
<td>-1.1</td>
<td>-0.7</td>
<td></td>
<td></td>
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<tr>
<td><strong>PANSS negative(^a), (\bar{x} (s))</strong></td>
<td>Baseline 23.7 (10.9)</td>
<td>21.8 (9.6)</td>
<td>(p &lt; .001)</td>
<td>--</td>
<td>(p &lt; .01)</td>
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<tr>
<td></td>
<td>Post 10.8 (4.2)</td>
<td>14.5 (6.1)</td>
<td></td>
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<tr>
<td><strong>Effect size</strong></td>
<td>-1.2</td>
<td>-0.8</td>
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<tr>
<td><strong>PANSS GPS(^a, c), (\bar{x} (s))</strong></td>
<td>Baseline 46.0 (19.7)</td>
<td>41.9 (16.2)</td>
<td>(p &lt; .001)</td>
<td>--</td>
<td>(p &lt; .01)</td>
<td></td>
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<tr>
<td></td>
<td>Post 22.0 (4.8)</td>
<td>28.6 (8.3)</td>
<td></td>
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<tr>
<td><strong>Effect size</strong></td>
<td>-1.2</td>
<td>-0.8</td>
<td></td>
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<tr>
<td><strong>Psychosocial functionig(^d) (GAF), (\bar{x} (s))</strong></td>
<td>Baseline 43.6 (6.4)</td>
<td>43.6 (6.7)</td>
<td>(p &lt; .001)</td>
<td>(p &lt; .001)</td>
<td>(p &lt; .001)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post 67.0 (8.9)</td>
<td>44.8 (9.4)</td>
<td></td>
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<tr>
<td><strong>Effect size</strong></td>
<td>3.7</td>
<td>0.2</td>
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</tbody>
</table>

\(^a\) Higher scores indicate more severe symptoms.
\(^b\) Analysis of variance for repeated measures.
\(^c\) GPS, General Psychopathology Scale.
\(^d\) Higher scores indicate better global functioning.

**Table 2:** Symptomatology (PANSS) and psychosocial functioning (GAF) outcomes.

Other variables such as relapse and re-hospitalization rates, medication compliance and therapeutic adherence were measured during treatment. Integrated treatment patients had lower relapse: 9.3%, \(p < .01\) and re-hospitalization rates: 5.6%, at the end of treatment compared to 32.5% and 10% respectively for the standard treatment group that received medication alone. Antipsychotic medication compliance was higher in the integrated treatment group: 88.9% compared to 82.5% of the standard treatment group. Therapeutic adherence to the social skills training sessions was 86.4%, which means a higher adherence level according to the therapeutic adherence levels: excellent: 90 – 100; high: 80 – 89; good: 70 – 79; regular: 60 – 69; poor: 50 – 59; and bad: 40 – 49.

The assessment of symptomatic remission, psychosocial functioning and functional outcome demonstrated at baseline that remission was achieved by 29.6% of the integrated treatment group com-
pared with 20.8% of standard treatment. At the end of the interventions, integrated treatment patients showed a 96.3% of symptomatic remission compared to 56.3% of standard treatment. Psychosocial functioning within a “normal range” (GAF score above 65) was not achieved by either group under study at baseline. At the end of treatment psychosocial functioning was achieved by 50% of patients of integrated treatment compared to 2.5% of standard treatment. The two groups under study did not achieve functional outcome at baseline, while, 50% of the standard treatment group met both criteria: symptomatic remission and psychosocial functioning within a “normal range” at the end of treatment and were considered to have achieved functional outcome (favorable outcome) compared to 2.1% of the standard treatment group (unfavorable outcome) (Table 3).

<table>
<thead>
<tr>
<th></th>
<th>Integrated treatment $n = 54$</th>
<th>Standard treatment $n = 48$</th>
<th>McNemar</th>
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</thead>
<tbody>
<tr>
<td>Symptomatic remission at baseline</td>
<td>16 (29.6%)</td>
<td>10 (20.8%)</td>
<td>$p &lt; .01$</td>
</tr>
<tr>
<td>Symptomatic remission after treatment</td>
<td>52 (96.3%)</td>
<td>27 (56.3%)</td>
<td></td>
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<tr>
<td>Psychosocial functioning at baseline</td>
<td>--</td>
<td>--</td>
<td>$p &lt; .01$</td>
</tr>
<tr>
<td>Psychosocial functioning after treatment</td>
<td>27 (50%)</td>
<td>1 (2.5%)</td>
<td></td>
</tr>
<tr>
<td>Functional outcome at baseline</td>
<td>--</td>
<td>1 (2.5%)</td>
<td></td>
</tr>
<tr>
<td>Functional outcome after treatment</td>
<td>27 (50%)</td>
<td>1 (2.1%)</td>
<td></td>
</tr>
</tbody>
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Table 3: Symptomatic remission, psychosocial functioning and functional outcomes

4 Discussion

The present findings provide evidence that early integrated treatment in first episode psychosis is positively linked with statistically significant improvements in symptomatology, psychosocial functioning, lower relapse rate, high compliance with medication and high therapeutic adherence. Effect sizes in symptomatology and psychosocial functioning were large for integrated treatment. These results indicate that outcome can be improved through early intervention after the onset of psychosis. The maintenance of a stable clinical state is no longer considered as the ultimate therapeutic goal of treatment. New proposals indicate that the focus of treatment should include the achievement of symptomatic remission, and good psychosocial functioning that would lead to functional outcome as it was measured in the present study. Results indicate that a high proportion of patients that participated in integrated treatment achieved remission at the end of treatment: above than 95% compared to less than 60% of standard treatment. Psychosocial functioning within a normal range was accomplished by half of patients of integrated treatment compared to less that 3% of standard treatment. Functional outcome was achieved by half of patients of integrated treatment (favorable outcome) compared to less than 2.5% of standard treatment (unfavorable outcome). The aim of the study was to compare a single versus multi-element interventions indicated that the latter determined a favorable clinical and functional outcome. Remission achieved in the present study was higher than remission rates reported in the international literature: 17% – 88% (Emsley et al., 2011) according to the Schizophrenia Working Group criteria. Functional outcome that was observed in half of the patients of integrated treatment was similar (Harding et al., 1987; Harrison et al., 2001), and higher as other studies (Harrison et al., 2001; Whitehorn et al., 2002). Achieving and maintaining remission has been related to a better clinical status and functional outcome as reported in various studies (Docherty et al., 2007; Emsley et al., 2007; Hellding et al., 2007). Symptomatic remission can be considered as a good
indicator of better clinical and psychosocial functioning (Brissos et al., 2011), and it has been associated with good functioning (Bodén et al., 2009).

Although, there is not an international accepted consensus definition for symptomatic remission, the operational definition proposed by the Schizophrenia Working Group, has been useful to measure symptomatic remission as it has been verified in a great number of studies (Gorwood & Peuskens, 2012). Using eight items of the PANSS, the remission criteria are very easily to apply by a trained clinician, and could be considered as a good example of the need of shorter and simpler instruments. Even though, the operational definition is not related to any improvements in functioning, symptomatic remission has been associated with higher levels of social functioning (Bodén et al., 2009). Usually, remission and functioning have been assessed separately. For the present study, we included these two variables to assess functional outcome, as it has been considered that functional outcome should include various domains. There is not a consensus either on how to measure functional outcome, since the rates and definitions vary considerably across studies from “poor”, “fair” or “good” outcome (Henry et al., 2010; Salokangas et al., 2013). As it has been found in the present study, favorable outcome has been reported in developing countries (Hooper et al., 2007; Novick et al., Teferra et al., 2012).

Early treatment for schizophrenia should go beyond the measurement of symptom change. Psychosocial functioning can be considered as a very serious concern that should be included in the assessment of clinical and psychosocial effectiveness of interventions, these two variables should encompass functional outcome. The primary goal of schizophrenia treatment, in addition of symptom relief, should be the restoration of functioning, that is, the ability to function adequately in the community. First episode psychosis individuals present impairments in psychosocial functioning before the first psychotic episode; hence, these impairments must be addressed in initial treatment (Grant et al., 2001).

The great majority of patients that participated on this research project, 95% of them (Valencia et al., 2003) were living at home with their families. The experience of family caregivers to manage a person with a first-episode psychosis was a complicated burden since they had no knowledge of how to handle the illness. Relatives very clearly manifested the need for more information about the disease that would help them to cope with the burden and lower the stress related to living with a person with psychosis. These issues were included as components of the integrated treatment approach. The purpose was connecting patients and relatives needs with treatment strategies. At first, relatives were eager to believe that their needs and opinions would be taken into account as components of treatment, since they manifested that final decisions about treatment are only made by doctors. However, when these issues were incorporated and verified by them during treatment, they were satisfied since they felt that their needs were being accomplished by learning new skills that helped them to cope with the burden and illness management. These positive experiences increased involvement and commitment to treatment by relatives. A particular strength of this study should be explained by the fact that patients of integrated treatment experienced a significant lower relapse rate (10%). It seems that patients and relatives learned to identify the warning signs to prevent relapse which might be associated with high compliance with antipsychotic medication (88.9%). Considering that medication compliance was high and relapse rate was low, this might indicate that patients and relatives were aware of the benefits of medication as a protective factor to avoid relapse. Therefore, it appears that they learned the necessary skills about symptom management, and the importance of taking antipsychotic medication. It seems that high medication compliance was helpful for preventing relapse, and learning how to prevent relapse has been considered a priority in schizophrenia (Gleeson et al., 2009; Mueser & Bellack, 1992). These favourable results can be explained by the fact that all efforts by patients, their corresponding relatives and the treatment team were
oriented towards functional improvements. The work with patients and relatives, using an integrated treatment approach, can be considered as an effective way to promote functional outcome for first episode psychosis patients (Bertelsen et al., 2008; Petersen et al., 2005).

Participation of relatives in a psychoeducational multi family group intervention and later on in family therapy sessions for each patient and his family were beneficial (Rossberg & Johannssen, 2010), and essential as it has been established for family interventions (Pitschel-Walz et al., 2001). Participation of family caregivers was considered a strategic treatment issue since we pursued establishing a therapeutic alliance between patients, their relatives and the treatment team. Strong therapeutic alliance is related to better outcome in early treatment of schizophrenia (Johansen et al., 2013). Psychoeducation promoting a positive therapeutic alliance might be helpful in reducing the burden experienced by relatives, improving family relations and preventing the exacerbation of psychotic symptoms (Smerud & Rosenbarb, 2008)

At the National Institute of Psychiatry, in Mexico City, there has been a long term tradition of using a single-element treatment model such as pharmacotherapy as standard treatment. However, in the last twenty years, research protocols have been conducted including in addition to medication, psychosocial, psychoeducational, family therapy and rehabilitation approaches. Two components were considered for designing these treatment programs: 1) evidence based practices recommendations (Falloon et al., 2004; Shean, 2009) and 2) the situation, needs and demands from our patients and their relatives. Several experimental and clinical trials have been conducted with a duration of six or twelve months of treatment in chronic patients (Valencia et al., 2007; 2010; Valencia, Diaz et al., 2012; Valencia, Liberman et al., 2012) but also with first-episode psychotic patients during one year (Valencia, Juarez et al., 2012), and another study, during six months as reported in this chapter.

It is worth mentioning that in a previous study, first episode patients that received integrated treatment during one year demonstrated statistically significant improvements in symptomatology, psychosocial functioning, lower relapse and re-hospitalization rates, higher compliance with medication and high therapeutic adherence (Valencia, Juarez et al., 2012). In the present study significant improvements were not found in variables such as re-hospitalizations and compliance with medication. Although, six months of treatment proved its effectiveness, we wonder if a one year treatment would be more suitable for first-episode psychosis patients, which leads to the question that needs to be addressed referring to how long patients should remain in early treatment interventions for schizophrenia. Therefore, a limitation of the present study could be the short duration of the intervention as well as the difficulty to determine what components of the integrated treatment were relevant for clinical and functional improvements.

First-Episode psychosis patients need prompt diagnosis and early intervention for improving long-term outcome that will lead them to live productive lives in the real world. Early intervention, at this critical period, could lead to a more favorable outcome to prevent clinical and psychosocial deterioration.

References


