

PIENSA: Development of an Early Intervention Program for Adolescents With Early-Onset Psychosis and Their Families

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Abstract: Interest in the effectiveness of psychological interventions in patients with psychosis has increased in the last 2 decades, and early intervention programs are increasingly common. PIENSA (Programa de Intervención en Psicosis Adolescente; Intervention Program for Adolescent Psychosis) is a clinical program and pilot study based on previous research into the efficacy of early intervention in preventing relapse and improving outcome in patients with first-episode psychosis.

We describe a psychoeducational intervention designed for adolescents with early-onset psychosis and their parents. The intervention is adapted from McFarlane's Multiple Family Therapy model to our setting and population (adolescents treated in the Spanish public health system). It consists of 2 stages: an individual stage comprising 3 sessions and a subsequent group stage comprising 12 sessions. The total program lasts for 1 academic year (9 months).

We present the design of our program and our preliminary experience in a Child and Adolescent Unit in Spain.

Keywords: Adolescents, family intervention, group therapy, psychoeducational, psychosis, treatment.

INTRODUCTION

The term early-onset psychosis (EOP) covers several mental disorders and constitutes an DSM-IV diagnosis in which the manifestation of psychotic symptoms occurs before the age of 18 years (Remschmidt, 2001). Psychosis is estimated to affect about 1% of young people in community samples of children and adolescents (Lohr & Birmaher, 1995; Remschmidt, 2001; Remschmidt, Schulz, Martin, Fleischhaker, & Trott 1994; Remschmidt, Schulz, E., Martin, Warnke, Trott, 1994; Ulloa *et al.*, 2000). Studies based on psychiatric samples have shown that between 4% and 8% of this population suffers from psychotic symptoms (Karson *et al.*, 1991; Volkmar, 1996).

The course of EOP is variable, and prognosis is usually worse than in adult psychosis (Ballageer, Malla, Manchanda, Takhar, & Haricharan, 2005). Since adolescence is a critical period for biological, psychological, and social development, the onset of a severe psychiatric disorder during this time can have an added impact on a person's achievements and cause disability, economic burden, and family suffering.

In the early stages, the search for adequate treatment of EOP may be especially difficult for parents, who often attribute the signs and symptoms of the disorder to the habitual developmental manifestations of adolescence or to other problems in the family, social, and school environment. These signs and symptoms can portend poorer outcome and may require a specific approach for early identification and treatment. Several studies have shown the importance of early interventions, since the 2 to 5-year period after the first psychotic episode is a period "of maximum vulnerability and of maximum opportunity" (Edwards & Mc Gorry, 2002). In addition, interventions have to be specific to each population, as observed in various programs for first psychotic episodes, such as the LEO program in the UK and the OPUS program in Denmark (Bertelsen, *et al.*, 2008; Craig & Norman, 2004). However, programs such as these have demonstrated the superiority of this type of intervention over standard treatment. Therefore, early and specific interventions are an essential element in improving the prognosis of patients with psychosis.

INCLUDING FAMILIES IN THE INTERVENTION PROGRAM

The observation that both genetic and environmental factors play a key role in the heterogeneity of the etiology and course of psychotic disorders (van Os, Rutten, & Poulton, 2008) paved the way for the stress-vulnerability model, on which contemporary family interventions are based. The stress-vulnerability model assumes that genetic factors operate by making individuals selectively vulnerable

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to environmental risk factors, such as stressors and adverse life events (van Os, Kenis, & Rutten, 2010). These factors not only contribute to the onset of illness but also to the maintenance, persistence, and worsening of symptoms. Considering that most adolescents experience their first episode while living with their families, knowledge of the family environment is essential if the stressors of daily life are to be managed.

In early interventions, both patients and their families should be included in treatment strategies, as family interactions can affect the onset and course of psychotic symptoms. Family intervention aims to improve family relationships through the development of problem-solving strategies and to reduce the frequency of relapse (Kuipers, Onwumere, & Bebbington, 2010). High levels of expressed emotion are a reliable predictor of patient outcome in schizophrenia; the relapse rate for those returning to families with low levels of expressed emotion is 21% compared with a 50% relapse rate for those returning to families with high levels of expressed emotion (Bebbington & Kuipers, 1994). Moreover, caring for a family member with psychosis is demanding, often prolonged and associated with increased levels of stress and distress (Scazufo & Kuipers, 1996).

Background and Fundamentals of Psychoeducational Models

Psychoeducational programs are among the most widely studied psychosocial interventions in the early stages of psychotic disorders. These programs are systematic, didactic, psychotherapeutic interventions which aim to provide information to patients and their relatives about the illness and available treatment options in order to foster coping skills and understanding (Baüml & Pitschel-Walz, 2007). Their format varies depending on the focus, duration, setting and stage of the disorders. In recent decades, many controlled studies have shown their efficacy in disorders such as schizophrenia and other psychoses, including bipolar disorder (Colom *et al.*, 2009). The superiority of psychoeducational programs combined with medication over medication alone or medication combined with a "standard intervention" has been demonstrated in a meta-analysis (Pitschel-Walz, Leucht, Bäuml, Kissling, & Engel 2001). Specifically, studies in adult populations have shown that psychoeducational interventions can reduce the probability of relapse, the number of hospitalizations, and symptom severity. In addition, they can improve social and occupational functioning and increase adherence to treatment (Huxley, Rendall, & Sederer, 2000; Xia, Merinder, & Belgamwar, 2011). Psychoeducational interventions are both highly effective and economically viable (Rund *et al.*, 1994), thus enabling them to be easily implemented in health care systems. Additional benefits include reduced family burden, improved coping skills and the recognition and understanding of psychosis as an illness (Falloon, McGill, Boyd, & Pederson, 1987; McFarlane, Dushay, Stastny, Deakins, & Link, 1996; Pitschel-Walz, *et al.*, 2001). Thus, in accordance with the stress-vulnerability model, family interactions can play an important role in the continuity of the disorder. In this sense, family psychoeducational programs are aimed at influencing the environment in which the patient lives (Anderson, Hogarty, & Reiss, 1980) by

reducing anxiety and increasing family members' self-confidence and ability to react constructively to the patient. The programs also instill hope and are need-oriented. Interventions of this type aim not to apportion blame, but to develop a sense of responsibility so that family members can influence the course of the disease.

Psychoeducational programs aid in planning care and are easily implemented in a mental health system following the continuity of care model. Clinical experience shows the need to design individual treatments and care plans for patients with psychosis. These intervention plans need to be continuously adapted to the progress of the disorder, as well as to the patient and his/her environment. Therefore, clinical and community resources are necessary to facilitate regular mental health care on a continuum of intensity (considering hospital admissions as the most intense treatment and outpatient treatments as the least intense treatment). Health care systems without levels of care are usually inadequate and inefficient (Gunderson, 2002). Specific European programs that have shown their efficacy, such as the OPUS study, apply this continuing care model. The family psychoeducational groups based on McFarlane's model have also proven to be a key component of psychosis intervention programs (Bertelsen *et al.*, 2008).

THE INTERVENTION PROGRAM IN ADOLESCENTS WITH PSYCHOSIS (PIENSA) PROGRAM

The Child and Adolescent Psychiatry Department of Gregorio Marañón University Hospital, Madrid, Spain serves a population of approximately 3.8 million, of whom approximately 10-15% are adolescents. The department's main function is to study and stabilize patients with various psychiatric conditions requiring hospitalization. Therefore, the department participates in research programs and is a reference center in the field of EOP. The study of first psychotic episodes is a major research focus and has been developed as such since its inception. Given the importance and proven effectiveness of early treatment, the department also administers standard therapy and implements psychoeducational programs to better address psychotic symptoms. In this context, the Programa de Intervención en Psicosis Adolescente, PIENSA (Intervention Program for Adolescent Psychosis) was established in 2007 as an additional psychotherapeutic intervention for patients with EOP and their families and as a clinical and research program.

Before developing the psychoeducational intervention included in the PIENSA program, we were aware of only one other psychoeducational program specifically developed for the treatment of adolescents with EOP and their families, namely, the Psychosis Project in Norway (Rund *et al.*, 1994). Despite its relevance and originality, a number of issues limited the applicability of this project to our setting (the Spanish public mental health system). First, it was a long-term psychoeducational intervention that required the involvement of a large number of professionals with very specific qualifications. Second, it was conceptualized as an overall treatment package including psychoeducation and other interventions. Finally, the program was aimed at patients with a specific diagnosis of schizophrenia and their

families, while our target population (EOP) was broader and included patients with psychotic episodes related to schizophrenia, as well as those with bipolar disorder and psychotic disorders not otherwise specified. Our previous experience with the psychoeducational multifamily group of McFarlane (Gunderson, Berkowitz, & Ruiz-Sancho, 1997; Ruiz-Sancho, Gunderson, & Smith, 2001) and its proven efficacy encouraged us to proceed with the adaptation and development of our program.

Based on the Psychoeducational Multifamily Group program developed by McFarlane, (1991) our program consists of 2 consecutive phases: the initiation/alliance phase and the group phase (multiple family therapy format).

The initiation phase consists of 3 individual sessions lasting 50 minutes each in which the 2 group leaders interview families and adolescents separately. The main purpose of these interviews is to establish a strong therapeutic alliance with the participants. Therefore, the attitude of therapists, who listen actively and empathize with the patients, is an essential component in building a relationship. These interviews include retrospective recall of the difficulties experienced by patients and families in order to obtain a profile of specific conflicts and problems. The interviews also promote the expression of feelings and validate the participation of patients and their families in the program. In fact, one of the objectives of the individual sessions is to assess family dynamics, with particular emphasis on identifying the strengths of individual members and the family system as a whole. Specific questions regarding the group phase are discussed, and preparation for group therapy is accomplished. Specific psychoeducational material is also provided during these sessions.

Once participants have completed the initiation phase, they are invited to join 2 separate groups, 1 for patients and 1 for parents. The program was designed to match the academic year and consists of 12 sessions of 90 minutes each held during alternate weeks.

In comparison with the McFarlane intervention, PIENSA psychoeducational program has the following additional advantages:

Target Population

Our intervention targets adolescents and their families. Consequently, it was necessary to prepare new psychoeducational material for patients aged between 14 and 19 years (with onset of psychosis before age 18) using adequate terminology and an attractive design. To the best of our knowledge, no other program specifically addresses diagnostic dilemmas, psychoeducational maturation in adolescence, and adaptation of treatment in patients with EOP. One of the differential aspects of our program is the distinction between symptoms of the disease and developmental manifestations of adolescence. Our clinical experience shows that this is one of the main difficulties families face. As such, our psychoeducational program constitutes a new and useful tool in the management of this population.

Heterogeneity of Diagnoses

Apart from the programs that include young people with prodromes, we believe that this is the first psychoeducational program designed for a heterogeneous group of patients, all of whom have psychotic symptoms, but whose symptoms are manifestations of different diseases (eg, schizophrenia and bipolar disorder), which have different prognoses and outcomes. We based our psychoeducational program on the concept of psychosis as a continuum (van Os *et al.*, 2010), which is common to all diagnostic groups and can serve as a basic guideline of behavior in the early stages of the disorder when uncertainty prevails.

Parallel Groups

Considering the age of the participants and given that one of the challenges adolescents face as they mature is differentiation from their parents, a decision was taken to use 2 simultaneous and parallel groups: one for parents and one for adolescents. This approach also provides an

Table 1. Phases of Structured Sessions

Phases	Time	Objectives
Informal talk	10 minutes	Social conversation in which the focus is on promoting social networking/alliance, avoiding talking about problems.
Task review	5 minutes	The target family from the previous session is invited to review the implementation of the solutions suggested in that session
Seminar	10 minutes	A short talk of by one of the group leaders summarizing one of the specific topics from the educational program
Word round	15 minutes	An informal chat in which all the group members can talk about their difficulties or concerns
Troubleshooting	40 minutes	Following the word round. The group leaders pick out a dilemma or conflict to be solved in the group. The group members use brainstorming to start proposing potential solutions that are recorded on a whiteboard and later analysed through the evaluation of advantages and disadvantages. The session finishes with an action plan drawn up by the whole group, based on the solution preferred by the family or the patient whose situation had been examined.
Social and informal chat	10 minutes	Participants are encouraged not to talk about problems, but about hobbies or personal interests.

intimate setting in which patients can share feelings and personal experiences, a process that is difficult for adolescents if their parents are present.

Adaptation to Public Health Systems

To facilitate application of the program to our environment and the possibility of use in other mental health services, PIENSA is shorter than other programs (3 individual sessions plus 12 group sessions). It is conducted fortnightly and requires the participation of only 2 clinicians per group. Although therapists do not need to be highly skilled, they do need to be familiar with psychosis.

Supervision of Therapists and Groups

This is an innovation of traditional psychoeducational models imported from other approaches, such as dialectical behavioral therapy. Therapists receive feedback and are supervised by other team members and an external consultant who monitors each case. Thus, we have three parallel working groups: adolescents, parents and professionals. This approach enables us to create a space for reflection where we can share the task with coherent, rational, and reliable thinking as a result of constructive interaction between us. With this goal, we organized weekly supervised and coordinated sessions (1.5-2 hours) in which all the team members participate and whose main objectives are as follows:

- To ensure compliance with the technique and competence of the therapists
- To train new therapists
- To ensure continuous training
- To manage clinical dilemmas

The meetings serve to score and review the technical performance and competence of the therapists through a specifically designed scale (see Fig. 1).

This task ensures that treatment is implemented according to the research protocol. All sessions are video recorded. Some members of our team complete the scale immediately after watching the videos; then the whole team discusses the differences and commonalities between the session and the protocol. This process of self-assessment and assessment by others contributes to our continuing training and development, strengthens our team, and enables us to grow both personally and professionally.

PROGRAM DESIGN: PRACTICAL ISSUES IN DEVELOPING THE PROGRAM

Group Format Vs. Individual Format

Our experience shows that the main benefits of the group format, as described by Vinogradov and Yalom (1996), are that it provides a model through which it possible to learn social skills, facilitates reciprocal support between patients, and reduces stigma, all of which are key issues in a population that tends towards isolation. The group format also facilitates insight, improves adherence to treatment,

extends the social network of patients and families, and is more efficient and economical.

Duration of the Program

Our psychoeducational program is shorter than other, similar programs, and the effectiveness of interventions of this length have been properly tested in adults (Colom *et al.*, 2003). In our opinion, shorter interventions have fewer dropouts and are less expensive. Consequently, they are easier to implement in a public health system.

Number of Patients

The ideal size of a psychoeducational group is between 8 and 12 patients. A smaller number of participants (fewer than 8) would diminish the quality of contributions and the opportunities for patients to interact. Working with larger numbers of patients is often uncomfortable for therapists, and patients may think that therapists do not pay adequate attention to them.

Open Groups Vs. Closed Groups

PIENSA provides patients with an open format so that they and their families can be incorporated on discharge from the Hospital Unit. Therefore, there is no common start/end date, although everyone has to complete the same number of sessions for therapy to be considered finished. Thus, the groups are heterogeneous in terms of participants' experience and the degree of cohesion between them, an observation which has its advantages and disadvantages. First, senior members tend to convey a more positive and hopeful vision for newcomers, who are still dealing with the trauma of their illness. Second, as the number of new patients eligible for entering the program is fairly small; patients do not have to waste time waiting until a minimum number of participants is reached. Third, a more internalized group structure with veteran members is easier to accept for new members. However, this format has the disadvantage that each time a member enters or leaves the group, cohesion is disrupted. In addition, group phenomena such as regression, rejection and review of group norms must be taken into consideration and analyzed.

Co-Therapy/Pool of Therapists

Although the groups are conducted in co-therapy (one pair of therapists for the patient group and another pair of therapists for the parent group), we have at least one additional therapist for each group who could replace the usual one in case of need, that is, we have a pool of 3 therapists per group, even though every session would be co- led by only 2 of them. Any potential negative effect of this pool system is reduced by introducing the third therapist to the participants at the initial individual sessions as a member of a "pool" of 3 therapists, 2 of whom lead the sessions. It is also important for each therapist to have participated in at least 1 individual session with each patient so that they have met the patients at least once before the groups get started. This facilitates attachment and gives the participants a teamwork perspective that ensures continuity of care, which is key to the successful therapy.

Fig. (1). Contd.....

Development of the Solution					
9)	5	4	3	2	1

	The solution includes an action plan with clearly defined steps			Solution unclear, vague or without specification.	
Closure Informal					
10)	5	4	3	2	1

	Informal and relaxed group setting emotionally			Environment tense charged and problem-focused	

Ruiz-Sancho, A., Gunderson, J. G., Berkowitz, C. (1996). Adherence and competence questionnaire. © Authors

Fig. (1). Adherence and competence questionnaire. This questionnaire will be completed based on comments (audio or video) from the psychoeducational sessions in Multiple Family Therapy. Indication of the number that best describes the way in which the therapist has led the session (if the work of co-therapist is scored along with the lead therapist, then the score will be a team score).

Management of Absences

To counter the lack of regular attendance, one of the main problems we encountered, we used phone calls from one of the therapists to the group's members to remind them of the dates of sessions, show interest in their return to the sessions, and seek an explanation for the last absence.

Supportive Care

It is important to inform parents and adolescents that psychoeducational groups are only part of their treatment and that they cannot replace the need for medication and follow-up sessions with their own therapist or other resources such as outpatient therapy or day hospitals.

The main contribution of group meetings is to provide the necessary structure to manage and contain anxiety during a period when uncertainty can be paralyzing. Furthermore, group meetings provide a common space that enables participants to think together and put painful emotions into words. They also provide an increased sense of control that enables patients to redefine a seemingly unmanageable situation as a number of specific problems for which feasible solutions can be proposed and realistic action plans developed.

BENEFITS OF OUR PROGRAM

Our 5 years' experience with this program indicates that adolescents and their parents need and welcome this assistance. As a result of implementing this program, we now provide a more comprehensive approach including not only biological treatment, but also psychological support by the time of first contact with mental health professionals. On finishing the program, many parents and patients ask to continue, because the program increases their awareness and helps them manage their difficulties. In fact, some parents request psychological treatment for themselves. Both adolescents and their parents start creating a social network and find a place where they can share their feelings with other families at the same stage of illness. As health care professionals, we obtain more information about adolescents; we receive feedback about side effects of medication and the participants' general health. PIENSA

psychoeducational groups offer long-term psychosocial support for patients and their families while the relationship between clinicians and patients improves. We are currently conducting a study in which the PIENSA program is compared with a standard supportive intervention, using a randomized design.

An additional benefit is the creation of a multidisciplinary and highly motivated therapeutic team that benefits from continuous training and supervision. PIENSA has generated much interest in other hospitals, and other health care professionals are now requesting training.

LIMITATIONS

Since its inception, our program has been limited by poor adherence, as patients are barely aware of their disease and find it difficult to enroll in group treatment. Other limitations include dropouts or absence, which may have been due to the setting. As our program was conducted in a hospital located in a large city, some adolescents were unable to use public transport by themselves and missed sessions because their parents were not able to take them to hospital. Furthermore, returning to the hospital reminds patients of their hospitalization and increases stigma.

FUTURE DIRECTIONS

We would like to make structural changes to our program, for example, to introduce a workshop immediately before starting the groups as another stage in the psychoeducational treatment program. The purpose of the workshop is to provide information about the illness and to work together with patients, parents, and siblings, who are also important family members and should be included in the workshop. Specific groups could also be formed for siblings. Another structural change could be to extend the duration of the group phase to 19-24 months so that new issues, such as sexuality and internet/video game addiction, could be covered.

As a part of our current clinical trial, and because we are identifying needs as we progress, our program could be expanded by adding new research lines and clinical interventions according to the stage of the illness, for

example, cognitive remediation in later stages. Interventions for earlier stages could include educational and prevention programs in the immediate environment, such as those of the Portland Identification and Early Referral (PIER) program (McFarlane *et al.*, 2012) which trains professionals dealing with adolescents (eg, teachers and monitors) as part of a wider global program.

Given the promising findings of other programs (Bertelsen *et al.*, 2008), PIENSA could expand its range of interventions to become a complete treatment package in which psychoeducation is an important component, but not the only one.

CONCLUSIONS

The PIENSA program was successfully implemented in our Child and Adolescent Psychiatry Department. It is a pioneer program in both in Spain and internationally, since it includes two parallel groups for parents and adolescents with EOP and a multidisciplinary team. We observed a clear need and desire to participate, especially among parents. The psychoeducational approach provides participants with a clear framework (structure and consultation material) that can allow them to better respond to treatment and manage their emotions. It is of paramount importance to adapt and implement psychoeducational models, not only in mental health institutions, but also in educational and leisure centers, in order to prevent EOP and adequately treat children and adolescents with this disorder.

CONFLICT OF INTEREST

The author(s) confirm that this article content has no conflicts of interest.

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