AN EARLY PSYCHOSIS RESEARCH PROGRAM IN SÃO PAULO, BRAZIL. ORGANIZATION AND IMPLEMENTATION

Mario R. Louzã, Yara Azevedo, Gamaliel Macedo, Wagner Gattaz

Abstract

Objective: Early psychosis services became very important in research and treatment of subjects at high-risk to develop a psychosis.

Method: This paper describes the organization and first 2½ years of experience of an early intervention research program (*ASAS- Avaliação e Seguimento de Adolescentes e Adultos jovens em São Paulo*) in São Paulo, Brazil.

Results: From 894 subjects that contacted our research group, 18 fulfilled the SIPS/SOPS criteria for high-risk of psychosis. They had a mean age of about 22 years, 66.7% were female. Fourteen (77.7%) met criteria for Attenuated Positive Symptoms. Their baseline mean total SOPS was 32.1 ± 12.4.

Conclusions: The very low rate (2%) of high-risk subjects in relation to the number of contacts should be considered in the context of the limitations of the brazilian health system. Most of the subjects contacted our program directly and were not referred from other health or social services.

Keywords: Early Psychosis – Detection – Intervention – Services – Brazil

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Introduction

In the last 15 years early intervention programs for psychotic disorders, especially schizophrenia, became widespread worldwide. Many specialized groups made efforts to develop ways to look for adolescents and young adults at risk for psychotic disorders (McGorry et al. 2007, Edwards and McGorry 2002).

São Paulo is located in the southeastern part of Brazil. It has about 12 million inhabitants and is the largest city of South America. It reaches about 20 million if "great São Paulo" is considered, as there are about 20 other smaller cities just around São Paulo. The population between 14 and 30 years is estimated in about 2.9 million inhabitants (IBGE 2001).

An epidemiological study of prevalence of mental disorders in Sao Paulo using the CIDI interview and ICD-10 criteria estimated the 1-month, 12-month and lifetime prevalence of nonaffective psychosis in 0.7%, 0.8% and 1.9% respectively (Andrade et al. 2002).

Our early psychosis research program is located at the Instituto de Psiquiatria do Hospital das Clinicas da Faculdade de Medicina da Universidade de São Paulo (http://www.hcnet.usp.br/ipq), a university psychiatric hospital and outpatient clinic with about 120 beds and about 10.000 outpatient consultations a month. It is a tertiary facility, usually dealing with more severe patients.

The aim of this paper is to describe the organization and implementation of an early psychosis program in the city of Sao Paulo and present baseline characteristics of our sample and to discuss the challenges of implementing such a program in a developing country.

Subjects and Methods

The ASAS program (Avaliação e Seguimento de Adolescentes e Adultos Jovens em São Paulo)

The ASAS (Evaluation and Follow Up of Adolescents and Young Adults in São Paulo) included the physical organization of an outpatient clinic, the trai-

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ning of the team in the theory and practice of early detection and intervention, including training in interviews and scales for the diagnosis of high-risk subjects.

A campaign to inform the community about early signs of psychosis was developed and included interviews on newspaper, radio and a small commercial on the educative TV. A folder and a poster about the ASAS project were also developed. High schools in the area around the Instituto de Psiquiatria were also contacted; most of them refused our offer of a conversation about early intervention with teachers. Three high schools accepted to fix our posters in common areas.

Subjects could contact the project either by email or phone. A screening was done by phone; if positive, the subject and a family member were invited to a personal evaluation.

Inclusion criteria for screening included subjects between 14 and 30 years old living in Sao Paulo, who have been experiencing at least two of any of a checklist symptoms for at least two weeks:

- feeling anxious, irritable, or depressed
- disturbed patterns of sleeping or eating
- confused or muddled thinking
- noticing that things and people seem strange or unreal
- being preoccupied with particular ideas or thoughts
- unusual experiences such as seeing or hearing things that are not there
- isolation from family and friends
- poor performance at school or work.

Subjects were screened by phone and if positive, they were invited to a personal interview. A written consent was obtained from the subject and an accompanying person to participle in the research project.

They were assessed with the Structured Interview for Prodromal Symptoms (SIPS), the Scale of Prodromal Symptoms (SOPS), the Positive and Negative Syndrome Scale (PANSS), the WHO Psychiatric Disability Assessment Schedule (DAS), the Clinician Rating Scales for alcohol and drug use (CRS) and the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID).

Subjects were considered with "at risk" to develop a psychosis if they fulfilled the Criteria for Prodromal Symptoms provided by the Structured Interview of Prodromal Symptoms (SIPS) as described by Miller et al. (2003B). The three prodromal syndromes include the "Brief Intermittent Psychotic Symptoms", the "Genetic risk and functional deterioration" and the "Attenuated Positive Symptoms" syndrome; the operational definitions of these syndromes are described in Miller et al. (2003B).

Results

Between September 2004 and March 2007, 894 subjects contacted ASAS by phone (88,9%) or email (11,1%) and were interviewed (**Figure 1**). They were contacted by phone and a screening interview with a check list was applied.

There were 753 negative phone screenings. The main reasons are presented in **Table 1**.

A total of 141 individuals fulfilled criteria for further personal assessment. They were explained about the purposes of the research and were invited to come to our clinic. About one third of the subjects refused to come to the hospital (see **Table 2**); those who came to personal assessment signed an informed consent for participation. Of this sample, 18 individual fulfilled criteria for a prodromal syndrome. The main reasons for exclusion of the subjects are presented in **Table 2**.

From the 123 subjects that did not fulfilled the criteria for high-risk mental state, 35.8% contacted our program themselves, 54.5% were referred by their parents; 10.3% were referred by other relatives or friends. Fifty-six percent of the high-risk subjects (n=18) contacted our program themselves and 44% were referred by their parents or relatives.

The baseline characteristics of the prodromal sample (n=18) are summarised in **Tables 3**, **4** and **5** and Figure 2. The sample, at baseline, was young (mean age about 22 years), 12 of them female, 50% was white, 13 single (72.3%) and 14 completed high school (77.8%). They were largely unemployed (66.7%), but nine subjects had some kind of income (e. g., informal job) and the mean income was about US$ 250.00 per month. They were functionally compromised, with a mean actual Global Assessment of Functioning (GAF) score of 68 ± 14 (**Table 3**).

Fourteen patients (77.7%) met criteria for the Attenuated Positive Symptoms (APS) prodromal syndrome, and 3 (16.7%) met criteria for both APS syndrome and genetic risk and recent deterioration syndrome and 1 (5.6%) met criteria for genetic risk and recent deterioration. No one met criteria for Brief Intermittent Positive Symptoms (**Figure 2**).

In **Table 4** we present the mean (and standard deviation) of each symptom of the SOPS and in Table 5 the mean (and standard deviation) of the four scores of the SOPS, together with the same scores from the New Heaven sample (Miller et al. 2003A) for comparison purposes.

Discussion

Our early psychosis program must be considered in the context of the Brazilian mental health system. A Unified Health System (SUS – Sistema Unico de Saúde) is planned to provide health care for the whole country population. From the whole health expenditures, 2.35% is allocated to mental health. In 2005 the funding was US$82.70 per capita, of which US$ 1.95 per capita was applied for mental health care (WHO-AIMS 2007).

During the last years there has been a reduction of psychiatric hospital beds and an increasing number of community facilities for the treatment of mentally ill, specially Psychosocial Community Centers (CAPS – Centro de Atenção Psicossocial). There has been a reduction in the budget allocation to psychiatric hospitals (49.3% of the mental health budget) and an increase in the budget to community centers (15%) (Secretaria de Atenção à Saude/DAPE 2007).

Nevertheless the system is not sufficient for the whole population and its structure is not as organized

Figure 1. *Fluxogram of the subjects that contacted the early psychosis program*

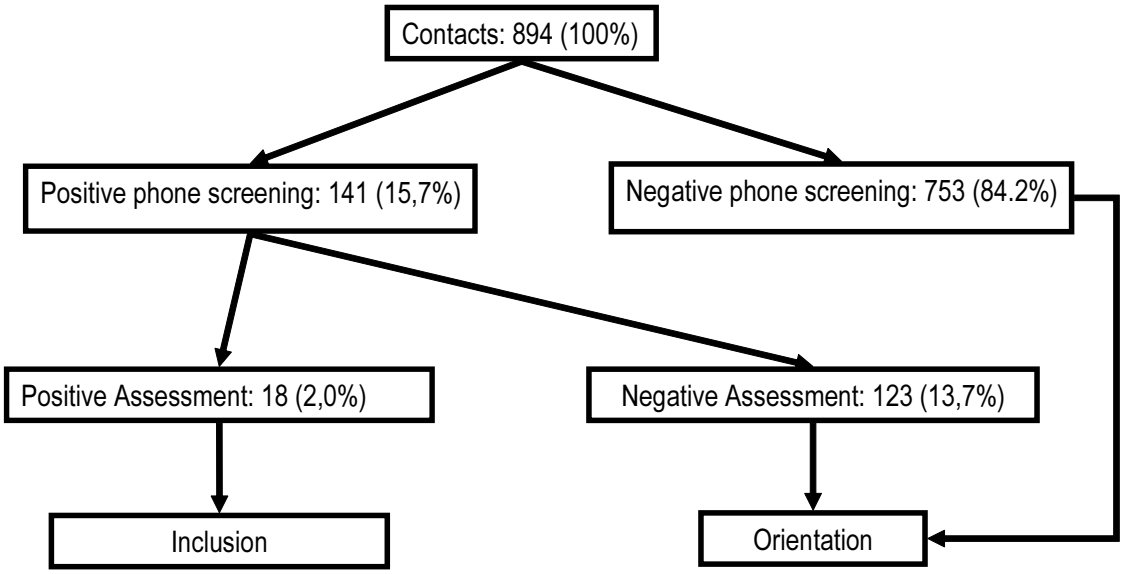


Table 1. *Reasons for negative phone screening (n=753)*

	%
Impossible to contact the person who called us (Ununderstandable message, wrong phone number, unanswered calls, others)	26.8
Just wanted general information	16.8
Outside the age range (14-30 years)	21.2
Subject with diagnosis of psychosis or already using antipsychotics	10.7
Subject with other psychiatric diagnosis	5.5
Mental health professional looking for information	3.7
Does not live in São Paulo Catchment Area	8.0
Patient refuses to come to personal interview	1.4
Others	4.5

as in developed countries so that there are important unmet needs for the population, specially the poor (Andrade et al. 2008). It is still a challenge to implement mental health care in the primary health care system, as other health care professionals are not well acquainted with mental health concepts and have difficult to recognize mental disorders (Tanaka and Lauridsen-Ribeiro 2006).

This is one of the factors that could account for the large number of negative telephone screenings. Most of the reasons for the negative screenings are clearly not related to lack of information given in folders, posters or interviews in the media, but indicate that this public was looking for any kind of treatment. It should be also considered the "Instituto de Psiquiatria" is a well known and famous public service, so that the possibility to be treated there may also account for the large proportion of negative screenings.

If a person was considered a suspect in the telephone screening, he/she was invited to a personal interview and assessment, in order to participate in the research. Some of the subjects refused to come to the

Table 2. *Reasons for negative personal assessment (n=123)*

	%
Previous or actual use of antipsychotics	11,4
Refuses to come for personal assessment or to participate in the research project (did not sign informed consent)	37.4
Does not fulfill inclusion criteria	31.0
Acute psychotic disorder	8.9
Ongoing treatment in other outpatient services	1.6
Others	9.7

Table 3. *Demographic and functional aspects of the prodromal sample (n=18)*

	Male	Female	Total
Nº of subjects	6	12	18
Age (mean ± sd)	22.0 ± 5.2	21.6 ± 4.1	21.7 ± 4.4
Marital status			
Single	5	8	13
Married	1	3	4
Divorced		1	1
Unemployment	6	12	18
GAF actual (mean ± sd)	67.3 ± 14.9	68.6 ± 15.2	68.7 ± 14.7
GAF last year (mean ± sd)	81.4 ± 6.0	87.4 ± 6.1	85.3 ± 6.6

personal interview; from the subjects who came to the assessment, only 18 fulfilled criteria for high-risk for psychosis. The main reason for the negative personal assessment was related to the refusal to participate in the project. Although we do not have detailed information about these subjects, as they did not signed informed consent and were not submitted to SIPS/SOPS evaluations, it can be speculated that some of them were high-risk subjects.

We had a very low rate (2%) of at high-risk subjects in relation to the number of contacts as compared to other services (e.g., 32% in Broome et al. 2005). This probably reflects the fact the subjects (or family members) contacted our service directly, very few subjects were referred from other health services.

Considering the high-risk sample, the distribution of the 3 syndromes is similar to others. Most of the patients have attenuated positive symptoms and/or genetic risk, this also occurs in the sample of Broome et al. (2005). Their symptomatology is comparable to the numbers published by Lemos et al. 2006, Miller et al. 2003A, McGlashan et al. 2006. They had also similar scores in the GAF, in comparison to other studies.

There is a difference in relation to gender ratio, about 2/3 of our subjects were females. In other samples, most of the subjects were males (Miller et al. 2003a, Broome et al. 2005). In an epidemiological study in Sao Paulo, service utilization was more frequent by females, probably related to a worse self-perceived mental health and a more frequent help-seeking behavior in comparison to males (Andrade et al. 2008). Differently from other samples, approximately half of our patients were self-referred what might contribute to their demographic and clinical characteristics.

Table 4. *SOPS: mean and standard deviation of the symptoms, number and percent of patients scoring between 3 (moderate) and 5 (Severe but not psychotic)*

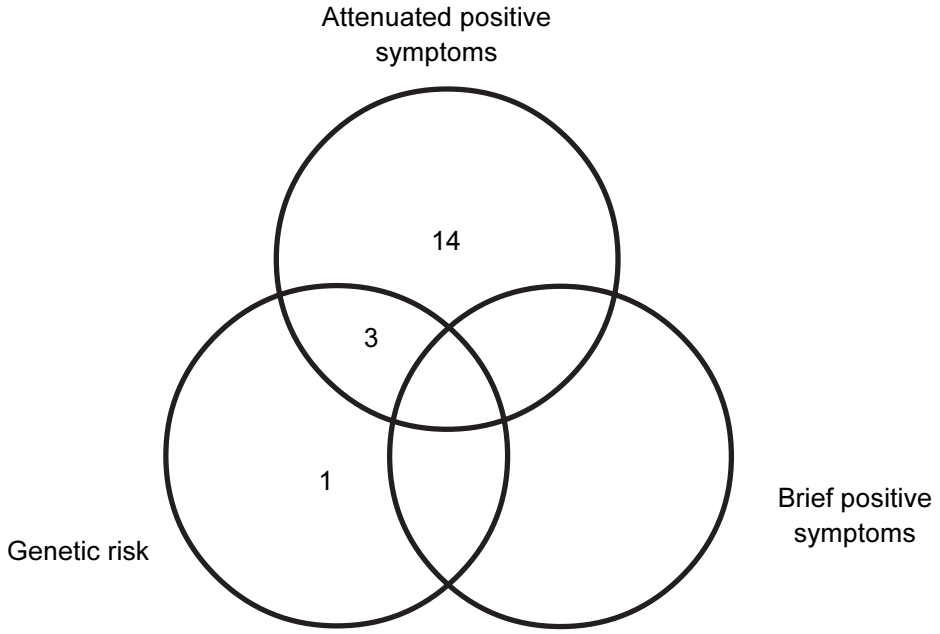
	Mean ± sd	N	%
Positive symptoms			
Unusual thought content	3.17 ± 1.61	14	77.8
Suspiciousness	2.72 ± 1.48	12	66.7
Grandiosity	1.06 ± 1.58	4	22.3
Perceptual abnormalities	2.56 ± 1.50	10	45.6
Speech disorganization	1.28 ± 1.90	4	22.2
Negative symptoms			
Social isolation	2.06 ± 1.73	6	33.4
Avolition	2.72 ± 1.56	10	55.6
Decreased expression of emotion	1.06 ± 1.30	3	16.7
Decreased experience of emotion	1.06 ± 1.21	3	16.7
Decreased ideational richness	1.22 ± 1.35	5	27.8
Decreased role functioning	2.28 ± 1.60	8	34.5
Disorganization symptoms			
Odd appearance	0.56 ± 1.04	2	11.1
Bizarre thinking	0.56 ± 0.92	1	5.6
Poor focus/attention	1.83 ± 0.94	4	22.2
Poor hygiene	0.94 ± 1.30	2	11.2
General symptoms			
Sleep disturbance	2.22 ± 1.51	9	50.0
Dysphoric mood	2.78 ± 1.83	9	50.0
Motor disturbance	0.22 ± 0.54	0	0
Decreased stress tolerance	1.83 ± 1.38	5	28.8

Table 5. *SOPS scores (mean ± sd) of the sample (n=18) and from the New Haven sample for comparison*

	ASAS	New Haven (PRIME Study)*
Positive symptoms	10.7 ± 4.5	8.3
Negative symptoms	10.4 ± 5.5	14.0
Disorganized symptoms	10.0 ± 3.8	6.1
General symptoms	7.0 ± 3.5	7.4
Total SOPS	32.1 ± 12.4	35.7

*(Data from Miller et al. 2003A)

Figure 2. *Distribution of the sample (n=18) according to the type of at-risk mental state*



Conclusion

The most significant difference between our early psychosis program and other similar programs is related to the huge number of subjects that contacted us and the small number of high-risk subjects. This is probably related to the limitations of our mental health services and to the fact that most of the subjects contacted us directly, not as a referral from other health or social services.

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