

Factorial structure, comorbidity and prevalence of the Thought Problems empirical syndrome in a paediatric sample

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ABSTRACT

This study shows the findings about prevalence and comorbidity of alterations in thinking in a paediatric clinical sample. Its aim was to find out about the empirical configuration (factor structure) of thought problems in minors with psychological problems. **Method:** The sample population included 300 minors from 6 to 12 years old who showed psychological alterations and had been referred by different medical specialists. The assessment instrument used was an adaptation of the Child Behaviour Checklist (CBCL), consisting of 96 items. **Results:** From the factorization carried out an empirical syndrome which partially coincides with Achenbach and Rescorla's (2001) factorization can be seen. The percentage of cases above the 98 percentile of the mean plus one and two standard deviations were calculated both in the thought problems factor from Achenbach's factorization and in the paediatric factorization. The prevalences found ranged between 2.1% (pc 98) and 24.5% (sd mean + 1). In all the cases the percentage of boys with thought problems was higher than that of girls. Furthermore, the thought problem factor showed a high degree of association with the following factors: dissocial, somatic complaints, confrontational/defiant, attention deficit hyperactivity disorder and, to a lesser extent, anxiety and depression.

Key words: CBCL, child clinical inventory, prevalence, comorbidity, thought problems.

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INTRODUCTION

During childhood it is hard to discriminate whether some behaviour and attitudes are actual characteristics of thought alterations or mere traits associated to the developmental stage that the young child is in (Caplan, 1994; Rothstein, 1981). At present, categorial classifications such as DSM-IV and CIE-10 do not have a specific section for thought problems in their descriptions of children's psychological disorders. Clinical psychologists are sent descriptions of generalized disorders in children's development, such as autism or Asperger's syndrome, or psychotic problems, specifically schizophrenia, in adult classifications.

Kraepelin (1883) was the first to use the term 'dementia precox' to name what we now know as schizophrenia. In the fourth edition of his *Compendium der Psychiatrie* he discusses a type of dementia in young people. In the sixth edition he groups paranoia, catatonia and hebefrenia, under the common heading of dementia praecox, whose

fundamental features are affective isolation, indifference, loss of the inner unity, alteration in the course of thinking and reasoning, and lack of will.

Empirical studies in adults support the existence of a wide psychotic spectrum (Claridge et al., 1994; Eysenck, 1992). In this sense, the dimensional model proposes a continuum of personality variables which indicate a predisposition with no necessary manifestation of the pathology. The construction of the P scale (Psychotizism) in Eysenck's theory is regarded adequate to estimate vulnerability within a wide spectrum of psychotic problems (Claridge et al., 1996). Ballepí, Barrantes-Vidal and Obiols (1999) reviewed bio-behavioural markers of the schizophrenic spectrum and concluded that there are premorbid manifestations in childhood which are part of the schizophrenic spectrum in adult age. Some of these symptoms are: difficult temperament, passivity, inhibition and lack of spontaneity.

García and Pérez (2003) stated that adolescence is an especially complicated developmental period in which the resolution of conflicts typical of this stage may be determinant in the appearance of symptoms similar to those of schizophrenia. Poulton, Caspi, Moffitt, Cannon, Murray and Harrington (2000) found that 13% of eleven year olds respond affirmatively to an item

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which assesses psychotic symptoms. Over the last few decades the research of this phenomenon in the normal population (Johns y Van Os, 2001) has been very relevant by highlighting the so called attenuated or subclinical psychotic experiences; among them, paranoid ideation, magical thinking and strange perceptions (Nelson and Yung, 2009). These symptoms, which are not clinically significant and do not allow a specific diagnosis of psychosis, can be regarded as schizotypic or pseudo-psychotic signs (Venables, 1995). In a recent study, Yung *et al.* (2007) made reference to the differences between psychotic and pseudo-psychotic symptoms and concluded that such differences lie essentially in the degree of discomfort that they generate as well as in the frequency and intensity of the symptoms, and that both symptoms, psychotic vs pseudo-psychotic, are similar. Other studies carried out with the child population (Cannon, Mednick and Parnas, 1990; Walker and Lewine, 1990; Watt, Grubb and Erlenmeyer-Kimling, 1982) found that shyness, social isolation, immaturity and emotional instability, aggressivity and other behavioural problems are some of the symptoms characteristic of thought problems in childhood.

Starting from the factorization carried out on the second part of the *Child Behavior Checklist (CBCL)*, Achenbach (1991a/b) described the Thought Problems Empirical Syndrome, which consists of obsessive thinking, self-injury or suicide, seeing or hearing what others cannot see or hear, sleeping problems, pinching parts of the body, repeating actions or behaviour, storing things, strange behaviour or ideas and worries about sex (Table 2).

A great number of worldwide studies have been conducted with Achenbach's scales (Lambert, Knight, Taylor and Achenbach, 1994; Stanger, Fombonne and Achenbach, 1994; Verhulst *et al.*, 2003) from an epidemiological point of view. The factorial analyses carried out show an empirical syndrome which includes characteristics of thought problems. On the other hand, some studies conducted with the CBCL in childhood (Achenbach, 1991; Lambert *et al.*, 1994; Verhulst, *et al.*, 2003) show that psychological alterations detected in symptoms such as unsociable behaviour, aggressiveness and criminal behaviour are related to the presence of thought problems, specifically schizophrenia in adulthood (Miller, Byrne, Hodges, Lawrie and Johnstone, 2002), in spite of not having the main symptoms of the diagnosis. In addition to this, Baum and Walker (1995) found in a retrospective study, which used a modified version of Achenbach's questionnaire (CBCL) together with the versions for parents, of Andreasen's Scale for the Assessment of Positive Symptoms (SAPS) (Andreasen, 1984) and the Scale for the Assessment of Negative Symptoms (Adreasen, 1983), that cognitive disorganization and psychomotor poverty in schizophrenic adults might be directly related to shyness and inversely associated with anxiety and depression during childhood. Furthermore, in the general population, Jones, Rodgers, Murray and Marmot (1994) observed that those minors who became schizophrenic in their adulthood had shown characteristics of shyness, introversion and anxiety during their childhood.

Stanger, MacDonald, McConaugh and

Achenbach (1996) applied the CBCL, its TRF version (Teacher's Report Form; Achenbach, 1991b) and the YSR version of it (Youth Self-Report; Achenbach, 1991c) to a sample population of 1,103 children and teenagers aged 4-18 in order to identify syndromes that might predict the beginning of mental problems. The findings obtained from the self reports showed that the teenagers had problems of shyness, anxiety and depression. Another study carried out by Dhossche, Ferdinand, Van der Ende, Hofstra and Verhulst (2002) with the YSR questionnaire, among others, states that 6% of teenagers report hallucinogenic experiences. In Spain, López-Soler *et al.* (1998) and Lemos, Vallejo and Sandoval (2002) conducted research on the general teenage population with the YSR and found that the set of items that make up the thought problems empirical syndrome is equivalent to the one found by Achenbach in the American population. The prevalence of the thought problems disorder in the study by López-Soler *et al.* (1988) was 17.5% with moderate symptoms (19.4% in males and 15.5% in females) and 5% with severe symptoms (3.8% in males and 6.2% in females).

López Soler and Freixinós (2001) conducted a study with the YSR, whose objective was to find out the relationship between alcohol use and associated psychopathology in a general sample population of 324 teenagers aged 12-17. This study found statistically significant differences between consumers and non consumers in the thought problems factor. More often than their non-using counterparts, alcohol users reported hearing things that others do not hear, seeing things that others cannot see, thinking strange things, and so on. In the same teenage sample, the thought problems empirical syndrome is significantly related to criminal and antisocial behaviour (López and López Soler, 2008).

In spite of the research on empirical syndromes during childhood, the fact is that the characteristics of the psychotic spectrum is still difficult to identify and diagnose. In the scarce data about the prevalence of this disturbance in childhood, Loranger's retrospective study with 10 to 14 year old children (1984) found that psychotic pathology or thought disturbances are present in 18% of males and 11% of females. If we compare Loranger's study with similar ones, such as those by Gillberg, Wahlström, Forsman, Hellgren and Gillberg (1986) and Thomsen (1996), we can observe that the percentages found by these other studies are lower and range between 0.14% in males and 0.25% in females below the age of 14. These percentages are more in tune with schizophrenia throughout life, which is approximately 1%. (DSM-IV-TR, 2003).

In relation to gender, though, the studies coincide in that the prevalence is higher in males. (Gillberg *et al.*, 1986; Loranger, 1984). Moataz *et al.* (2004) applied the CBCL to study a general population sample of 1,416 of only male children and teenage students from Saudi Arabia and found a prevalence of 11.9% in ages ranging 6-15 years and 6.8% in those older than 15.

As for comorbidity, a disorder seldom manifests itself in isolation. It is generally associated with another or other disorders. Thus, Verhulst and Van der Ende (1993) reported that the children with high rates in only one syndrome have a better

prognosis than those showing high rates in two or more syndromes. In this sense, CBCL has proved to be a very adequate scale to screen a number of disorders Biederman *et al.* (1995); Hazell, Lewin and Carr (1999). Both studies used the CBCL as an instrument to discriminate mania with attention deficit hyperactivity disorders by using large samples of subjects with two diagnoses plus a control group. In the first study, Biederman *et al.* concluded that the scales of delinquent behaviour, aggressive behaviour, somatic complaints, anxiety or depression, and thought disturbances of the CBCL showed excellent convergence with the diagnosis of mania. A study by Hazell *et al.* which sought to differentiate minors with mania and attention deficit hyperactivity disorder (ADHD) from those showing only ADHD found that, when the CBCL was applied, mania plus ADHD obtained a high rate of significance in the syndromes of shyness, thought disturbances, delinquent behaviour and aggressive behaviour and a high comorbidity among anxiety, depression and psychotic symptoms. Finally, López-Soler *et al.* (1997) found in a teenage sample that the thought disturbances factor showed significant correlations with the factors of depression-anxiety, aggressiveness, drug use, somatic complaints and inability to pay attention.

Objectives of the study

The general objective of this study is analyse the structure of the thought disturbance empirical factor, its prevalence and comorbidity in a paediatric sample. Furthermore, the specific objectives set out are:

Find out the symptoms/items that constitute the thought disturbance factor in the paediatric sample.

1. Obtain the prevalence of the thought problems empirical syndrome in the paediatric sample on the basis of the following criteria: a) the normalized rates obtained by Achenbach for this factor in the general population, which correspond with the items in Table 2, and b) the scores corresponding to the thought problems factor with the factorial structure found in the paediatric sample (Table 2).
2. Find out the comorbidity of thought problems taking the items from the structure by Achenbach and Rescorla (2001) (Table 6) as the reference point as well as the factorization carried out using the items in the *Inventario Clínico Infantil (ICC)* or Child Clinical Inventory (CCI) by López-Soler (1987) with the rest of the syndromes found.

METHOD

Participants

The sample studied consisted of 300 minors, 207 males (69%) and 93 females (31%) with ages between 6-12 (Mean = 8.457; standard deviation = 1.826). The average age of boys was 8.469 (sd = 1.797) and that of girls was 8.430 (sd = 1.896). The minors were referred to the *Consulta de Psicología Clínica Infantil* (child psychology clinical unit) of the Virgen de la Arrixaca University Hospital in Murcia by different units of paediatric hospital departments and primary health care centres in the Autonomous Region of Murcia due to the fact that they manifested

indicators of possible psychological alteration, according to the medical specialists who had referred them. The parents of all the minors in the sample were given full information and signed their consent. No minor with intellectual disability was included in the sample.

Procedure

The procedure followed was to hold an initial interview with the parents to find out about the basic problems of the minors, to ask for their consent for the management of the data found in the research, to administer the CBCL and the CCI to the parents, and to administer the specific psychological tests to the minors.

The minors were referred to by using a check list in which specialist doctors described the characteristics of the minors which might be indicators of psychopathology or emotional alteration. The specialist in clinical psychology carried out a semistructured psychological interview by means of which aspects of the minor's psychological development, usual performance, behavioural and emotional responses, school performance and problems at school, as well as the makeup and attitudes of the family were detailed.

In order to have access to specific and unbiased information about the child, parents and minors were given a battery of psychological tests both for general screening and for some specific disorders identified during the interview so as to be able to carry out reliable psychodiagnosis.

The CBCL or the abbreviated CCI version were a part of the general screening tests. Once the psychological examination had been carried out, a report was made and sent to the specialist who had first been consulted. At the same time, the psychological treatment was started and, if necessary, the parents were directed to the appropriate psychological service to go to with their psychological problems.

Instruments

The information collected from the minors' parents who were referred to consultation was obtained by means of the *Inventario Clínico Infantil (ICC)* or Child Clinical Inventory (CCI) by López-Soler (1987) and is the object of this research. This inventory assesses the behaviour and feelings of boys and girls. It consists of 96 items with four alternative answers to choose from, from 0 to 3. Its preparation is based on the second part of the *Child Behavior Checklist* by Achenbach and Edelbrock (1984).

In order to obtain significant information about the children's altered behaviour and to find indicators of psychopathology, the first part of the CBCL was eliminated, this part assesses social characteristics of the families and the aptitude and abilities of the minors. The items of the second part of the CBCL, which describe behaviour not indicative of psychopathology were not included either. A first study was carried out with this instrument in paediatric population, which showed a Cronbach's alpha coefficient of .931 (López-Soler *et al.*, 1995).

Statistical analysis

In order to study the dimensional structure

of the Child Clinical Inventory, an exploratory common factor analysis was carried out with the SYSTAT 12 statistical analysis software. The resulting *scree-plot* graph was studied in order to select the interpretive number of factors. Also, Varimax, a criterion of orthogonal rotation and Oblimin, an oblique criterion, were used in order to obtain a more simple structure of the specific syndromes in the sample under study. As the results of the oblique solution were virtually the same as those of the orthogonal rotation, the latter was chosen on the basis of its more interpretative simplicity.

The prevalences of the thought problems factor in the paediatric sample were obtained according to the following statistical criteria:

1. Global percentage and by the gender of the minors in or over the 98 percentile in the thought problems factor of Achenbach's factorization.
2. Global percentage and by the gender of the minors who were above the mean plus one standard deviation and plus two standard deviations in Achenbach's thought problems empirical syndrome in the general population.
3. Global percentage and by the gender of the minors who were in or above the 98 percentile

of the paediatric sample in the thought problems factor in the CCI factorization.

4. Global number of minors and by gender of those who were above the mean plus one standard deviation and plus two standard deviations in the thought problems factor in the CCI factorization.

Finally, the study of the relation between the thought problems factor with the rest of the syndromes obtained in our factorization was carried out by means of Pearson's product-moment correlations.

FINDINGS

Factor structure

As the number of items of the CCI scale was very high, the *scree-plot* graph which resulted from applying the exploratory common factor analysis did not show a clear rupture in the incline of the eigenvalues. So an eight factor choice was made which accounted for 39.75% of the total variance of the correlation matrix. Table 1 shows the percentage of variance accounting for each of the factors in the eight factor factorization.

F. I	F. II	F. III	F. IV	F. V	F. VI	F. VII	F. VIII
Dissocial (24.968)	Anxiety/ depression (11.587)	Attention deficit hyperactivity (20.597)	Somatic complaints (10.285)	Insecurity (6.842)	Oppositional Defiant (12.607)	Thought Problems (7.441)	Depression (5.673)

Table 1: Percentage of variance accounted for by each of the factors.

The choice of the items which made up the thought problems empirical syndrome was carried out

depending on whether its factorial load was equal or higher than 0.30 (Table 2)..

General population (CBCL) (Achenbach y Rescorla, 2001)	Paediatric population (ICI)	Factor loading (ICI)
Thoughts / Obsessions	Self-injury / Suicidal attempts	0.568
Self-injury/ Suicide	Talks about killing him/herself	0.558
Hears things that others cannot hear	Often gets injured	0.348
Sleeping problems	Stares or makes his/her eyes white	0.344
Pinches parts of his/her body	Nervous movements or tics	0.318
Repeats actions / behaviour	Thoughts / Obsessions	0.315
Sees things that others cannot see	Lost in his/her thoughts	0.314
Stores things	Sleeping problems	0.300
Strange behaviour /ideas	Self-injury / Suicidal attempts	
Worried about sex		

Table 2: Thought problems factor.

As can be seen in Table 2, there are differences between the factorial structure found in the general population and the one found in the clinical population. In their factorization, Achenbach and Rescorla (2001) obtained ten items which made up the thought problems syndrome, whereas our study has obtained nine, only three of which coincide with those by Achenbach, namely self-injury or suicidal attempts, obsessive thinking and sleeping problems.

It is worth mentioning that the items *sees things which others cannot see* and *hears things which others cannot hear, and strange behaviour/ideas* which are fundamental in Achenbach's thought problems factor, appear in the

dissocial factor.

Analysis of reliability

The analysis of reliability for the whole scale with the Cronbach's alpha coefficient was 0.95. Therefore, we can regard the whole scale as a reliable instrument for the assessment of child psychopathology. The alpha coefficient for the thought problems factor was 0.65. Even though this is a relatively low value, it is necessary to remember that the thought problems factor consists of only nine items of the whole CCI scale.

Prevalence of the Thought Problems Syndrome

Table 3 shows the prevalences of the

thought problems factor in relation to gender.

	98 Percentile	Mean + 1dt	Mean + 2dt
Total	2.1%	20.8%	3.2%
Boys	3.6%	21.2%	3.6%
Girls	1.1%	19.8%	2.2%

Table 3: Thought problems prevalence. CBCL items (Achenbach and Rescorla, 2001).

If we attend to the first criterion, the global percentage of minors in or over the 98 percentile in Achenbach’s thought problems factor is 2.1%. When regarding gender difference, the percentage ranges from 3.6 in boys to 1.1% in girls. By using the mean plus one standard deviation (M + 1SD) and the mean

plus two standard deviations (M+ 2SD), the sample total obtains a prevalence of 20.8% and 3.2%, respectively. Regarding gender, the prevalence of M + 1SD is 21.2% in boys and 19.8% in girls, whereas with M + 2SD the prevalence is 3.6% in boys and 2.2% in girls.

	98 Percentile	Mean + 1dt	Mean + 2dt
Total	2.8%	22.7%	2.8%
Boys	2.6%	24.5%	3.6%
Girls	1.2%	18.6%	2.3%

Table 4: Thought problems prevalence. CCI items.

The total percentage of minors in or above the 98 percentile of the thought problems factor in the CCI factorization is 2.8%. With regards gender, we obtain 2.6% in boys and 1.2% in girls.

Finally, the prevalence with the mean plus one standard deviation is 22.7% and with the mean plus two standard deviations it is 2.8%. When the assessment is done in relation to gender, the prevalence with M + 1SD is 24.5% in boys and 18.6% in girls, whereas with M + 2SD, the

prevalence is 3.6% in boys and 2.3% in girls.

The cut-off point scores corresponding to the mean plus one standard deviation (M + 1SD), to the mean plus two standard deviations (M + 2SD) and to the 98 percentile are shown in Table 5. We must remember here that when the CCI appears in the table, it represents the thought problems factor obtained in the paediatric sample (Table 2). The structure of the CBCL is also described in Table 2..

Global cut-off scores	N	M+1DT	M+2DT	P98
ICI	282	8.456	12.075	13
CBCL	284	8.468	12.073	14.82

Table 5: Global cut-off scores

We can see that the sample size differs from the number of subjects of the total sample. This is due to the fact that the statistical programme used for finding these data eliminates those minors who lack some data in some of the items that contribute to calculating the thought problems factor. The cut-off point scores obtained both with the CCI items and with the CBCL are very similar and use the criterion of mean plus one standard deviation (8.456 in CCI

and 8.468 in CBCL) and the criterion of mean plus two standard deviations (12.075 in CCI and 12.073 in CBCL). When the 98 percentile criterion is taken, there are almost two points of difference (13 in CCI and 14.82 in CBCL).

Table 6 shows the comorbidity of thought problems with the rest of the syndromes in the CBCL and CCI.

	CBCL	ICI
Dissocial	.731**	.597**
Anxiety / Depression	.434**	.456**
ADHD	.613**	.545**
Somatic complaints	.682**	.623**
Insecurity	.263**	.315**
Oppositional / Defiant	.648**	.597**
Dysthymia	.218*	.279**

* p < .05, ** p < .01

Table 6: Comorbidity of the thought problems factor according to the CBCL or the CCI with other CCI factorization syndromes.

The comorbidity of the thought problems factor has been carried out with Achenbach’s factorization ítems and with the one obtained in the CCI. In both cases its correlation has been established with the rest of the syndromes in our paediatric

sample. Thus, taking as a reference the configuration of the thought problems syndrome in the CBCL, a high correlation can be observed with the following factors: dissocial (.731), somatic complaints (.682), oppositional/defiant (.648), and attention deficit

hyperactivity disorder (.613), whereas the correlations are lower for the mixed anxiety depression factor (.434), uncertainty (.263) and dysthymia (.218).

According to the CCI factorization, although the positive correlations obtained are similar, the order is not the same, since the highest correlation is with somatic complaints (.623), followed by dissocial (.597), oppositional/defiant (.597) and attention deficit hyperactivity disorder (.545). As happened in the CBCL, the least significant correlations are established by internalizing factors such as anxiety/depression (.456), insecurity (.315) and dysthymia (.279).

The highest correlation obtained was established between the thought problems syndrome and the dissocial factor from Achenbach's factorization. This strong association is partly due to the fact that two of the items (seeing things and hearing things) from Achenbach's thought problems syndrome are a part of the dissocial empirical syndrome in the factorization of our paediatric sample.

Conclusions

As for the first objective to reach, obtaining the items that make up the thought problems factor in the paediatric sample, we can observe that there is a very important difference between Achenbach's factorial structure and the one obtained by this study: the items seeing things that others cannot see, hearing things that others cannot hear, or strange behaviours or ideas do not form part of the factor, they appear in the dissocial factor.

Apart from this, in relation to prevalence, we can see that when the alteration criterion taken is the 98 percentile, the prevalence obtained in the total sample is very similar in both structures (CBCL and CCI factors), and slightly higher in the paediatric structure (2.8% versus 2.1%).

If the criterion taken is the mean plus one and plus two standard deviations, very similar rates are again found with both structures. The rate is higher with the criterion of mean plus one standard deviation. The mean plus two standard deviations is higher in the factorial structure of the CBCL. Furthermore, the prevalence rates are higher with this criterion than with the 98 percentile.

When the prevalence obtained in children is compared in both structures, the 98 percentile prevalence is similar. When the reference is the mean plus one standard deviation, the paediatric structure is three points higher than the one found in the CBCL structure (24.5% versus 21.2%, respectively). However, if the criterion is the mean plus two standard deviations, the prevalence is 3.6%, the same in both structures.

The prevalence found for girls both in the paediatric structure and in the CBCL structure is practically the same, being slightly higher in the CBCL structure, 19.8% versus 18.6%, which are obtained in the factorization of the clinical group. It can be observed in Tables 3 and 4 that the prevalence in thought problems is higher in boys than in girls.

The cut-off point scores obtained for both the CBCL structure and the one in the paediatric sample do not differ. Only in the 98

percentile is the cut-off point score higher in the CBCL factorization.

As for comorbidity, there is a greater relation with externalising problems, such as dissocial conflicts, attention deficit hyperactivity and oppositional defiant attitude, than with internalizing problems, except for the somatic complaint factor in the paediatric factorization, which shows the highest correlation with thought problems.

DISCUSSION

The factorial structure found by Achenbach in the general population does not coincide with the factorial structure of the clinical paediatric population. Only three items out of the nine obtained in our factorization coincide with those of Achenbach. Surprisingly, seeing things and hearing things do not appear within the items in our factorization.

Our findings do not coincide with the ones obtained in the configuration of the thought problems factor in samples of Spanish teenagers in the general population (Lemos, *et al.*, 2002 and López-Soler *et al.*, 1998). However, aggression and antisocial criminal behaviour do show a close relationship with teenage thought problems (López and López-Soler, 2008)

As stated above, in spite of the numerous studies carried out all over the world, the characteristics that make up the thought problems factor describe a great variety of symptoms. Cannon *et al.* (1990), Caplan (1994), Walker and Lewine (1990) and Watt *et al.* (1982) spoke of isolation, immaturity, aggressiveness and other behavioural problems that may be characteristic of thought problems during childhood. Miller *et al.* (2002) thought that aggressiveness was a trait in childhood which was likely to predict psychotic problems during adult life. Some manifestations of aggressiveness during childhood may actually include symptoms of thought problems, as it has been shown in this study.

The presence of two clearly psychotic symptoms in the dissocial factor of our factorization is very peculiar and requires further research that would permit us to find whether it is part of a stable symptomatologic configuration or merely a specific finding in this sample. As the research consulted shows no data in this respect, we are inclined to think that the finding may be just a characteristic of this sample.

The findings might be important in the design of childhood protocols, as the referral of minors to clinical consultations is mainly due to behavioural problems and very seldom to possible psychotic alterations.

Some behavioural disorders might include psychotic symptomatology which is difficult to observe and, therefore, not specifically assessed, as it is not so evident or disturbing in the environment as are behavioural alterations.

As for the gender variable, our study coincides with the ones by Gillberg *et al.*, (1986) and Lorange (1984), in which the prevalence of thought problems is also higher in boys than in girls.

In relation to comorbidity, both somatic

complaints and anxiety/depression have a high correlation with thought problems. This finding is in the line of the research carried out by Yung *et al.* (2007), which concludes that the highest scores in the dimension of depression may increase pseudo-psychotic symptoms. However, it might also indicate that thought problems are a risk factor for the development of depressive symptoms, given that perceiving or interpreting reality in a peculiar way and not finding social validation may trigger responses of anxiety and depression.

The limited detection of thought problems during childhood, its combination with aggressive symptoms and its psychopathological importance in teenage and adult life make it necessary to look out for its signs at an early age, which is easy to do by collecting parent information by means of the CBCL or other specific scales. Only in this way shall we reliably find out how pseudo-psychotic symptoms are manifested in childhood and be able to establish adequate psychological treatment, which would improve the well-being of minors and decrease the probability that psychotic disorders appear or worsen in the future.

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