Rev Bras Psiquiatr 2002;24(2):63-7

Epidemiology of depressive symptoms in adolescents of a public school in Curitiba, Brazil

Epidemiologia de sintomas depressivos em adolescentes de uma escola pública em Curitiba, Brasil

Saint-Clair Bahls

Department of Psychology of the Federal University of Paraná (UFPR). Curitiba, Paraná, Brazil

Abstract **Objectives:** To assess, using the self-report questionnaire Children's Depression Inventory (CDI), the rate of depressive symptoms and its distribution by age and gender, in a sample of students.
Methods: Application of the CDI in 463 students, aged 10 to 17.
Results: The total mean score was 13.0 with a standard deviation of 7.0 (median = 12.0), for females the score was 14.4 with a standard deviation of 7.2 (median = 13.0) and for males it was 11.1 with a standard deviation of 6.2 (median = 10.0). Using the cut-off score of 19, 20.3% of the students had important indications of depressive symptoms. The age factor had no significance; however, there was a non-significant trend of increasing rates of depressive symptoms in the ages of 10 to 15 and a decreasing trend in the ages of 16 to 17. There was a statistically significant predominance of females above the cut-off score compared to males (72.3% versus 27.7%), with a ratio of 2.6 females for each male.
Conclusions: These results suggest that adolescent students have a high level of depressive symptoms, with a clear predominance of females over males, and a probable period of onset concentrated between the ages of 12 and 15 years.

Keywords Epidemiology. Depressive symptoms. Adolescence.

Resumo **Objetivos:** Avaliar, por meio da aplicação do questionário de auto-avaliação *Children's Depression Inventory* (CDI), o índice de sintomas depressivos e sua distribuição por idade e gênero em uma amostra de estudantes.
Métodos: Aplicação do CDI em 463 alunos do ensino fundamental e médio, com idade entre 10 e 17 anos.
Resultados: O escore médio total foi de 13,0 com desvio-padrão de 7,0 (mediana = 12,0), com a seguinte distribuição por gênero: meninas = 14,4, com desvio-padrão de 7,2 (mediana = 13,0), e meninos = 11,1, com desvio-padrão de 6,2 (mediana = 10,0). Aplicando o ponto de corte de 19, 20,3% da amostra situaram-se na faixa indicativa de sintomas depressivos importantes, e a distribuição por gênero foi de 72,3% para meninas e de 27,7% para meninos, representando 2,6 meninas para cada menino, diferença estatisticamente significativa. No fator idade, não houve diferença estatisticamente significativa; entretanto, encontrou-se tendência de aumento dos índices dos sintomas à medida que a idade aumentava durante a adolescência, dos 10 aos 15 anos, e observou-se uma redução, não significativa estatisticamente, nas duas faixas etárias de maior idade (16 e 17 anos).
Conclusões: Confirmou-se a existência de alto índice de sintomas depressivos entre adolescentes estudantes, havendo um nítido predomínio do gênero feminino sobre o masculino e com provável pico de aparecimento no período dos 12 aos 15 anos de idade.

Descritores Epidemiologia. Sintomas depressivos. Adolescência.

Thesis: "Depressive Symptoms in Students aged 10 to 17: An Epidemiologic Survey" presented to the Master Course of Psychology of Childhood and Adolescence. Sector of Humanities and Arts. Federal University of Paraná, 2000.
Received on 21/6/2001. Reviewed on 12/12/2001. Approved on 11/1/2002.

Introduction

The scientific interest on depression in children and adolescents is quite recent, although there have been case reports since the 17eth century. Up to the 70's, it was believed that depression at this age was rare or even non-existent.[1-5] This concept began to change after the Fourth Congress of the European Union of Child Psychiatrists in 1970, which main subject was: *Depressive States on Childhood and Adolescence*. Systematic studies that proved the existence of depressive disorders in adolescence and childhood have also contributed to change this conception.[6-8] Since 1975, the National Institute of Mental Health of the US (NIMH) has recognized the existence of depression on children and adolescents.[9]

It is currently understood that major depression (MD) on adolescents is common, debilitating and recurrent, involving a high degree of morbidity and mortality and it is one of the great public health concerns, although still often not recognized nor treated.[7-13] Several authors remarked the phenomenon of depression on children and adolescents that seems to be occurring more frequently and earlier than before.[10,14-19] However, there are few epidemiological studies about depression at this period of life.[20-23]

Several articles[4,15,16,19,24-28] about the epidemiology of depressive disorders in adolescents used several types of interviews and their results vary for year-prevalence of MD from 3.3% to 12.4% and for dysthymia from 2.0% to 6.4%. Results about gender distribution have been controversial, as three researches[16,19,24] reported higher frequencies on females, whereas in three others[4,15,25] there was no statistically significant difference and in one study[27] males were predominant. Concerning the age factor mentioned in two of these researches[4,16] no statistically significant difference was found.

Studies about depressive symptoms on adolescents in community samples show that they are commonly present, although results differ greatly. In researches using the *Children's Depression Inventory* (CDI), the most widely used self-assessment scale of depressive symptoms in young adolescents,[6] there is a great variability in the cut-off score used that ranged from 12[29] to 25.[30] Two researches[31,32] used the cut-off score of 19, as recommended by Kovacs,[33] and the rate of depressive symptoms varied from 8.3% to 10.0%. Some studies[34,35] have only indicated the total mean scores, of 9.03 and 9.65. Regarding the gender factor, eight studies[6,30-32,34,36-38] have not found statistically significant difference, but three others did, in two of them[29,39] females were predominant over males in the other[35] males were predominant. As for the age factor, less studied than the gender factor, we found five studies[30-32,37,40] with no significant results and two researches[35,39] with statistically significant difference.

Epidemiological studies about depression and depressive symptoms in adolescents have shown discrepancies, in the frequencies found, in the different rates of the distinct age groups and in the gender distribution. Although the increase in the prevalence of depression and depressive symptoms during the adolescence has been widely accepted, the exact moment in which it happens is not clearly known. It is also not known when there is an increase in the gender rates, with the predominance of females over males as the data available are scarce and the findings have been inconsistent regarding age and gender differences.[23,31]

The aims of this study have been: (1) To identify the rate of depressive symptoms on students aged 10 to 17; (2) to verify if the depressive symptoms rates increase with age; and (3) to verify the relationship between depressive symptoms in adolescence and their gender distribution.

Methods

Five hundred and five students from 6th up to 11th grades of a state school, in the city of Curitiba (selected by adherence), Paraná, Brazil, accepted to participate in the study. They represented all students aged 10 to 17 of these grades. Four hundred and sixty-three students were included and assessed, as information about 22 of them was incomplete and 20 aged more than 17. The participants' features are summed up in Table 1. The author and two senior students of the Psychology Course of the Federal University of Paraná (UFPR) administered the CDI in the classrooms. The administration followed a standard procedure: the educational supervisor conducted the researcher to the classroom to explain the reasons of the survey, emphasizing to the students that their participation in the questionnaire would be voluntary and assured them about the confidentiality and anonymity of the surveyed data. Next, the researcher distributed the questionnaires to those who gave oral consent to participate and read aloud the filling instructions. All questionnaires were applied at the same day.

Table 1 - Distribution of the sample by age and gender.

Age	Male		Female		Total		Ratio
(years)	N	%	N	%	N	%	F / M
10	05	2.6	08	3.0	13	2.8	1.6
11	15	7.7	23	8.5	38	8.2	1.5
12	24	12.4	26	9.7	50	10.8	1.1
13	26	13.4	35	13.0	61	13.2	1.3
14	31	16.0	43	16.0	74	16.0	1.4
15	35	18.0	53	19.7	88	19.0	1.5
16	35	18.0	59	21.9	94	20.3	1.7
17	23	11.9	22	8.2	45	9.7	1.0
Total	194	100.0	269	100.0	463	100.0	1.4
		41.9		58.1			

$\chi^2_{calc} = 3.50$; $p=0.8347$ (Chi-Square).

Instrument

The instrument used was the self-assessment questionnaire *Children Depression Inventory* (CDI),[33] validated for Brazilian students.[37] After a pilot study, Bahls & Kossobudzki modified the CDI.[37] The CDI was created in the US in 1977 and its last edition dates from 1992. It measures depressive symptoms in children and adolescent students, aged 7 to 17. The appropriate cut-off score to be used in population samples is 19. The CDI differentiates children and adolescents with major depression or dysthymia from those with other psychiatric disorders or from the normal ones.[33]

Several studies have assessed its internal consistency, structural factors, reliability, test-retest (stability), administration methods and cut-off scores to outline depression cases. In stan-

dard samples, the Cronbach's alpha coefficient for the 27 items is 0.86. It is noteworthy that the CDI is not a diagnostic instrument; it simply measures depressive symptoms. Positive and significant correlations of CDI scores to the clinical diagnosis have been already found and several authors[3,4,6,11,31,34,36,37,39,41] have validated it in community and clinical samples and Gouveia et al[37] adapted the CDI to the Brazilian context.

Statistical analysis

The descriptive analysis was done through tables and graphs. We used the Student's t parametric test in the age descriptive statistics, and the non-parametric Mann-Whitney test in the descriptive statistic of the scores and the Chi-Square with Yates correction test (using the Epi Info software) in the age and gender sample distribution. The maximum significance level adopted was 5%.

Results

Depressive symptoms rates

The total median score was 13.0 (standard deviation-SD: 7.0) and the mean was 12.0, with the following gender distribution: females 14.4 (SD: 7.2) and median of 13.0; males 11.1 (SD: 6.2) and median of 10.0, representing a statistically significant difference ($p<0.0001$). The scores of females varied from a minimum of 0.0 to a maximum of 40.0 and that of males, from a minimum of 0.0 to a maximum of 29.0 (Table 2). Applying the cut-off score (CS) of 19 we obtained a rate of 20.3%, with the distribution of 2.6 females for each male. Analyzing separately by gender, 25.3% of the females and 13.4% of the males are situated above the cut-off score. We found in the CS of 17, the rate of 28.5% and in the CS of 25, the rate of 7.1% (Table 3).

Depressive symptoms and age

The sample was divided into eight age groups that showed the following results with the cut-off score of 19: (1) 10 years: 4.3% (p=0.517); (2) 11 years: 9.6% (p=0.745); (3) 12 years: 10.6% (p=0.896); (4) 13 years: 14.9% (p=0.695); (5) 14 years: 18.1% (p=0.648); (6) 15 years: 22.3% (p=0.449); (7) 16 years: 11.7% (p=0.029); and (8) 17 years: 8.5% (p=0.808). There was no statistically significant difference between age groups, although at the age 16 we found a greater concentration for scores smaller than 19.

Depressive symptoms and gender distribution

We found the following ratios in the age groups: (1) 10 years: 4 females and not a single male (ratio F/M = non-existent); (2) 11 years: 5 females and 4 males (p=0.997); (3) 12 years: 8 females and 2 males (p=0.025); (4) 13 years: 10 females and 4 males (p=0.059); (5) 14 years: 12 females and 5 males (p=0.039); (6) 15 years: 17 females and 4 males (p<0.0001); (7) 16 years: 9 females and 2 males (p=0.011); (8) 17 years: 3 females and 5 males (p=0.617) and in the total sample: 68 females and 26 males (ratio F/M=2.6). There was statistically significant difference at 12, 14, 15 and 16 years; at 13 years it was found only a trend to a difference. Between age groups of 11 to 16 years the ratio varied from 1.2 to 4.5 females for each male. Dividing the sample into two groups, the first with scores up to 18 and the second one with scores of 19 or over, we found the following distribution: (1) scores up to 18: 54.5% females and 45.5% males; and (2) scores of 19 or over: 72.3% females and 27.7% males. These data are represented in Figure.

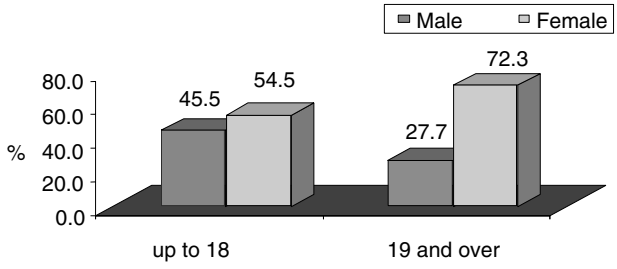

Figure - Gender distribution vs. cut-off score

Discussion

This total mean score (13.0) found in the study was greater than the rates found in the literature and in researches using the same instrument. Finch Jr. et al[35] in the US, obtained the total mean score of 9.65 in 1,463 students aged 7 to 16 and Smucker et al[34] in the US, found a total mean score of 9.09 in 1,252 students aged 8 to 16, whereas Reynolds et al[36] in the US, found mean scores of 9.00 in females and of 7.82 in males in 166 students aged 9 to 12. We should stress that these studies included participants younger than 10, what can alter the rates

Table 3 - Data Distribution by gender vs. the cut-off score.

Cut-off score	Male		Female		Total		F/M Ratio
	N	%	N	%	N	%	
19 :Total	26	27.7	68	72.3	94	100.0	2.6
% Total		13.4		25.3		20.3	
17 :Total	41	31.1	91	68.9	132	100.0	2.2
% Total		21.1		33.8		28.5	
25 :Total	06	18.2	27	81.8	33	100.0	4.5
% Total		3.1		10.0		7.1	

Table 2 - Descriptive statistics of age and score vs. gender.

Data		N	Mean	Standard Deviation	Minimum	Maximum	Median
Age	463	14.2	1.9	10.0	17.0	-	
	Male	194	14.2	1.9	10.0	17.0	-
	Female	269	14.2	1.9	10.0	17.0	-
Score	463	13.0	7.0*	0.0	40.0	12.0	
	Male	194	11.1	6.2*	0.0	29.0	10.0
	Female	269	14.4	7.2*	0.0	40.0	13.0

**Very high standard deviation, it is advisable to use the median.*
Age → t = -0.009 and p = 0.992 (Student's t);
Score → z = 4.386 and p < 0.0001 (Mann-Whitney)

downwards, partially justifying the difference found with the current study. In the research of Chartier & Lassen[31] in the US, in 792 students aged 13 to 18, the total mean score was 9.10, again smaller than ours. Although there are few studies reporting total mean scores with the CDI scale, we noticed that the mentioned researches were all done in the US and showed some homogeneity in their results, always smaller than those found in the current study, what allows us to suppose that there are cultural differences involved in these different results.

The rate of depressive symptoms of 20.3% found in our study, with the cut-off of score 19, is greater than that reported in the study of Doerfler et al[32] in the US, which amounted to 10%, among 1,207 students aged 10 to 18; and to that of Chartier & Lassen[31] in the US, of 8.3%. Other researchers using different cut-off scores obtained the following results: Reinherz et al[29] in the US, found a rate of 21% in 378 students aged 13 to 16, with the cut-off score of 12. Charman[6] in Britain obtained a rate of 8% in 286 students aged 12 to 13, with the cut-off score of 15. Donnelly[39] in Northern Ireland, in 887 students, aged 11 to 15, with the cut-off score of 13, found results of 26.8% whereas with the cut-off score of 17 the results were of 11.6%. Curatolo[38] in Brazil, studying 578 students aged 7 to 12, with the cut-off score of 17 obtained a rate of 21.2% (greater than the study of Northern Ireland). Applying to this study the similar cut-off score of 17, we obtained a rate of 28.5%, that, respecting the difference in the age group studied by Curatolo[38] also in Brazilian students, could suggest a similarity in results. Moreover, using the cut-off score of 25, the result found was 7.1%, inferior to that found in the Egyptian study[30] (10.25%). The rates of depressive symptoms of this study are greater than those of the US with the same participants and cut-off scores, although inferior to that of Egypt and similar to the other Brazilian study. It is remarkable the existence of few researches using the cut-off score of 19, as recommended by Kovacs.[33]

There was no statistically significant difference in the age factor, although we found an upward trend in the rate of symptoms as age rises, from 10 to 15 years old, and we observed a decrease in the two greatest age groups (16 and 17). Articles on the prevalence of depressive disorders in adolescents did not find a statistically significant difference in different age groups,[4,16] therefore, they presented results similar to our research. Review studies that refer to the rate of depressive disorders and to the relationship with age, stated that rates increase from childhood to adolescence.[5,7,9,12,13] Besseguini[1] says that the increase starts at 9 years old, age group that was not included in the current study, what could indicate that the increase in the rates of depressive symptoms starts before 10 years old. Regarding the studies with the CDI, five of them (three in the US, one in Brazil and one in Egypt) did not find, as well as the current research, statistically significant difference in the age factor,[30-32,37,40] against two (one in the US and one in Northern Ireland) with statistically significant difference,[35,39] and one study (in the US) that found greater rates in the lowest age groups.[42] This study has also found higher rates of depressive symptoms in age groups up to 15 years and a decrease in ages 16 and 17, although there was no statistically significant difference in the age factor. Therefore, the age factor in adolescent depression is, according to what was observed in the data presented, still a controversial issue and open to further research.

As for the gender distribution in adolescence, in review articles, ten authors report greater rates for females, varying from two up to five females for each male,[1,2,5,7,10,11,13,14,21,43] result found in the current study up to the age of 16. However, Bandim et al[20] describe that the rates are the same and Pataki & Carlson[12] say that the gender distribution is not well defined. Research articles about depressive disorders mention unequal results, as Larsson et al[4] and Garrison et al[15] obtained equal rates between females and males, whereas Kessler & Walters[16] and Olsson & von Knorring[19] found higher rates in females compared to males; finally, Anderson et al[27] and Garrison et al[25] obtained higher rates in males. Of the researches using the CDI, eight (five in the US, two in Brazil and one in Egypt) found equal results for males and females,[6,30-32,34,36-38] but Finch Jr. et al[35] (in the US) found predominance of males and Reinherz et al[29] (in the US) and Donnelly[39] (in Northern Ireland) found predominance of females. These results demonstrate that the gender factor, especially when the depressive symptoms are assessed by the CDI, is still an aspect to be better studied and elucidated. The results of this study regarding the distribution of depressive symptoms by gender, of 2.6 females for each male, correspond to data in the literature in review studies and to the findings of some research articles. Nevertheless, results in the group age of 17 years seem to disagree with the general idea that female adolescents have greater prevalence than male adolescents.

Conclusions

The rate of depressive symptoms in adolescent students in the assessed school was high. There was a significant predominance of female over male students, in the approximate ratio of two to three females for each male. Female predominance reached its highest rate between 12 and 15 years. It is known that there is a probable increase in the rates of depressive symptoms in students during the adolescence, along with age, but it is still not clear at what age this rate starts to rise.

This research has some limitations. We investigated participants of one single school, what does not allow us to make generalizations from the results found making it difficult to generalize. Adolescents who are not studying in the educational system were not assessed, as depression in itself results in impairments and withdrawal from school. Furthermore, we have not included students below 10 years old, what makes it difficult to assess more precisely when there is an increase in the depressive symptoms. The number of participants under 10 was low, and in the age groups 12, 13 and 17, although statistically acceptable, was also low and we should be cautious in the interpretation of these results.

It is surprising that the overwhelming majority of the depressed adolescents were not even identified and thus not referred to treatment.[6,26,30,39,44] In the study of Goodyer & Cooper[45] in England, none of the adolescents identified as having major depression was referred to treatment or was already being treated. These data demonstrate even more the relevance of the issue investigated in our study.

References

1. Besseghini VH. Depression and suicide in children and adolescents. Ann N York Acad Scie 1997;816:94-8.
2. Herkov MJ, Myers WC. MMPI profiles of depressed adolescents with and without conduct disorder. J Clin Psychol 1996;52:705-10.
3. Kent L, Vostanis P, Feehan C. Detection of major and minor depression in children and adolescents: evaluation of the mood and feelings questionnaire. J Child Psychol Psychiatry 1997;38:565-73.
4. Larsson B, Melin L, Breitholtz E, Andersson G. Short-term stability of depressive symptoms and suicide attempts in Swedish adolescents. Acta Psych Scand 1991;83:385-90.
5. Scivoletto S, Nicastri S, Zilberman ML. Transtorno depressivo na adolescência: diagnóstico e tratamento. Rev Bras Medicina 1994;51:1211-28.
6. Charman T. The stability of depressed mood in young adolescents: a school – based survey. J Affect Disord 1994;30:109-16.
7. Mirza KAH, Michael A. Major depression in children and adolescents. Br J Hosp Med 1996;55:57-61.
8. Weissman MM, Wolk S, Goldstein RB, Moreau D, Adams P, Greenwald S, et al. Adolescentes deprimidos: como ficam quando adultos. JAMA Brasil 1999;3:2429-35.
9. Bhatara VS. Early detection of adolescent mood disorders. South Dakota J Med 1992;45:75-8.
10. Brent DA. Depression and suicide in children and adolescents. Pediatrics Review 1993;14:380-8.
11. Kazdin AE, Marciano PL. Childhood and adolescent depression. In: Mash E, Barkley R, editors. Treatment of childhood disorders. 2nd ed. New York: The Guilford Press; 1998. p. 211-48.
12. Pataki CS, Carlson GA. Childhood and adolescent depression: a review. Harvard Rev Psychiatry 1995;3:140-51.
13. Walter G. Depression in adolescence. Australian Family Physician 1996;25:1575-82.
14. Birmaher B, Ryan ND, Williamson DE, Brent DA, Kaufman J, Dahl RE, Perel J, Nelson B. Childhood and Adolescent Depression: A Review of the Past 10 Years. Part I. J Am Acad Child Adolesc Psychiatry 1996; 35: 1427-1439.
15. Garrison CZ, Addy CL, Jackson KL, McKeown RE, Waller JL. Incidence of major depressive disorder and dysthymia in young adolescents. J Am Acad Child Adolesc Psychiatry 1997;36:458-65.
16. Kessler RC, Walters EE. Epidemiology of DSM-III-R major depression and minor depression among adolescents and young adults in the national comorbidity survey. Depression Anxiety 1998;7:3-14.
17. Prosser J, McArdle P. The changing mental health of children and adolescents: evidence for a deterioration? Psychological Med 1996;26:715-25.
18. Ryan ND, Williamson DE, Iyengar S, Orvaschel H, Reich T, Dahl RE, et al. A secular increase in child and adolescent onset affective disorder. J Am Acad Child Adolesc Psychiatry 1992;31:600-5.
19. Olsson G, von Knorring A-L. Adolescent depression: prevalence in Swedish high-school students. Acta Psych Scand 1999;99:324-31.
20. Bandim JM, Sougey EB, Carvalho TFR. Depressão em crianças: características demográficas e sintomatologia. J Bras Psiquiatria 1995;44: 27-32.
21. I LF. Epidemiologia e fatores clínicos dos transtornos afetivos da infância e adolescência. In: Assumpção Jr-FB, editor. Transtornos afetivos da infância e adolescência. São Paulo: Lemos; 1996. p. 19-28.
22. Lewinsohn PM, Clarke GN, Seeley JR, Rohde P. Major depression in community adolescents: age at onset, episode duration, and time to recurrence. Am J Acad Child Adolesc Psychiatry 1994;33:809-18.
23. Roberts RE, Chen Y-W. Depressive symptoms and suicidal ideation among mexican-origin and anglo adolescents. J Am Acad Child Adolesc Psychiatry 1995;34:81-90.
24. Kashani JH, Carlson GA, Beck NC, Hoeper EW, Corcoran CM, McAllister JA, et al. Depression, depressive symptoms, and depressed mood among a community sample of adolescents. Am J Psychiatry 1987;144:931-4.
25. Garrison CZ, Waller JL, Cuffe SP, McKeown RE, Addy CL, Jackson KL. Major Depressive Disorder And Dysthymia In Young Adolescents. Am J Epidemiol 1992;135:792-802.
26. Roberts RE, Lewinsohn PM, Seeley JR. Symptoms of DSM-III-R major depression in adolescence: evidence from na epidemiological survey. J Am Acad Child Adolesc Psychiatry 1995;34:1608-17.
27. Anderson JC, Williams S, McGee R, Silva PA. DSM-III disorders in preadolescent children: prevalence in a large sample from the general population. Arch Gen Psychiatry 1987;44:69-76.
28. Cooper PJ, Goodyer I. A community study of depression in adolescent females i: estimates of symptom and syndrome prevalence. Br J Psychiatry 1993;163:369-74.
29. Reinherz HZ, Frost AK, Stewart-Berghauer G, Pakiz B, Kennedy K, Schille C. The many faces of correlates of depressive symptoms in adolescents. J Early Adolescence 1990;10:455-71.
30. Abou-Nazel MW, Fahmy SI, Younis IA, El-Din AGS, Fatah MA, Mokhtar S, et al. A study of depression among alexandria preparatory school adolescents. J Egyptian Public Health Assoc 1991;LXVI:649-74.
31. Chartier GM, Lassen MK. Adolescent depression: children's depression inventory norms, suicidal ideation, and (weak) gender effects. Adolescence 1994;29:857-64.
32. Doerfler LA, Felner RD, Rowlison RT, Raley PA, Evans E. Depression in children and adolescents: a comparative analysis of the utility and construct validity of two assessment measures. J Consult Clin Psychology 1988;56:769-72.
33. Kovacs M. Children's depression inventory, CDI. Manual Multi-Health Systems, Inc. Toronto; 1992.
34. Smucker MR, Craighead WE, Craighead LW, Green BJ. Normative and reliability data for the children's depression inventory. J Abnorm Child Psychology 1986;14:25-39.
35. Finch Jr-AJ, Saylor CF, Edwards GL. Children's depression inventory: gender and grade norms for normal children. J Consult Clin Psychology 1985;53:424-5.
36. Reynolds WM, Anderson G, Bartell N. Measuring depression in children: a multimethod assessment investigation. J Abnorm Psychology 1985;13:513-26.
37. Gouveia VV, Barbosa GA, Almeida HJF, Gaião AA. Inventário de depressão infantil (CDI): estudo de adaptação com escolares de João Pessoa. J Bras Psiquiatria 1995;44:345-9.
38. Curatolo E. Epidemiologia de sintomas depressivos em escolares. Apresentação em Mesa Redonda no Congresso Brasileiro de Psiquiatria. Rio de Janeiro; 2000.
39. Donnelly M. Depression among adolescents in Northern Ireland. Adolescence 1995;30:339-50.
40. Saylor CF, Finch Jr-AJ, Furey W, Baskin CH, Kelly MM. Construct validity for measures of childhood depression: application of multitrai-multimethod methodology. J Consult Clin Psychology 1984;52:977-85.
41. Kovacs M. The children's depression inventory (CDI). Psychopharmacology Bull 1985;21:995-8.
42. Saylor CF, Finch Jr-AJ, Baskin CH, Saylor CB, Darnell G, Furey W. Children's depression inventory: investigation of procedures and correlates. J Am Acad Child Psychiatry 1984;23:626-8.
43. Nolen-Hoeksema S, Girgus JS. The emergence of gender differences in depression during adolescence. Psychological Bull 1994;115:424-43.
44. Martin A, Cohen DJ. Adolescent depression: window of (missed?) opportunity [Editorial]. Am J Psychiatry 2000;157:1549-51.
45. Goodyer I, Cooper PJ. A community study of depression in adolescent females ii: the clinical features of identified disorder. Br J Psychiatry 1993;163:374-80.

Correspondence:
Saint-Clair Bahls
R. Carneiro Lobo, 570, cj. 1403
80240-240 Curitiba, PR, Brazil
Tel./Fax: (0xx41) 242-6132
E-mail: scbahls@uol.com.br