

# Effectiveness of cognitive behaviour therapy in schoolchildren with depressive symptoms in Alexandria, Egypt

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فعالية معالجة السلوك المعرفي لدى تلاميذ المدارس المصابين بأعراض اكتئابية في الإسكندرية، بمصر  
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**الخلاصة:** تم في إطار هذه الدراسة تقييم فعالية معالجة السلوك المعرفي لدى تلاميذ المدارس في الفئة العمرية 12 – 14 سنة، ممن يعيشون في منطقة ذات مستوى اجتماعي واقتصادي منخفض في مدينة الإسكندرية، بمصر، وذلك خلال العام الدراسي 2003 – 2004. وقد شملت عينة الدراسة 198 من الذكور و136 من الإناث. وتم التقييم التلاميذ باستخدام القائمة التفصيلية لتقدير اكتئاب الأطفال، وقائمة كوبر سميت التفصيلية لتقدير الاعتزاز بالنفس. وبيّنت الدراسة أن تواتر (تكرار حدوث) الاكتئاب بلغ 9.6%؛ بواقع 7.1% لدى الذكور، و13.2% لدى الإناث. وقُدِّم علاج للسلوك المعرفي لـ 32 من التلاميذ الذكور المصابين باكتئاب، فقبله 17 تلميذاً منهم فقط حيث تلقوا 9 جلسات علاجية. وتم تقييم هؤلاء التلاميذ بعد 3 أشهر من تلقي العلاج باستخدام نفس الأدوات، وبيّنت وأظهرت فعالية قصيرة الأمد للعلاج.

**ABSTRACT** We evaluated the effectiveness of cognitive behaviour therapy for 12–14-year-old schoolchildren from a low socioeconomic area in Alexandria, Egypt during the academic year 2003–04. Our sample comprised 198 boys and 136 girls. Students were assessed using the Child Depression Inventory and the Coopersmith Self-Esteem Inventory. The frequency of depression was 9.6%; 7.1% in boys and 13.2% in girls. The 32 children with depression were offered cognitive behaviour therapy. Only 17 accepted the offer and received 9 sessions of therapy. They were assessed 3 months after the intervention using the same tools and the results indicate the short-term effectiveness of the therapy.

## Efficacité réelle de la thérapie cognitivo-comportementale chez des enfants scolarisés dépressifs d'Alexandrie (Égypte)

**RÉSUMÉ** Pendant l'année scolaire 2003-2004, nous avons évalué l'efficacité réelle de la thérapie cognitivo-comportementale chez des enfants de 12 à 14 ans scolarisés, issus d'un quartier socialement et économiquement défavorisé d'Alexandrie (Égypte). Notre échantillon se composait de 198 garçons et 136 filles. L'évaluation de ces élèves a reposé sur l'inventaire de dépression de l'enfant (IDE) de Kovacs, également connu sous le nom d'échelle CDI (pour *Child Depression Inventory*) et sur l'inventaire d'estime de soi (*Self-Esteem Inventory*) de Coopersmith. Il a été constaté une fréquence de la dépression de 9,6 %, à savoir 7,1 % chez les garçons et 13,2 % chez les filles. Les 32 enfants dépressifs se sont vu offrir une thérapie cognitivo-comportementale. Seuls 17 d'entre eux ont accueilli favorablement cette offre et ont participé à 9 séances de thérapie. Une évaluation de ces enfants s'appuyant sur les mêmes instruments de mesure et effectuée 3 mois après l'intervention a confirmé l'efficacité réelle à court terme de la thérapie.

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## Introduction

Depression in childhood and adolescence is among the commonest and more disabling disorders. It has been reported that childhood depression ranges from 2%–6% among the school-aged population, and it seriously affects childhood and may have serious repercussion in adult life [1]. Klerman and Weissman have indicated that the onset of depression is occurring earlier in life today than in the past [2]. By the year 2020, depression is expected to become the single leading cause of disease burden worldwide [3].

The prevalence of depression in prepubertal children is estimated at approximately 2% and 5%–8% for adolescents [4,5]. A community survey of Australian children found that 3.7% of boys and 2.1% of girls at prepubertal age had experienced a depressive episode [6]. The gender ratio is 1:1 in prepubertal children and increases to 2:1 female-to-male ratio in adolescents [7–9]. In a large study of 1% of total students in preparatory schools in Alexandria, 10% of the students demonstrated depressive scores: 56% of these were girls compared with 44% boys [10].

Identifying one specific primary cause for depression among children and adolescents is hard since they are more sensitive to their environment [11,12]. Tension and conflicts come together triggering clinical depression with physical symptoms [13,14]. In another study in Alexandria, the psychological profile of students rating high on the depression scale indicated that a lack of communication and the presence of parent–child conflicts ranked first (23%), followed by parental conflicts (21%), and 30% had scholastic problems [15].

There has been considerable debate on the efficacy and safety of psychophar-

macological drugs such as tricyclic antidepressants (TCA) and selective serotonin reuptake inhibitors (SSRI). Some studies have shown empirical limitations compared with placebo concerning improvement of depressive symptoms and disorders among children and adolescents [16–19]. Psychological treatments for child and adolescent depression, including cognitive behaviour therapy (CBT), are therefore now often recommended as a first line of treatment [20]. Several randomized trials attest to the efficacy and safety of CBT in the treatment of depression in children and adolescents [21–24]. Meta-analysis of psychotherapies that have been used in the treatment of child and adolescent depression revealed 63% of those receiving some form of CBT showed significant improvement of symptoms [25,26].

The main aim of this study was to assess the prevalence of depressive symptoms among early adolescents, and to determine the clinical effectiveness of CBT in the management of depressive symptoms in school settings.

## Methods

### Sample

The study was conducted during the academic year 2003–2004 in 2 preparatory schools [one boys' ( $n = 198$ ) and one girls' school ( $n = 136$ )] in a poor socioeconomic district in Alexandria. They were the only such schools in the district. All students enrolled in the first academic year (aged 12–14 years) were eligible for inclusion.

### Measures

A questionnaire and psychological tests for depression and self-esteem were administered as baseline screening (pre-test) after

having the consent for participation. We used the Arabic version of the Children Depression Inventory (CDI-Arabic version) [15] to measure the severity of depressive symptoms (score range: 0–54, cut-off  $\geq 25$ ) and the Coopersmith Self-Esteem Inventory [27] to measure the self-esteem (score range: 0–25, cut-off  $\leq 13$  = low self-esteem).

A sociodemographic questionnaire was completed by the students which included questions on recent stressful life events over the past 6 months, sociodemographic data, and the type of discipline adopted and child interrelations at school and at home. The child's scholastic performance was assessed through school grades and levels of achievement, which were obtained from school records.

Children with the highest scores on the CDI scale ( $n = 32$ ) underwent further clinical assessment to confirm depressive symptoms according to the *Diagnostic and statistical manual of mental disorders* (DSM-IV-TR) diagnostic criteria [28].

A more detailed questionnaire was completed by the interviewers for parents and teachers of the 32 children with the highest scores to further assess sociodemographic data, global functioning, academic achievement, peer relationships, communication skills with friends and the reason for frequent absences from school (if applicable).

#### **Exclusion criteria (for participating in CBT)**

- Children who had been and still were taking antidepressant treatment or therapy over the past 6 months (1 girl)
- Those who refused to join from the children with high scores (child or parental causes) ( $n = 15$ ; 7 boys and 8 girls).
- Children with suicidal intent and in need of further referral (1 boy).

#### **Treatment intervention**

We used the *Cognitive behavioral manual for use with child patients with depressive disorders* [29] as a basis for therapy.

The intervention sample was 7 boys and 10 girls ( $n = 17$ ). Nine weekly sessions were conducted at their school during the recreation break; 1 group for the 7 boys and 2 groups for girls with 5 girls each. Each session lasted 60 minutes but some sessions for girls extended to 90 minutes. A set of rules was issued by the children before starting the intervention sessions for control, discipline, respect and confidentiality of the sessions and were approved by their parents.

The main theme for each session was introducing a task or a situation with a role-play approach to solve the different situations. Homework assignments related to the tasks discussed and required them to record at home in writing their own feelings towards the applied activity. Parents attended with their children the discussion and explanation about the intervention as an introduction to what would be applied.

The first session was an ice-breaking session which was followed by 9 therapeutic ones focused on: emotional recognition, self-monitoring, self-reinforcement, activity schedule, communication and interpersonal skills, social problem-solving, cognitive reconstruction I, cognitive reconstruction II, and treatment review plan (final session). The skills were designed to help children learn to get along with peers and adults. We also included parents in some of the sessions where they learned how to encourage healthy behaviour in their children and become better at providing consistent consequences for negative behaviour and praising positive behaviour.

### Statistical analysis

Statistical analyses were performed using *SPSS*, version 8.0. The chi-squared test was used for testing the difference in the prevalence between the sexes and the *t*-test for testing clinical effectiveness of treatment with CBT.

### Results

The flow of participants through each stage of the study is shown in Figure 1. This shows that those who were the highest scorers on the CDI depression scale and eligible

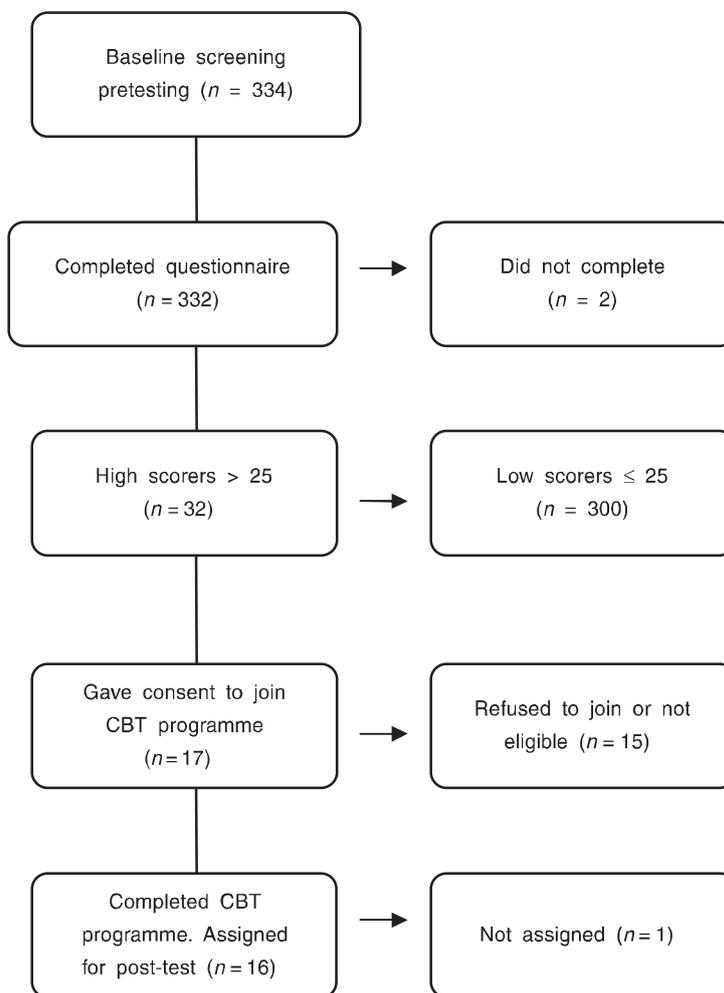


Figure 1 Flow chart of enrolment of participants in the cognitive behaviour therapy (CBT) programme

were recruited to CBT programme ( $n = 17$ ); 7 boys and 10 girls.

The prevalence of depression was 9.6% among all children; 7.1% in boys and 13.2% in girls, giving a male:female ratio of 1:1.86.

Table 1 shows the sociodemographic characteristics of both the high-scorer group

( $n = 32$ ) and the low-scorer group ( $n = 300$ ). There were no significant differences between the groups except for parental punishment ( $\chi^2_2 = 11.4, P < 0.0001$ ) and stressful life events over the past 6 months ( $\chi^2_3 = 22.6, P < 0.0001$ ).

Table 2 shows the different mean CDI scores for the 32 highest scorers among all

Table 1 Characteristics of the students according to depressive symptoms

Characteristic	Depressive symptoms ( $n = 32$ )	No depressive symptoms ( $n = 300$ )	Statistical tests
<i>Age (years)</i>			$t = 1.36, P = 0.0622$
Mean (SD)	13.1 (0.7)	13.4 (0.8)	
Range	12–14	12–14	
	<b>No. (%)</b>	<b>No. (%)</b>	
<i>Sex</i>			$\chi^2 = 0.496, P = 0.088$
Male	14 (43.8)	182 (60.7)	
Female	18 (56.3)	118 (39.3)	
<i>Parent's marital status</i>			$\chi^2 = 0.274, P = 0.7081$
Married	19 (59.4)	200 (66.7)	
Widow	4 (12.5)	30 (10.0)	
Separated	9 (28.1)	70 (23.3)	
<i>Mother's education</i>			$\chi^2 = 0.0228, P = 0.2348$
No formal education (illiterate)	5 (15.6)	80 (26.7)	
High school	20 (62.5)	180 (60.0)	
University and higher education	7 (21.9)	40 (13.3)	
<i>Father's education</i>			$\chi^2 = 0.0822, P = 0.2011$
No formal education (illiterate)	6 (18.8)	102 (34)	
High school	20 (62.5)	146 (48.7)	
University and higher education	6 (18.8)	52 (17.3)	
<i>Most stressful life events over the past 6 months</i>			$\chi^2 = 22.6, P < 0.0001$
Family conflicts and lack of communication	15 (46.9)	17 (5.7)	
Family instability	11 (34.4)	20 (6.7)	
Death of one of the parents	3 (9.4)	15 (5.0)	
No life event of significance	3 (9.4)	248 (82.7)	
<i>Parental punishment</i>			$\chi^2 = 11.4, P < 0.0001$
Corporal punishment	18 (56.3)	5 (1.7)	
Verbal punishment	12 (37.5)	45 (15.0)	
No abuse/punishment	2 (6.3)	250 (83.3)	
<i>Coopersmith self-esteem inventory [Mean (SD)]</i>	8.9 (2.0)	23.7 (2.3)	$P = 0.0341$

SD = standard deviation.

Table 2 Distribution of the highest mean CDI scores according to age and sex

Age (years)	Boys Mean (SD)	Girls Mean (SD)	P-value
12	29.75 (2.6)	28.33 (2.1)	0.6556
13	28.33 (1.4)	32.62 (4.9)	0.0363*
14	30.75 (5.9)	30.00 (4.1)	0.8915

\*Significant at  $P < 0.05$ .

CDI = Child Depression Inventory.

SD = standard deviation.

age groups for both boys and girls. At 13 years, girls had more depressive symptoms than boys ( $t_5 = 2.838$ ,  $P < 0.0363$ ).

### Cognitive behaviour therapy intervention programme (pre- and post-intervention differences)

Intervention sessions lasted more than 60 minutes particularly for girls where they felt more suppressed; 8 out of 10 girls reported that the extra household duties and the limitations of outdoor creativity that are available to their boy siblings were the major complaints. In contrast, 5 out of 7 boys mentioned that their deprived families (being the most disadvantaged of the families)

made them feel isolated with limited social communication with peers.

The improvement after the end of the intervention programme at the post-test was significantly greater than expected. The changes that occurred were statistically significant both on the depression scale ( $t_2 = 9.02$ ,  $P < 0.0001$ ) and the self-esteem scores ( $t_{16} = 18.495$ ,  $P < 0.0001$ ) (Table 3).

Table 4 shows that there were marked improvements in feelings of worthlessness, interpersonal relations and communication skills with staff and peers, interest in activities and school achievement among girls ( $t_2 = 10.9$ ,  $P < 0.0001$ ) and boys ( $t_2 = 12.6$ ,  $P < 0.0001$ ). As regards overall improvement differences between girls and boys, boys showed greater improvement than girls which was statistically significant ( $\chi^2_3 = 46.7$ ,  $P < 0.0001$ ).

### Discussion

In our study, we found the prevalence of depressive symptoms to be 9.6% which is of concern. Life events over the past 6 months (every-day stressors) and parental punish-

Table 3 Pre- and post-intervention tests scores for depression and self-esteem

Tool used	Pre-test Mean (SD)	Post-test Mean (SD)	Statistical tests
<i>Child Depression Inventory</i>			$t_2 = 9.02$ , $P < 0.0001$
Intervention group (total)	32.5 (4.5)	17.7 (6.9)	
Females	33.5 (4.9)	17.3 (7.6)	
Males	31.1 (3.8)	18.3 (6.1)	
<i>Coopersmith self-esteem inventory</i>			$t_2 = 18.494$ , $P < 0.0001$
Intervention group (total)	8.88 (2.00)	15.65 (3.5)	
Females	9.30 (2.11)	16.0 (3.4)	
Males	8.29 (1.80)	15.14 (3.9)	

SD = standard deviation.

Table 4 Frequency of depressive symptoms pre- and post-intervention by sex

Depressive symptom	Pre-intervention		Post-intervention	
	Girls (n = 10) No. (%)	Boys (n = 7) No. (%)	Girls (n = 10) No. (%)	Boys (n = 7) No. (%)
Depressed mood	9 (90)	6 (86)	4 (40)	1 (14)
Feelings of worthlessness	9 (90)	5 (71)	4 (40)	2 (29)
No interest in activities	8 (80)	6 (86)	3 (30)	1 (14)
Appetite change	10 (100)	6 (86)	6 (60)	2 (29)
Disturbed sleep patterns	8 (80)	7 (100)	5 (50)	3 (43)
Difficulty in concentrating	7 (70)	6 (86)	4 (40)	3 (43)
Poor school achievement	8 (80)	4 (57)	3 (30)	4 (57)
Poor communication skills with peers and school staff	9 (90)	5 (71)	3 (30)	2 (29)

$t_2 = 10.9$ ,  $P < 0.0001$  (girls);  $t_2 = 12.6$ ,  $P < 0.0001$  (boys).  
 $\chi^2_3 = 46.7$ ,  $P < 0.0001$  (girls versus boys).

ment were significantly associated with such symptoms. Kalb and Raymond [30] reported family conflicts and poor inter-family communication and peer problems as stressor factors, while Eliot and Reis [31] considered family instability and insecure relationship as stressors.

We found sex differences in the frequency of depression, and early adolescent girls were more likely to be affected than boys with a ratio of approximately 2:1. Several studies have reported that girls are more vulnerable to life transition stressors, conform to social rules and utilize internalizing coping styles more than boys, i.e. they become socially withdrawn [8,32–34].

Pomerantz stated that parents using psychological control attempt to regulate their child's psychological and emotional development [35]. By constraining verbal expression and invalidating feelings they reinforce the child's depression. With lack of support, the child is less able to communicate effectively and more conflicts in relationships emerge. Our study illustrated

the association between the use of violent means of discipline by parents and high depressive symptoms as has been reported in another study in Egypt [36]. In addition, maltreated children are significantly more likely to have low cognitive functioning, poorer adaptation to school and academic failure [37].

There has been a wave of sentiment against the use of pharmacological intervention as a first-line treatment for child and adolescent depression [20,38]. We observed a general concern towards treatment, especially pharmacological drugs, among the parents of our students, either because of fear of drug dependency or social and psychological stigma.

The start of CBT sessions revealed the conflict between children and their parents and suggested poor treatment outcomes. However, over the course of treatment, parents developed positive views of CBT (praising positive behaviour of their children) and children showed rapid response to the treatment as assessed by the pre-

and post-intervention depression scores, which are the main indicators for effective short treatment outcome. Thus, our results confirm those reported by DeCupper and colleagues that CBT can be applied within school and is effective in treating children and adolescents with depressive symptoms [39].

Regrettably, because of the limited awareness of the parents of their child's need for the programme, a large proportion of the parents of children showing depressive symptoms refused to enrol their child in the intervention programme. This resulted in only a small sample enrolled in the programme, which is was a limiting factor for the study. Furthermore, the lack of awareness of the school staff on mental

health issues related to children hindered different approaches directed towards the group with depressive symptoms.

Depression among 12–14-year-old schoolchildren from deprived areas in Alexandria appears to a problem that needs to be addressed and a school mental health programme should be implemented [40]. Follow-up studies with larger sample sizes and adequate control groups will be necessary to evaluate the long-term benefit of CBT. In addition, psychoeducation and parenting skills for parents [21] are recommended together with increased training for mental health and school staff on CBT as a simple and effective tool to decrease depressive symptoms among schoolchildren [41].

### References

1. *The world health report 2001 – mental health: new understanding, new hope*. Geneva, World Health Organization, 2001.
2. Klerman GL, Weissman MM. Increasing rates of depression. *Journal of the American Medical Association*, 1989, 261:2229–35.
3. Murray CJ, Lopez AD, eds. *The global burden of disease: a comprehensive assessment of mortality and disability from diseases, injuries and risk factors in 1990 and projected to 2020*. Cambridge, Massachusetts, Harvard School of Public Health on behalf of the World Health Organization and the World Bank, 1996.
4. Carlson GA. The challenge of diagnosing depression in childhood and adolescence. *Journal of affective disorders*, 2000, 61:53–8.
5. Jellinek MS, Snyder JB. Depression and suicide in children and adolescents. *Pediatric reviews*, 1998, 19: 255–64.
6. Sawyer M et al. *The mental health of young people in Australia*. Canberra, Mental Health and Special Programs Branch, Commonwealth Department of Health and Aged Care, 2000.
7. Birmaher B et al. Childhood and adolescent depression: a review of the past 10 years. Part 1. *Journal of the American Academy of Child and Adolescent Psychiatry*, 1996, 35:1427–39.
8. Wolraich M, Felice ME, Drotar D. *The classification of child and adolescent mental diagnoses in primary care: diagnostic and statistical manual for primary care (DSM-PC) child and adolescent version*. Elk Grove Village, American Academy of Pediatrics, 1996.
9. Nolen-Hoeksema S, Girgus JS. The emergence of gender differences in depression during adolescence. *Psychological bulletin*, 1994, 115:424–3.
10. Aboy Nazel M. *A study of depression among Alexandria preparatory school adolescents* [Doctoral thesis]. Alexandria, High Institute of Public Health, University of Alexandria, 1989.

11. Kolvin I, Barrett ML, Bhate SR. The Newcastle Child Depression Project: diagnosis and classification of depression. *British journal of psychiatry*, 1991, 159(suppl.):9–21.
12. Kutcher SP, Marton P. Parameters of adolescent depression. *Psychiatric clinics of North America*, 1989, 12:895–918.
13. Kessler RC. The effects of stressful life events on depression. *Annual review of psychology*, 1997, 48:191–214.
14. Asarnow JR, Jaycox LH, Tompson MC. Depression in youth: psychological interventions. *Journal of clinical child psychology*, 2001, 30:33–47.
15. Abou Nazel M et al. A study of depression among Alexandria preparatory school adolescents. *Journal of the Egyptian Public Health Association*, 1991, LXVI (6):6.
16. Emslie GJ et al. Fluoxetine for acute treatment of depression in children and adolescents: a placebo-controlled, clinical trial. *Journal of the American Academy of Child and Adolescent Psychiatry*, 2002, 41:1205–16.
17. Hazell P et al. Tricyclic drugs for depression in children and adolescents. *Cochrane database of systematic reviews*, 2002(2):CD002317.
18. Keller MB et al. Efficacy of paroxetine in the treatment of adolescent major depression: a randomized controlled trial. *Journal of the American Academy of Child and Adolescent Psychiatry*, 2001, 40:762–72.
19. Ambrosini PJ et al. Antidepressant treatments in children and adolescents. I: affective disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 1993, 32:1–6.
20. Ramchandani P. Treatment of major depressive disorder in children and adolescents. *British medical journal*, 2004, 328:3–4.
21. Sung ES, Kirchner DO. Depression in children and adolescents. *American family physician*, 2000, 62:2297–308.
22. Birmaher B et al. Clinical outcome after short-term psychotherapy for adolescents with major depressive disorder. *Archives of general psychiatry*, 2000, 57:29–36.
23. Harrington R et al. Systematic review of efficacy of cognitive behavior therapies in childhood and adolescent depressive disorder. *British medical journal*, 1998, 316:1559–63.
24. Reinecke MA, Ryan NE, DuBois DL. Cognitive-behavioral therapy of depression and depressive symptoms during adolescence a review and meta-analysis. *Journal of the American Academy of Child and Adolescent Psychiatry*, 1998, 37:26–34.
25. Kendall PC, ed. *Child & adolescent therapy: cognitive-behavioral procedures*, 2nd ed. New York, Guilford Press, 2000.
26. McGinn LK. Cognitive behavioral therapy of depression: theory, treatment, and empirical status. *American journal of psychotherapy*, 2000, 54:323–31.
27. Coopersmith S. Building self-esteem in the classroom. In: Coopersmith S, ed. *Developing motivation in children*. Palo Alto, California, Consulting Psychologists Press Inc., 1975:95–132.
28. *Diagnostic and statistical manual of mental disorders - text revision*. Washington DC, American Psychiatric Association, 2000:349–76.
29. Harrington RC. *Cognitive behavioral manual for use with child patients with depressive disorders*. Pendlebury, Manchester University, Department of Child Adolescent Psychiatry, Royal Manchester Children's Hospital, 1998.
30. Kalb C, Raymond J. Troubled souls. *Journal of clinical child psychology*, 2003, 39:152–5.

31. Elliot AJ, Reis HT. Attachment and exploration in adulthood. *Journal of personality and social psychology*, 2003, 85:317–31.
32. Graber JA. Puberty in context. In: Hayward C, ed. *Gender difference at puberty*. New York, Cambridge University Press, 2003.
33. Suesser K. *Explaining the emergence of gender differences in depression during adolescence. The role of personality characteristics and mixed-sex interactions*. Nashville, Vanderbilt University, 1998.
34. Agnold A, Rutter M. Effects of age and pubertal status on depression in a large clinical sample. *Develop and psychopathology*, 1992, 4:5–28.
35. Pomerantz E. Parent x child socialization: implications for the development of depressive symptoms. *Journal of family psychology*, 2001, 15:510–22.
36. Youssef R, Attia M, Kamel M. Children experiencing violence. I. Parental use of corporal punishment. *Child abuse and neglect*, 1998, 22(10):959–73.
37. Segrin C. Social skills deficits associated with depression. *Clinical psychology review*, 2000, 20(3):379–403.
38. Breggin PR. *Reclaiming our children: a healing plan for a nation in crisis*. Bethesda, Lake House Books, 2000.
39. DeCupper S et al. Treating depressive symptoms in school children, a pilot study. *European child & adolescent psychiatry*, 2004, 13(2):105–14.
40. Seif El Din et al. A multisectoral approach to school mental health, Alexandria, Egypt. *Health Services Journal of the Eastern Mediterranean Region*, 1993, 7(2):34–40.
41. Ramsey M. Depression in adolescence—treatment: depression in children—treatment; Counseling. *School counselor*, 1994, 41:1–7.