Archives of Psychiatry and Psychotherapy, 2007; 1–2 : 27–33

Depressiveness in adolescents from different environments: city and village, during their education in junior secondary school (*gymnasium*; a three-year school for pupils aged 13–15)

Jarosław Rola

Summary

Aims: The clinicians agree on the fact that the rate of depressiveness increases among youth. The aim of this study was to find answers to three main questions: (1) was the intensity of depressiveness higher in adolescents from city or village? (2) was the intensity of depressiveness higher in girls or boys from different environments? (3) did the intensity of depressiveness change with sex, school form and environment?

Material and method: The subjects were 1140 adolescents. The Children's Depression Inventory by M. Kovacs was used.

Results indicated that the intensity of depressiveness was significantly higher among adolescents from the city than from the village. In the whole population girls had a higher rate of depressiveness in comparison to boys. The rate of depressiveness increased with age.

depression / **adolescence**

INTRODUCTION

Considering numerous controversies related to the way depression symptomatology manifests itself in children who differ in both age and the reached level of development, an interesting way of organising the knowledge of this issue is treating these disorders as a certain continuum – an attitude which nowadays is quite popular. Like in the case of autism or deafness, also in the case of depressive disorders it is possible to talk about their gradable intensity. One extreme of the continuum understood in that way can be represented by children manifesting the symptoms of major depression. The other extreme of the continuum is represented by people who can be placed at the end of the developmental norm; in this case, depressive characteristics in functioning result from the combined influence of personal and environmental factors. Such people manifest depressive characteristics in their behaviour; however, neither the presence nor the intensity of these features is sufficient for the diagnosis of major depression or depressive neurosis [1].

Within the depressive continuum, the changeability of depressive symptoms manifested by the child is possible. Both the presence of the manifested symptoms and the change of their type are a function of the child's age and the developmental level the child has reached (for example, in younger children suicidal thoughts are more frequent in the clinical picture than suicidal acts, which, in turn, dominate in adolescents).

Jarosław Rola: Department of Clinical Psychology and Psychotherapy of the Academy of Special Education; Correspondence address: Jarosław Rola; Academy of Special Education; Institute of Psychology and the Support for Human Development; 40 Szczęśliwiecka St. 02–356 Warszawa, Poland; e-mail: jaroslawrola@poczta.onet.pl;
The study was funded from the funds for the the Academy of Special Education own research programmes

Interesting studies on this issue were conducted by Kashani, Rosenberg, Reid [2]. The comparison of the intensity of depressive symptoms in children aged 8, 12 and 17 revealed interesting differences. The intensity of symptoms such as: the sense of fatigue, the lack of crying when the child was hurt or irritation which increased as the child grew up.

In 8-year-olds depression was related to pessimism and the withdrawal from social interactions; in 12-year-olds it involved pessimism and symptoms of physical nature (sleep disturbances, stomach aches, dysorexia); finally, in 17-year-olds depressive symptoms co-occurred with nightmares and suicidal thoughts [2].

Carlson, Kashani [3] compared people with diagnosed depression in four age groups, focusing on the differences in manifested depressive symptoms. The comparison involved pre-school children, individuals in the pre-adolescence period, adolescents and adults. It was observed that while the intensity of such symptoms as: anhedonia, the sense of helplessness and hopelessness as well as motor inhibition increased as the child grew up, the intensity of such symptoms as: depressive appearance, low self-esteem or physical complaints decreased as the child grew up.

Ryan, Puig-Antich et al [4] indicate that children with diagnosed depression more often manifest psychomotor agitation, physical complaints, depressive appearance or separation anxiety while in adolescents anhedonia, sense of helplessness, escape into sleep, weight loss or weight gain, as well as the abuse of alcohol and drug use are more frequent.

Bomba, Jaklewicz [5], Bomba et al [6], Bomba [7] report a change in the clinical picture of depression in young school-age children and adolescents. While in the case of younger children the symptoms of prime importance include: activity disorders, mood changes, anxiety, somatic symptoms or the tendency to withdraw from social interactions, in the period of adolescence additional symptoms occur, such as self-destruction and the disorders in intellectual functions. In general, the psychopathological picture of depression is poorer in younger children than in adolescents, as it is limited to somatic symptoms and the reduction of psychomotor activity. Activity disorders and mood changes occur in the picture of depression regardless of age. According to Bomba [8], depression in adolescents can be expressed by one of the four psychopathological syndromes: "1) pure depression with mood depression, hypothymia, anxiety over future 2) depression with resignation, with the symptoms of pure depression, inefficient studying, the feeling of life senselessness, suicidal thoughts and acts 3) depression with anxiety, with the symptoms of pure depression, mood changeability, self-destructive disorders of behaviour 4) depression with hypochondriasis with the symptoms of pure depression, somatic manifestations of anxiety, and hypochondriacal focus on the body" [8].

As the above-mentioned clinical observations suggest, the clinical picture of depression in children tends to become similar to depression in adults as the child becomes mature. The dominant symptoms in infants include: mood atonia, motor atonia, poor interactions, sleep disturbances, dysorexia. Older children more often manifest such symptoms as: weepiness, anxiety and apprehensions, psychomotor agitation, sleep disturbances and dysorexia, as well as intensified separation anxiety; in adolescents, on the other hand, antisocial behaviour, difficulties in decision-making, gloominess, withdrawal from social interactions, negative ideas of one's own body and lack of sexual interests can be observed more often in the course of depression [1, 9, 10, 11, 12].

Moreover, differences between girls and boys in both quantity and quality in the clinical picture of depression have been suggested as well.

Baron and Campbell [13] claim that the type of manifested depressive symptoms in the group of non-depressive children and adolescents is to a large extent defined by the sex of the subjects. According to these authors, there is a certain correlation between the manifested depressive symptoms in girls and boys and sex-related roles interiorised as a result of the socialisation process. In girls without diagnosed depression the following symptoms occur more often: dysorexia, fatigability, weight loss or weight gain, sadness and suicidal thoughts.

On the other hand, girls with diagnosed depression are more often characterised by sluggishness, the tendency towards mood changes, dominant negative ideas about their own bodies, intensified somatic symptoms and increased anxiety; boys, in turn, more often manifest irri-

tability, behaviour disorders, aggression, self-aggression and suicidal attempts leading to death [1, 14].

The child's age can be another variable which modifies the type of manifested symptoms. Although no statistically significant differences have been noted between boys and girls in the pre-adolescence period, as far as the number of manifested depression symptoms is concerned, during adolescence the girls manifested twice or thrice as many symptoms as the boys. Apart from differences in quantity, symptoms manifested by boys and girls of different age differed also in quality [7, 15, 13].

In general, depression symptoms in children can be divided into four categories, similarly to the division used in the case of adults. The categories are as follows: emotional symptoms, such as dejection, loss of joy, reduction or loss of emotional relationships; cognitive symptoms, such as difficulties in decision-making, inadequate, low self-esteem and negative ideas about one's own body; motivating symptoms, such as paralysed will, withdrawal from interactions, increased dependency or the occurrence of suicidal thoughts; and physical symptoms, such as fatigue, loss of appetite and sleep disturbances [1, 17, 18, 19, 20].

In the light of conducted clinical observations, it turns out, however, that some children can rather manifest the loss of interest in the environment than serious mood disturbances. Moreover, mood disturbances in children can have other forms than just sadness; in some children it is rather anger, aggression, annoyance or irritation that is dominant [16]. Taking into consideration the findings of Stark's study [1], approximately 45 per cent of children diagnosed as depressive experienced such emotions. These symptoms were described on the same levels as lowered mood.

It turns out that in the case of depression in children negative (depressive) mood, which is the symptom most often associated with depression, occurs less frequently than other symptoms present in the clinical picture of the disease [16].

This work presents the results of the screening study concerning depressiveness among junior secondary school students from different environments: city and village. It was not the aim of the study to diagnose depression in the subjects. The students only provided information on their mood, on what they think about themselves, how they assess themselves or how they perceive themselves in their social interactions; in other words, they talked about a subjective feeling of the presence of symptoms rated among the symptoms of depression, which, as it is widely known, does not equal a psychiatric diagnosis. For the purposes of this study it has been agreed that the subjects' sense of the presence of symptoms rated by psychiatrists among the depressive symptoms will be perceived as the indicator of depressiveness. The idea that when depressiveness is highly intensified it is possible to diagnose depression in the subjects in a clinical examination is only a matter of conjecture.

On the basis of the analysis of the achieved results the answers to the following questions will be formulated:

1. Is the intensity of depressiveness higher in adolescents from city or village?
2. Is the intensity of depressiveness affected by the subjects' sex and environment?
3. Does the intensity of depressiveness change with the subjects' age?
4. Does the intensity of depressiveness change with the subjects' school form, sex and environment?

MATERIAL AND METHOD

The study included 1140 subjects altogether. All subjects attended state junior secondary schools. The study group was divided into two subgroups: one of them included students of Warsaw schools, whereas the other included students of rural schools. The size of the study group as well as its division into different environments (city-village), school forms (1–2–3) and sex of the subjects is presented in table 1.

In order to assess depressiveness, the Children's Depression Inventory by M. Kovacs was used. The results achieved in the questionnaire are within the range from 0 to 54 points (total score). The result higher than 11 points, according to Kovacs, indicates mild depression. A factor analysis of the Inventory makes it possible to differentiate five basic factors: negative mood, interpersonal problems, ineffectiveness, anhedonia, lowered self-esteem [21].

Table 1. The size of the studied group with its division into the environment, school form and sex of the subjects

Subjects	Junior secondary school city			Junior secondary school village		
	Total	Girls	Boys	Total	Girls	Boys
Form i	243	132	111	142	72	70
Form ii	258	131	127	143	72	71
Form iii	267	131	136	87	50	37
Total	768	394	374	372	194	178

In the statistical analysis of the material, Student's t-test for independent samples as well as Anova analysis of variance were used.

RESULTS

In order to answer the research question whether the environment divides the subjects according to the level of depressiveness, the analysis based on Student's t-test for independent samples was conducted. The achieved results are presented in table 2.

The results presented in table 2 suggest that there are statistically significant differences between both studied groups of adolescents, attending junior secondary schools in the city or in a village; the differences were found in both the CDI total score and in four out of its five differentiated scales, namely: negative mood, interpersonal problems, ineffectiveness and anhedonia. Significantly higher results for the analysed variables were achieved by students of the city school as compared with students of rural schools. It was only the last scale of depression, i.e. lowered self-esteem, where no statistically significant differences between both study groups of students were found.

In order to answer the next research question: whether the sex and environment of the subjects affect the level of depressiveness among the students of junior secondary schools, the Anova analysis of variance was used. The results of the analysis are presented in table 3.

The results of the analysis indicate the presence of main effects of the variables "environment" and "sex" on the following variables: depression total score $F(3.1136)=14.50$. $p<0.0001$; negative mood $F(3.1136)=5.60$. $p<0.0008$; interpersonal problems $F(3.1136)=5.56$. $p<0.0008$; ineffectiveness $F(3.1136)=7.26$. $p<0.001$; anhedonia $F(3.1136)=12.94$. $p<0.0001$; lowered self-esteem $F(3.1136)=5.54$. $p<0.0008$.

The analysis of the interaction effects makes it possible to conclude that as far as the variable of depressiveness (total score) is concerned girls from the city ($x=14.45$) score significantly higher than girls from the village (11.34); girls from the city ($x=14.45$) score significantly higher than boys from the village ($x=11.04$); boys from the city ($x=12.82$) score significantly high-

Table 2. Differences in the level of depressiveness among adolescents from the city and from the village

Variables	Mean village	Mean city	T	P
Cdi kovacs total score	11.25*	13.66*	–5.63*	0.00001*
Negative mood	1.93*	2.29*	–3.00*	.002709*
Interpersonal problems	1.04*	1.87*	–4.04*	.000057*
Ineffectiveness	2.43*	2.93*	–4.58	0.000005*
Anhedonia	3.38*	4.09*	–4.56*	0.00006*
Lowered self-esteem	2.45	2.58	–1.17	0.243594

Table 3. The results of the analysis of variance for the "sex" and "environment" variables and the analysed variables: depression total score, negative mood, interpersonal problems, ineffectiveness, anhedonia, lowered self-esteem

Variables	F	P
Cdi – total score	14.50	0.0001*
Negative mood	5.60	0.0008*
Interpersonal problems	5.55	0.0008*
Ineffectiveness	7.26	0.0001*
Anhedonia	12.94	0.0001*
Lowered self-esteem	5.54	0.0008*

er than boys from the village (x=11.04); finally, boys from the city (x=12.81) score significantly poorer than girls from the city (x=14.45).

As far as the variable of negative mood is concerned, the analysis of the interaction effects makes it possible to conclude that girls from the village (x=2.02) suffer from negative mood less frequently than girls from the city (x=2.46); boys from the village (1.83) – less frequently than girls from the city (x=2.46); finally, boys from the city (x=2.10) – less frequently than girls from the city (x=2.46).

As far as the variable of interpersonal problems is concerned, girls from the city (x=1.80) score higher than girls from the village (x=1.00), while boys from the city (x=1.93) score higher than boys from the village (x=1.07).

The analysis of interaction effects suggests that ineffectiveness of the taken actions is more often experienced by girls (x=2.95) and boys (x=2.91) from the city, as compared with girls from the village (x=2.36).

Anhedonia is a problem affecting girls from the city (x=4.43) more often than girls from the village (x=3.52). In this aspect girls from the city (x=4.43) score significantly higher than both boys from the city (x=3.72) and boys from the village (x=3.23).

As far as lowered self-esteem, which is the last scale of depressiveness differentiated by Kovacs, is concerned, a higher score is more frequent for girls from the city (x=2.81) than for boys, either from the city (x=2.33) or from the village (x=2.39).

In order to answer the research question whether the subjects' level of depressiveness changes together with their age, another analysis was conducted which included the whole study group of junior secondary schools students (1140 subjects). Two main effects of the analysed variable "age of the subjects" were achieved for the variables: "depression – total score" $F(7.1132)=2.48$. $p<0.015$ and "ineffectiveness" $F(7.1132)=2.33$, $p<0.02$. 14-year-old students of junior secondary schools (boys and girls) reported a higher level of depressiveness (x=13.78) and experienced ineffectiveness (x=2.98) as compared with 13-year-olds (x=12.11 and x=2.51. respectively).

In order to answer the last research question, namely, whether the school form, sex and environment influence the score for the analysed variables, the Anova analysis of variance was conducted. The achieved results are presented in table 4.

Table 4. The results of the analysis of variance for the "class", "sex" and "environment" variables and the analysed variables: depression total score, negative mood, interpersonal problems, ineffectiveness, anhedonia, lowered self-esteem

Variables	F	P
Cdi – total score	4.28	0.00001*
Negative mood	1.81	0.04765
Interpersonal problems	1.81	0.04862
Ineffectiveness	2.57	0.00312*
Anhedonia	3.91	0.00001*
Lowered self-esteem	2.51	0.00405*

As the data presented in table 4 suggest, the main effect of the variables "school form", "sex", "environment" was achieved for the following variables: "depression-total score", "ineffectiveness", "anhedonia", "lowered self-esteem".

An analysis of the interaction effects makes it possible to draw more detailed conclusions.

As far as the level of depressiveness is concerned first- and second-form girls from the city (x=14.50 and x=14.98, respectively) scored significantly higher than first-form girls from the village (x=10.86) and higher than first-form boys from the village (x=10.51). Second-form girls from the city (x=14.98) scored significantly higher as far as depressiveness is concerned in comparison with second-form girls from the village (x=11.72) as well as boys from the village, both first- and second-formers (x=10.51 and x=11.35, respectively).

As far as ineffectiveness is concerned significant differences were noticed between first-form girls from the village (x=2.18) and both second-form girls from the city (x=3.06) and also second-form boys from the city (x=3.01). Second-formers from the city, both boys and girls, reported a more intense feeling of ineffectiveness, as compared with studied first-form girls from the village.

Anhedonia clearly separated the two groups of first-form girls from the city (x=4.49) from boys from the village, also first-formers (x=3.29) as well as from the third-form boys from the city (x=3.51).The above-mentioned first-form girls

from the city reported anhedonia more often than the other two groups of subjects. A similar correlation was observed in the case of second-form girls from the city (x=4.58) in comparison with the two remaining groups.

The last analysed symptom: lowered self-esteem was more often typical for second-form girls from the city (x=3.01) as compared with the studied group of first-form boys from the village (x=2.15) as well as third-form boys from the city (x=2.25).

DISCUSSION

The results of the presented study suggest that depressiveness is more intense among the studied adolescents from city schools rather than those from rural schools. Adolescents attending schools in the city, in comparison with their peers from the village, report a more frequent presence of symptoms which are generally considered to be depressive. This phenomenon can be observed particularly clearly in the case of the studied girls from the city. What could account for their poorer emotional condition, in comparison with the studied group of girls from the village, is the fact that social and emotional support they are provided with is limited. Professional career of the parents of girls from the city or the breakdown of family relationships can also be perceived as the reasons for the subjects' intensified depressiveness. A potential reason for the fact that symptoms generally considered to be a manifestation of depression occur more often in the studied group of girls from the city can lie in critical changes related to the puberty period. Intensified depressiveness can also result from social transformations, which occur more dynamically in large urban centres, and, consequently, from the girls' problems with adaptation [22].

A lower level of depressiveness in the studied group of girls from the village can be related to the fact that they are more involved in performing their school duties. This, in turn, can be either a sign of the expectations of the subjects' parents or a result of the subjects' own strong motivation to finish a junior secondary school, and – in the more distant future – to alter their situation in life.

Cognitive activity undertaken by the girls, related to the completion of tasks resulting from the obligation to fulfil the school duties, can function as a way of natural protection against the symptoms which are generally considered to be a manifestation of depression. This phenomenon could probably be explained within Lewinsohn's socio-environmental model of depression. The author suggests that there is a relation between the decrease in activity and a limited amount of positive social reinforcement on the one hand and the occurrence of lowered mood and depression on the other [23]. According to the author, undertaking various activities protects individuals from the symptoms of depression. A lower level of depressiveness in the studied group of girls from rural schools can, probably, be a sign of an attempt to alter their situation in life by engaging oneself in studying, which, in turn, can ensure a better preparation to play new social and professional roles.

CONCLUSIONS

The results of the presented study make it possible to formulate the following conclusions:

1. Depressiveness is significantly more intense in the adolescents from the city than those from the village.
2. Sex and environment divide the studied group of adolescents according to the level of depressiveness. Girls from the city reported more intense symptoms indicating depression as compared with girls from the village. Similar results were achieved for the studied group of boys.
3. The level of depressiveness increases together with the age of the studied adolescents. Fourteen-year-old students scored higher for depressiveness than thirteen-year-old boys and girls.
4. The picture of subjective symptoms considered to be depressive symptoms changed among the studied adolescents according to their school form, sex and environment.

REFERENCES

1. Stark K. Childhood Depression. School Based Intervention. New York: The Guilford Press; 1990.
2. Kashani JH, Rosenberg TK, Reid JC. Developmental perspectives in child and adolescent depressive symptoms in a community sample. American Journal of Psychiatry. 1989, 146: 871–875.
3. Carlson GA, Kashani JH. Phenemenology of major depression from childhood through adulthood: Analysis of three studies. American Journal of Psychiatry. 1988, 145: 1222–1225.
4. Ryan ND, Puig-Antich, Ambrossini P, Rabinovich D, Nelson B, Iyengar S, Twowemy J. The clinical picture of major depression in children and adolescents. Archives of General Psychiatry. 1987, 44: 854–861.
5. Bomba J, Jaklewicz H. Depresja u dzieci podejmujących naukę szkolną. Rozpowszechnienie zjawiska i jego zależność od możliwości przystosowawczych dziecka. Psychoterapia. 1990, 4: 15–19.
6. Bomba J, Domagalska-Kurdziel, Bielska A, Gardziel A, Józefik B, Lebiedowicz H, Wolska M. Rozpowszechnienie i obraz depresji w młodszym wieku szkolnym. Psychoterapia. 1988, 2: 43–49.
7. Bomba J. Rozpowszechnienie i obraz depresji u młodzieży we wczesnej fazie adolescencji. Psychoterapia. 1988, 1: 37–43.
8. Bomba J. Depresja u młodzieży. Analiza kliniczna. Psychiatria Polska. 1982, 1–2: 25–30.
9. Carlson GA, Strober M. Affective disorders in adolescence. In: Cantwell DP, Carlson GA. eds. Affective disorders in childhood and adolescence: An update. New York: Spectrum; 1983. p. 85–96.
10. Mullins LL, Siegel J, Hodges K. Cognitive problem-solving and life event correlates of depressive symptoms in children. Journal of Abnormal Child Psychology. 1985, 2: 305–314.
11. Norvell N, Brophy Ch, Finch AJ. The relationships of anxiety to childhood depression. Journal of Personality Assessment. 1985, 2: 150–153.
12. Kendall PC. Depression in children and adolescents: Assessment issues and recommendation. Cognitive Therapy and Research. 1989, 13: 109–146.
13. Baron P, Campbell TL. Gender differences in the expression of depressive symptoms in middle adolescents: an extension of earlier findings. Adolescence. 1993, 28: 903–911.
14. Algood-Merten B, Lewinsohn PM, Hops H. Sex differences and adolescent depression. Journal of Abnormal Psychology. 1990, 99: 55–63.
15. Anderson JC, Williams S, McGee R, Silva PA. DSM-III disorders in preadolescent children. Archives of General Psychiatry. 1987, 44: 69–76.
16. Rabe-Jabłońska J. Depresja u dzieci i młodzieży. Aktualne poglądy na etiologię, diagnozowanie, przebieg i leczenie. Psychiatria i Psychologia Kliniczna Dzieci i młodzieży. 2001, 1:7–26.
17. Kovacs M. The natural history and course of depressive disorders in childhood. Psychiatric Annals. 1985, 6: 387–389.
18. Puig-Antish J, Lukens E, Davies M, Goetz D, Todak. Psychosocial functioning in prepubertal major depressive disorders I: Interpersonal relationships during the depressive episode. Archives of General Psychiatry. 1985, 42: 500–507.
19. Janzen HL. Children and depression. School Psychology Review. 1992, 12: 234–236.
20. Gotlib I, Hammen C. Psychological Aspects of Depression. Toward a Cognitive-Interpersonal Integration. England : John Wiley & Sons; 1992.
21. Kovacs M. Children Depression Inventory. New York: Multi Health Systems, Inc; 1992.
22. Jaklewicz H, Barańska Z, Deli D, Plich M, Woźniak A. Zaburzenia depresyjne u młodzieży w okresie transformacji społecznej. Psychiatria i Psychologia Kliniczna dzieci i Młodzieży. 2001, 1: 26–37.
23. Rola J. Depresja u dzieci. Warszawa: Akademia Pedagogiki Specjalnej; 2001.

PSYCHOTERAPIA

[PSYCHOTHERAPY]
Nr 1 (140) 2007

CONTENT

Editor: Polish Psychiatric Association Editorial Committee
31-138 Cracow, Lenartowicza 14, Poland
e-mail: psych@kom-red-wyd-ptp.com.pl
http://www.kom-red-wyd-ptp.com.pl