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SECURITY OF ATTACHMENT AND ADOLESCENTS' DEPRESSION

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attachment

adolescence

depression

Summary

Objectives: The purpose of the study was to investigate the role of internal working models in the prediction of depression. Insecure attachment has been theorized to form a vulnerability factor for the emergence of depressive symptoms.

Methods: This study examined the association of attachment style with depressive symptoms among early adolescents 12–15 years of age (N = 84). For the assessment of attachment style and depressive symptoms, the Adult Attachment Interview (George, Kaplan, Main), and the Child Depression Inventory (Kovacs) were used.

Results: As expected, insecurely attached adolescents more often reported the depressive symptoms (52,3%). 58,8% of the securely attached did not manifest any symptoms of depression. In the group of the continuous secure adolescents, there were 71,4% of non-depressive ones. 50% individuals in the earned secure category did not report any depressive symptoms, and the other 50% expressed light depressive symptoms. There were no cases of severe depression among representants of both: continuous secure and earned secure styles.

Conclusions: Bowlby's attachment theory provides in-depth understanding into the development of working models of the self and the others. Secure attachment is significantly correlated with high self-esteem, effective affect regulation and better adolescence adjustment. The continuous secure category seems to function as a more effective protector against depression comparing to the earned secure one. However no cases of severe depression among earned secure individuals confirm weightiness of the quality of attachment in a healthy development

Introduction

General psychopathology factors in adolescence tend to rise moderately, but the incidence of adolescent depression increases significantly. The research results suggest that 5% of children and between 10-20% of adolescents reported depressive symptoms [1-5]. Depressive symptoms that occurred in childhood or adolescence have a negative impact on the general functioning of individuals in their social, academic and family life, and predict later recurrences [6, 7].

Depression is not only a mood regulation disorder, but it also results in physiological and cognitive functioning alterations. Studies on prevention and therapy of adolescents depression explore developmental, environmental, interpersonal, behavioural, and biological factors.

Among developmental components contributing to depression, early family relations are also indicated. This study is particularly focused on attachment and its role in providing protection against depression.

According to Bowlby, adolescence is a period of two crucial developmental processes that might influence the occurrence of depressive symptoms. One of them is creating internal working model based on mental representation of attachment relations, and second one is growing affect regulation ability. Both self-esteem and effective emotional control depend on the attachment quality.

Internal working models

Attachment was described by Bowlby as a behavioural-cognitive system, created in a social relation between a child and his/ her primary figure. This system is a well-organized internal structure, fulfilling specific functions [8]. The primary goal of attachment behaviours is creating a secure base, in order to reduce negative emotions and to explore the world. Repeated experiences are being coded in memory as mental models. The child's natural disposition and the adult 's natural sensitivity to the signal sent by the child, provide an opportunity to achieve the sense of security, associated with normal, harmonious development [8].

In the process of attachment formation, an immature child's brain uses a mature parent's brain functions to organize its own brain processes [9]. In the developing mind, a network of cognitive, emotional and behavioural representations of the self, the others and the reciprocal relationships are being shaped. Those representations, called working models, are activated in response to stressful events, as coping strategies. The primary strategy is created by a child as a consequence of a model of an available and responsive parent, and an efficient and valuable self. Secondary strategies are being developed after unfavourable early parenting experiences. The first secondary strategy deactivates the attachment system as a consequence of repeated experiences of neglect and/or rejection. The child's attention is being shifted away from the attachment figure and the attachment-related experiences, which in turn limits emergences of attachment-related thoughts and feelings. The second secondary strategy hyperactivates the attachment system when the child experiences the parent as occasionally available. The attention is inflexibly focused upon the attachment figure and attachment-related experiences, as opposed to the environment. In difficult situations, the child exhibits strong signs of distress [10].

Early attachment representations are relatively stable and operate unconsciously [11, 12], however in extreme situations they are subject to reorganization. Therapeutic processes and positive peer and romantic bonds can possibly change the insecure pattern of attachment into the secure one, what is evidenced in earned-secure category of attachment. Some people (45-65% among securely attached), despite unfavourable childhood experiences, present valuing attachment mental state in adult life [14].

Traumatic experiences and toxic relationships may negatively influence the quality of attachment and result in modifications of the attachment system from secure to insecure. In the adolescents' cohort 64% presented the same attachment pattern as in infancy (during a Strange Situation Procedure), but the consistency of the attachment pattern was higher (78%) among those who had not experienced negative life events [14-16].

Increasing autonomy and emotional control are important elements developed in the middle childhood and adolescence. They are crucial for forming new attachment relationships, which differ from those created in childhood. Adolescents' strategies are more integrated, which provides youngsters with more generalized attitude with respect to attachment relationships. They are able now to reformulate the attachment system to make it predictable in later peer and romantic relationships. Attachment transformations however, which can origin in middle childhood, have a chance to reveal in adolescence, because of the individuation processes and the capacity for formal operational thinking, including logical and abstract reasoning abilities. Adolescents have an opportunity to evaluate their attachment figures from a larger than before perspective. Their perception about themselves in the attachment relationships is not focused on a certain relationship as before (My mom always helps me), but it becomes more internalized (I can ask for help and I will get it, but I have to considerate which people I can stay close to). Physical and emotional independence developed in adolescence, creates an opportunity to re-evaluate childhood attachment relationships. Critical review was too scary before to acknowledge and express it. It may temporarily worsen the general family functioning, but in the same time creates space for resolving childhood difficulties and forming more secure relationships in the future [17].

Adolescents depression

Psychiatrists legitimately highlight the individual nature of juvenile depression, as there are developmental processes and adolescence crisis additionally involved in it [18]. Research findings indicate that along with the developmental changes, depressive symptoms differ. Outcomes of youngsters' depressive disorder are much more assorted than in adult depression

[19]. Adolescence is a period between childhood and adulthood. Adolescents' disorders can be a continuation of childhood disorders, but also can be specific for adolescence or for adulthood. Juvenile depression is characterized by a complex group of outcomes, where not a depressed mood is fundamental, but irritability and problems with emotional control.

Attachment and adolescence depression

The quality of attachment determines individual's adaptation skills. If the bonds are being formed securely, youngsters develop self-confidence and the sense of security. Insecure family environment produces low self-esteem, disturbed peer-relationships, sense of desolation and anxieties [18]. Insecurely-attached child in stress situations is at risk of overproducing the stress hormone - cortisol. The parent fails to soothe negative emotions and thereby the cortisol level is not being regulated, which results in the fixed high blood cortisol level. A child then becomes oversensitive in troubled situations, hyperactive and depressed [21-23]. The lack of self-regulation strategies causes dissociation of the behavioural system, which appears passive, and of the physiological system, which becomes highly stimulated [24]. Depressive persons practice passive methods of coping in the face of difficulties, as they anticipate the strategy failure, which arises from childhood experiences developing depressogenic structures. The same way as the primary strategies in securely-attached people function as adaptation coping strategies, secondary/ defensive strategies in insecurely-attached individuals, trigger anxiety linked to the attachment figure's unavailability, which results in symptomatic and distorted expressions [25, 26]. Insecurely-attached people distort affect (dismissing of attachment Ds) or cognition (preoccupied E). If they contradict their emotions, they are very reserved in solution seeking, trying to divert the attention from the real problem. People defending themselves against cognitive reflections, manifest their emotions impulsively, magnify problems but refuse distrustfully all attempts of rational help. Ineffectiveness of both above mentioned strategies, may escalate depressive symptoms [27].

The purpose of the study

The purpose of the study was to investigate the role of internal working models in the prediction of depression [13]. The major objective was to verify if secure attachment performs a protection function against depression in adolescence. Insecure attachment has been theorized to form a vulnerability factor for the emergence of depressive symptoms.

Based on previous finding in the field of depression the hypothesis was formulated:

In the group of adolescents reporting depressive symptoms, predominately the individuals are classified as insecurely-attached (dismissive, preoccupied and disorganized).

Participants

After the parental consent was obtained, 84 students, 12-15 years of age were recruited from the junior middle schools. The data obtained from the AAI and the CDI were gathered at the turn of 2005 and 2006. The group was almost equinumerous in terms of gender distribution (51.2% girls and 48.8% boys). Most of them were adolescents 14-15 years old (88.1%), first-born children (48.8%), living in two-parent families (86.9%), having two siblings (47.6%). Both parents (father – 53.7%, and mother – 48.8%) of most of the examined adolescents completed secondary education.

Measures

The Adult Attachment Interview by George, Kaplan, Main [12] and Child Depression Inventory by Kovacs [29] were used to evaluate attachment and depressive symptoms.

The AAI is highly reliable tool, regarded as a “golden standard” in assessing “mental states with respect of attachment” [13, p.44]. The protocol was originally intended for research with parents with low-risk samples, but since has been used reliably with adolescents, latency-aged children (10-14), high-risk and clinical samples [13, 28].

The purpose of the interview is to obtain information about childhood experiences with the important attachment figures. The interviewees are asked to describe positive and negative childhood experiences like losses, separations, rejections and how the parents reacted. Additionally, the interviewees try to evaluate those memories and also the current relationships with the parents.

The AAI is a semi-structured protocol, consisting of 18 questions. The interview is transcribed [13, 28] and analysed for identifying five differing states of minds with respect to attachment: secure F, dismissing Ds, preoccupied E, disorganized U and cannot classify CC.

Attachment classification is based on analysing an interview text, paying special attention to:

- Early childhood experiences of parenting
- Narrative style and coherence level (internal consistency of the transcript and collaboration in the interview process)

The speaker's memories pertinent inferred parental behaviour are rated for the subscales: Loving, Rejecting, Reversing/Involving, Neglecting, and Pressured to Achieve. The subscales

of coherence pertain to the speaker's current state of mind referring to the mental representation of attachment-related experiences: Idealizing, Involving Anger, Derogation, Metacognition, Passivity of Discourse, Insistence of Lack of Recall, Fear of Loss.

Secure category placement is not obligatorily a result of favourable childhood experiences. Beside favourable or unfavourable childhood experiences, there are two subscales within the secure category, identified by the ratings on the parents' "loving" scale: "continuous secure" and "earned/discontinuous secure" [13].

Lapses of the monitoring of reasoning or discourse or reports of extreme behavioural reactions during discussion of abuse or loss lead to Unresolved U (Disorganized/ Disoriented) classification. Cannot Classify CC category (evidenced most clearly in clinical, prison and other high-risk populations) is used for speakers, who cannot be fitted to any "organized" (F, Ds or E) AAI placement, as they show mixed patterning. Among five major AAI categories, three of them (F, Ds, E) additionally have their own sub-categories: Ds1-4, F1-5, E1-3 [28]. Special competence at scoring and classifying transcripts, obtained in a formal training institute, followed by a reliability-check, are required to use that tool. The author of the studies is a reliable AAI coder.

Child Depression Inventory is one of the most frequently used measures of depression in children and adolescents between 7 and 17 years old. The self-report questionnaire consists of 27 items represented with three statements of varying severity with regards to emotional, cognitive and behavioural symptoms of depression. From the analysis five scales are derived: negative mood, interpersonal problems, ineffectiveness, anhedonia and negative self-esteem [29].

Results

Adolescents' attachment patterns were coded from the AAI transcripts and the depression symptoms were assessed from the CDI questionnaires (Table 1).

Table 1. Number of adolescents in categories: depression and attachment pattern

Depressive symptoms		Attachment patterns				Total
		secure	dismissing	preoccupied	disorganized	
No depressive symptoms	Number	30	6	0	4	40
	% of depression	75.0%	15.0%	0.0%	10.0%	100.0%
	% of attachment	58.8%	28.6%	0.0%	44.4%	47.6%
Mild & severe depressive symptoms	Number	21	15	3	5	44
	% of depression	47.7%	34.1%	6.8%	11.4%	100.0%
	% of attachment	41.2%	71.4%	100.0%	55.6%	52.4%
Total	Number	51	21	3	9	84
	% of depression	60.7%	25.0%	3.6%	10.7%	100.0%
	% of attachment	100.0%	100.0%	100.0%	100.0%	100.0%

Table 2. Chi-Square test of independence analysing correlation between the attachment pattern and depressive symptoms

	Value	df	Asymptotic significance (two-sided)
Pearson's Chi-square	8.385	3	0.039
N number of observations	84		

To analyse correlation between the attachment pattern and depressive symptoms in adolescents, Chi-Square test of independence was used. The findings, shown in Table 2 (df=3, $p=0.039<0.05$), confirm the assumed hypothesis. There were 75% secure individuals among no depressed adolescents.

In a group of the adolescents manifesting depressive symptoms, 52,3% represented insecure attachment pattern, and the other 47,7% were securely attached.

Quite a high percentage of secure individuals presenting depressive symptoms, made us to analyse in detail the relation between the two variables. The attachment pattern was grouped as “continuous secure”, “earned secure”, and “insecure”, and the depressive symptoms as “no depressive symptoms”, “mild depressive symptoms” and “severe depressive symptoms” (Table 3).

Table 3. Number of adolescents in categories: mild, severe and no depressive symptoms and continuous secure, earned secure and insecure attachment pattern

Depressive symptoms		Secure/insecure attachment patterns			Total
		continuous secure	earned secure	insecure (Ds, E, U)	
no depressive symptoms	Number	15	15	10	40
	% of depression	37.5%	37.5%	25.0%	100.0%
	% of secure/insecure attachment patterns	71.4%	50.0%	30.3%	47.6%
	% of Total	17.9%	17.9%	11.9%	47.6%
mild depressive symptoms	Number	6	15	15	36
	% of depression	16.7%	41.7%	41.7%	100.0%
	% of secure/insecure attachment patterns	28.6%	50.0%	45.5%	42.9%
	% of Total	7.1%	17.9%	17.9%	42.9%
severe depressive symptoms	Number	0	0	8	8
	% of depression	.0%	.0%	100.0%	100.0%
	% of secure/insecure attachment patterns	.0%	.0%	24.2%	9.5%
	% of Total	.0%	.0%	9.5%	9.5%
Total	Number	21	30	33	84
	% of depression	25.0%	35.7%	39.3%	100.0%
	% of secure/insecure attachment patterns	100.0%	100.0%	100.0%	100.0%
	% of Total	25.0%	35.7%	39.3%	100.0%

Table 4. Kruskal-Wallis Test for depression and attachment

	depression
Chi-square	9.509
df	2
Asymptotic significance	0.009

a Kruskal-Wallis Test

b Grouping variable: secure/insecure attachment pattern

With respect to the attachment pattern, the depressive symptoms as shown in Table 4, showed a significant difference (Kruskal–Wallis Test: $\chi^2=9.509$, $df=2$, $p=0.009<0.05$).

A majority of no depressed adolescents (75%) were securely attached: 37,5% continuous secure, and 37,5% earned secure.

In the group reporting light depressive symptoms there were 16,7% continuous secure and 41,7% insecure adolescents.

All the adolescents manifesting severe depressive symptoms represented an insecure attachment organization.

Discussion

1. In the examined population 60.7% of adolescents presented a secure attachment pattern, 25% were classified as dismissing, 3.6% were preoccupied and 10.7% - disorganized. In a "secure" category 58,8% were classified as earned secure. These is the common attachment pattern distribution found in other countries.
2. Among preadolescents (12-13) the majority (50%) were represented by dismissing individuals, 20% were secure, 20% disorganized and 10% preoccupied, which is not similar to standard distribution reported for comparable populations. The distribution of attachment patterns in older adolescents group (14-15) was: 66.2% secure, 21.6% dismissing, 2.7% preoccupied and 9.5% disorganized. This corresponds to those found for other nonclinical samples.

Ammaniti et al. [28] found in their research that the distribution of attachment representations (obtained with the AAI), in latency-aged children (10-14), does not differ from the distribution in a group of older samples. The concordance of attachment styles was observed at the children seen at 10 and again at 14 years of age [28]. It was not confirmed in our findings.

The nonstandard distribution in preadolescents may be the result of specific developmental issues. Determination to establish autonomy could be related to the minimization the power of the attachment system with respect to parents. Developmental changes and the challenges in the current environment may significantly influence attachment organization or temporarily disrupt the capacity to access it. Allen and Land's findings [17] seem to confirm the quoted thesis. They suggest that the concordance of attachment between adolescents and their mothers appears to be greater for older than for younger adolescents. Taciturnity, specific for the younger AAI speakers, may complement the above-mentioned interpretation. That would question the justification of interviewing 10/13-year-olds with the AAI, despite the tool was used reliably with the children. However, it must be taken into consideration that possible errors may occurred in the interview process. Although the protocol included age-appropriate adjustments, the interviewers could possibly fail at the communication level.

3. In the examined group of adolescents the cumulative rate of mild and severe depressive symptoms is as high as 52.4%. The observed depressive symptoms distribution is as follows: severe depressive symptoms – 9.5%, mild depressive symptoms – 42.9%, and

no depressive symptoms – 47.6%. Numerous studies in recent literature provide data about the prevalence of depression in childhood and adolescents. Some of the findings indicate high rates of adolescents' depression reaching 20% [30], 30% [31], and if examined as depressive comorbidity (anxiety, oppositional deviant disorder, conduct disorder, attention deficit, etc.) the rate increases to 57% [29]. In Romanian sample aged 10 to 21, there were 24.4% of light depression, 11.8% of moderate depression and 5% adolescents with severe depressive symptoms (41,2% in total) [32]. Bomba's studies in Poland [29] show a cohort trend for increasing rates of depression among younger adolescents (38.1%). In 1986 it was 28.15% among 13-year-olds, and 19.25% in the group of 17-year-olds. In 1988 the rate increased to 31.65% (42.41% girls and 22% boys). The rates of 10-year-olds' depression decreased from 38.2% in 1984 to 27.7% in 2001 (among boys from 46.6% to 31,0%) [33]. In 2005, 21.6% of 12-year-olds presented depressive symptoms (28.7% of girls). In 2008 Jaklewicz suggested increasing rates of depression in 15/18-year-olds [34, 35]. In 2010, the depressive symptoms estimated among 17-year-olds with the Beck's Inventory, presented 33.6%, of girls and 18.2% of boys [36]. It is difficult to make a statement regarding this study results, in relation to above reported findings, due to their huge spread. Factors for this variability include differences in population studied (clinical or normal), methods of assessment (self-report questionnaire or clinical interview) and definition of depression (symptom, syndrome or a disorder). Depressive symptoms, defined as negative mood, are presented by 15-40% of population, a syndrome (greater length set of symptoms) - 5-6%. Depressive disorder, major depressive disorder and dysthymia represent 1-3% of population [33]. Depression comorbidity is extremely common among depressed adolescents. CDI is a self-report measure of depression not designed as a diagnostic measure, it is useful however in assessing the severity of depressing symptomatology. Severe depressive symptoms, classified by CDI, represent a clinically relevant level of depression, but the tool does not distinguish properly between individuals manifesting mild depressive symptoms and those with depression comorbidity [34, 35]. Regardless of all the diagnostic, definition and methodology problems, it has been confirmed that young people have an increased prevalence of depression, which appears to be universal trend.

4. Preadolescents (12-13 years old) more often report depressive symptoms than adolescents aged 14-15. 90% of preadolescents and 47.3% in the group of 14/15-years-olds, presented mild or severe depressive symptoms. The preadolescents group was small in size and probably cannot be representative for the population, nevertheless they appear to be more

vulnerable to depression than their older friends. Crisis in an adolescence period can be a significant burden, when young people facing difficulties simultaneously experience insufficient support. Most of research results suggest that the rates of reported depressive symptoms in preadolescents aged 8-12 (2%) are four times higher than in 17 years old (4-8%) [2, 3, 40, 41], which was not confirmed in our studies. Gunnell's data indicate that depressive symptoms were presented in 21 to 50% in children [42]. A demanding individuation process, transition from primary to middle high school, new peer groups, simultaneously increasing expectations, and limited willingness to seek old, safe support methods, jeopardize harmonious development. Lower depression rates in the group of older adolescents may be related to more advanced adaptational and coping strategies, developed from experience, the maturity, and the wider social support network.

5. 58,8% of securely attached had no depressive symptoms. Majority of continuous secure adolescents were represented by non-depressed individuals (71.4%). Among earned secure adolescents 50% did not report any depressive symptoms, and the other 50% manifested symptoms of light depression. There was no severe depression among representations of both: continuous secure and earned secure individuals. Insecure adolescents reported more mild and severe depressive symptoms (52.3%). High rates of securely attached people among those with mild depressive symptoms (41.2%) might be a result of:
 - a) The examined population was a nonclinical sample. Depressed adolescents were not diagnosed with the clinical interview. Their self-reports' mild depression symptoms could indicate different factors related to puberty or other problems.
 - b) 71.4% of the securely attached, who reported depressive symptoms, were categorized as earned secure. The findings confirm the role of attachment as a protection against development of depression. The continuous secure category seems to function as a more effective protector against depression comparing to the earned secure one. However, no cases of severe depression among earned secure individuals confirm weightiness of the quality of attachment in a healthy development. In stress and life difficulties a new, reorganized attachment system is being tested. When it fails, the old, developed in the childhood, attachment system is being activated, which may increase vulnerability to depression. In adolescence, emotional regulation and cognitive processes are still under development, in addition there are various factors that jeopardize the integrity of newly organized

system, which might be not consistent enough to protect individual against depression.

Association between attachment and depression is widely reported in literature. Several studies identified a relation between depression and preoccupation [43], some researches indicated depression correlated with a dismissing pattern [44], others suggested a link between depression and disorganization of attachment [45, 46]. With regards to gender, there are some findings highlighting that preoccupied women and dismissive men are vulnerable to depression [17]. All of the studies confirm a general thesis that depression is associated with an insecure attachment pattern [47-51], which was also substantiated in this study.

Escalating family crisis, growing mobility of the society, declining family consistency, perhaps reduce support resources. People starting from a “secure base” head toward a safe direction, in opposition to those insecurely attached. Obviously, there is no guarantee that the former will succeed, and the latter are doomed to failure, but the attachment pattern acts as shield protecting against risk factors, or as another negative factor, which intensifies difficulties.

Strengths and limitations

Our studies, using the AAI, are pioneering in Poland, where the tool is not very popular due to its high costs of trainings and time-consuming transcribing and coding process. According to the author’s knowledge, there is only one reliable Polish AAI coder, which unfortunately made impossible the procedure of blind, double-coding. The objectivity of the results may be therefore questionable.

Depressive symptoms were estimated with a self-report questionnaire. The CDI is one of the most frequently used measures of depression in children and adolescents, but specially with the younger examinees can possibly contain errors.

Another limitation of the study is a population, which consisted of big town citizens and was too small in size, regarding the preadolescents sample, to formulate generalized conclusions.

Undoubted value of the presented research is that adolescents’ depression was illustrated from the attachment theory perspective. It provides in depth understanding of how insecure strategies can provoke and maintain depressive symptoms and how security of attachment protects against development of psychopathology. The presented model of adolescence depression could appear valuable for researches, clinicians and therapists, who might feel inspired in exploring further methods of a prevention of adolescents’ depression as well as creating effective interventions.

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