[Abstract:0261] ***Mood disorders***

Emotional and behavioral characteristics of childhood depression

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INTRODUCTION: Early-onset depression could negatively influence children and adolescents in all aspects of their lives such as emotional and cognitive development, school performance and social functioning. A very first epidemiological study from Turkey revealed that the prevalence of depression in elementary school students is 2.6%, and it is approximately two times more common in girls than boys[1]. However, studies carried out in clinical settings reported higher prevalence rates and different distribution rates between sexes.
It can arguably be claimed that behavioral problems may well hide the depressive syptoms in childhood[2], and they could be difficult to notice and diagnose correctly because of various clinical presentations of depression.
This study aimed to determine the prevalence of childhood depression in a clinical setting and whether there are any differences between the behavioral and emotional problems of these children and their peers without chronic medical illnesses or psychiatric disorders.
METHOD:
Subjects: The study was carried out in the child and adolescent psychiatry department of Karadeniz Technical University, Faculty of Medicine, between the dates of March 2013 and March 2014. There were 1992 children, aged 7-12 years, who presented to our clinic for the first time between these dates. Eventually, 42 of them were diagnosed with major depressive disorder (MDD) and agreed to participate in the study. The control group consisted of 42 children, age- and-sex matched with the study group, and they were collected from other departments of our hospital; none of them had any chronic mental or physical illness.
Procedures and Assessment Measures: Sociodemographic characteristics of the children and their parents were recorded on a semi-structured interview form prepared by the researchers. In this study, "Child Depression Inventory (CDI)" was used as a depression screening tool and "Schedule for Affective Disorders and Schizophrenia for School Aged Children, Present and Lifetime Version (K-SADS-PL)" was used to determine MDD and comorbidities. The cut-off point of CDI is declared as 13 for clinical populations; first children completed the CDI, and if their score was 13 or over, then K-SADS-PL was administered to them. In this study, item 9 of CDI was used to identify suicidal ideation. Also, the control group was interviewed using K-SADS-PL to determine that they had no psychiatric disorder. In the end, all mothers completed the "Child Behavior Checklist for Ages 6-18 (CBCL/6-18) and scored competence and behavior problems of their children.
RESULTS: There were 3157 children and adolescents (1247 female, 1910 male) who presented to our outpatient clinic between the dates of the study, and 63.1% of them (n=1992) were 7-12 years of age. After completing the CDI, those who scored above 13 points were interviewed using K-SADS-PL; 48 children (2.4%) were diagnosed with MDD. However, six of these children were excluded from the study and comparison analyses were conducted with 42 (2.1%) children.
The mean age of the children was 10.1±1.3 years and 64.3% of them (n=27) were male. Mothers of depressive children often mentioned externalizing behavior problems of their children. The most common complaints were inattention (n=8; 19.0%), bad temper (n=6; 14.3%) and irritability (n=5; 11.9%). On the other hand, self-injurious behavior was detected only in the study group (n=8; 19%) and the control group members had significantly more friends ($p<0.0005$; $\chi^2=26.877$). Also, "having no friends" and "having just one friend" was observed only in the study group.
In this study, 81% of the depressive children (n=34) had comorbid diagnoses. The most frequent comorbidities were anxiety disorders (n=19; 45.2%), disruptive behavior disorders (n=12; 28.5%) and attention deficit hyperactivity disorder (n=11; 26.1%), respectively. Among the anxiety disorders, separation anxiety was the most common one (n=8; 21.4%).
In depressive children, social relations (p=0.021; Z=-2.309) and school performance ($p<0.0005$; Z=-6.690) scores were significantly lower than in the control group, but all emotional and behavioral problem scores were significantly higher. Internalizing and total behavior problems were significantly higher in girls, but there was no significant difference in externalizing behavior problems between the sexes. Moreover, 57.1% of the study group (n=24) had suicidal ideation and 19% (n=8) had self-injurious behavior. Children with suicidal ideation had significantly higher scores on CDI (p=0.015; t=-2.552), but there was no significant association between suicidal ideation and children's competencies, behavioral problems or sexes. Besides, self-injurious behavior was not associated with sexes, suicidal ideation or total CDI scores. But it was significantly related with children's rule-breaking behavior (p=0.027; Z=-2.207), aggresive behavior (p=0.002; Z=-3.083) and externalizing behavior scores (p=0.001; Z=-3.470).
DISCUSSION: In this study, the prevalence of childhood depression was estimated as 2.4%, lower than in similar studies. We used a semi-structured interview to diagnose depression, and it is thought that the difference between studies may be due to this methodological variation. Also in this study, the ratio of boys to girls diagnosed with major depression was 1.8/1. But this result would be associated with the study population, because among the attendees aged 7-12 years, there was a male dominance.

It is suggested that children tend to report their internalizing symptoms more often than caregivers or teachers, and approximately two-thirds of children diagnosed with MDD have at least one comorbid psychiatric disorder[3]. As with these studies, mothers in our study usually mentioned their children's externalizing symptoms but after interviewing the children, we diagnosed depression. Also, we found that 81% of depressive children had at least one comorbid psychiatric disorder; ADHD, seperation anxiety, oppositional defiant disorder and conduct disorder were the most frequent comorbidities.

In this study, children diagnosed with depression had fewer friends and their school and social competence scores were significantly lower than in the control group. It is reported that all factors related to the school environment, like academic performance or peer relationships, have effects on child mental health, and children who have fewer friends are more likely to experience depressive symptoms[4]. Having fewer friends or lack of friends may have caused depression in the study group or could be a result of these children's behavioral problems, because these children had significantly higher scores in both internalizing and externalizing behaviors. It is reported that children who have internalizing or externalizing behavior problems could have lower social skills and thus act out more asocial behaviors among peers. Also, in this study, internalizing behavior problems were higher in depressive girls, but there was no significant difference in externalizing behavior between the sexes. These results suggest that externalizing behavior problems could be a part of childhood depression regardless of gender differences.

Another important finding of this study was that 57.1% of the children were shown to have suicidal ideation. This ratio was found to be 71% in Brenton's study[2]. Suicidal ideation is regarded as a predictor of suicide attempts. Thus, the high rates of suicide ideation in childhood depression as shown suggest that children are at risk of suicide attempts as adolescents and should be examined carefully in this regard.

Finally, in this study self-injurious behavior was detected only in depressive children. Although a study conducted with adolescents showed that self-injurious behavior is related with suicidal ideation[5], in our study this behavior was not associated with suicidal ideation or depression severity of children. We thought that self-injurious behavior in depressive children may not always be related with depression severity. Impulsivity or high comorbidity rates of childhood depression may make additional contributions to the development of this behavior. Hence the results of this study showed that self-injurious behavior was significantly associated with rule breaking, aggressive behavior, and total externalizing behavior scores.

Although the small sample size and high comorbidity rates in the study pose limitations to generalizing these results, we suggest that findings revealed in this study could contribute to the literature.

Keywords: depression, child behavior, self-injurious behavior

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[Abstract:0263] *ADHD*

Are SSRIs and psychostimulants really safe in terms of genotoxicity?

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BACKGROUNDS AND OBJECTIVE: Attention-deficit/hyperactivity disorder (ADHD) is the most frequent psychiatric disorder in children and adolescents[2]. Depression is the most common mood disorder[4]. In the treatment of such psychiatric disorders, typically SSRI and/or methylphenidate (MPH) are used. MPH is a commonly prescribed psychostimulant in ADHD treatment[3].