Mgr Nina Szalas

Niekorzystne doświadczenia w dzieciństwie (ACE-Adverse Childhood Experiences) wśród dzieci i młodzieży hospitalizowanych w oddziale psychiatrycznym - ocena związków z występowaniem zaburzeń psychicznych, podejmowaniem prób samobójczych i dokonywaniem samookaleczeń

Adverse Childhood Experiences among children and adolescents hospitalized in a psychiatric ward - assessment of associations with the occurrence of mental disorders, suicide attempts and self-mutilation

Rozprawa doktorska na stopień doktora

w dziedzinie nauk medycznych i nauk o zdrowiu

w dyscyplinie nauki o zdrowiu

przedkładana Radzie Dyscypliny Nauk o Zdrowiu

Warszawskiego Uniwersytetu Medycznego

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Warszawa 2023 r.

SUMMARY

Title: Adverse Childhood Experiences among children and adolescents hospitalized in a psychiatric ward - assessment of associations with the occurrence of mental disorders, suicide attempts and self-mutilation

Having gone through abuse and other Adverse Childhood Experiences (ACE) constitutes a life-long risk factor for the development of mental problems. The scarcity of studies on children and adolescent in-patients warrants the current study.

The goal of the study: to assess the impact of acute childhood experiences on the development of mental problems, suicide attempts and self-injuries among children and adolescent in-patients of psychiatric ward.

Method: A retrospective, descriptive, observational study included 1,232 patients of the Clinic of Child and Adolescent Psychiatry at Warsaw Medical University hospitalized between January 2017 and June 2020., of which 318 (26%) were selected for the study group based on the experience of different forms of abuse before admission, according to medical records (106 boys and 212 girls; mean age 12,7 years). The following data were obtained from the study group: the frequency of ACEs (including emotional, physical, sexual abuse, bullying, neglect, growing up in a family with members being affected by mental disorders, substance abuse or addictions, separation or divorce, persistent family conflict), the frequency of abuse depending on the perpetrator, interventions taken against abuse depending on the number of ACEs, the number of hospitalizations and formal diagnoses depending on the number of ACEs, the association between cumulative childhood experiences on the occurrence of externalizing and internalizing disorders, neurodevelopmental disorders, abnormal personality development, self-injuries, suicide attempts, the number of hospitalizations and the number of diagnoses.

Results:

1. 318 subjects (26%) out of 1232 hospitalized in a psychiatric ward for children and adolescents experienced various forms of violence before hospitalization.
2. 189 subjects (59,4%) had high exposure to adverse childhood experiences (ACE 4-8), 129 subjects (40,6%) had low exposure (ACE 1-3), whereby ACE=1 was observed in 8% of subjects, ACE= 2 in 13%, ACE = 3 in 19%, ACE = 4 in 28%, ACE =5 in 15%, ACE = 6 in 11 % , ACE = 7 in 5% and ACE = 8 in 0,3%. 63% of subjects experienced emotional abuse, 37% physical abuse, 12% sexual abuse, 47% peer abuse and 22% experienced neglect. 65% of subjects were raised in broken families, 59% were raised in families with alcohol or

substance abuse in one or two parents, 49% were raised in families where one or two parents suffered from mental disorder and 84% were raised in families with persistent conflict.

3. The abuse had been identified before hospitalization in 93% of subjects, while formal intervention procedures were launched in as little as 21% of subjects (6% - "Blue card" procedure, 12% - supervision of court officer, 3% joint procedures).
4. Parents were most often the perpetrators of physical and emotional abuse, more often fathers (74% and 66% accordingly), less often mothers (40% and 34% accordingly). Unrelated persons were the most common perpetrators of sexual abuse (66%), less often fathers (21%), mothers (13%) and step-fathers (8%).
5. The most common mental problems in the study group included: internalizing disorders (60%), suicide attempts (57%) and self-injuries (53%). The diagnosis of neurodevelopmental disorders was established in 36% of subjects. Internalizing disorders were evidently more often diagnosed in subjects with low ACE exposure (ACE 1-3 in 72% vs. ACE 4-8 in 16%), while high ACE exposure was observed more often in subjects diagnosed with externalizing disorders (ACE 4-8 in 49% vs. ACE 1-3 in 29% of subjects).
6. The frequency of suicide attempts, self-injuries and abnormal personality development was similar of subgroups with low and high ACE exposure (self-injuries ACE 1-3 in 56% vs. ACE 4-8 in 58%; self-injuries ACE 1-3 in 49% vs. ACE 4-8 in 55%; abnormal personality development (ACE 1-3 in 16% vs. ACE 4-8 in 17%). The mean number of ACEs in subjects with neurodevelopmental disorders was significantly higher in comparison with subject without such diagnoses (4,1 ± 1,5 vs. 3,7 ± 1,6; $F(1,316) = 3,735$; $p = 0,054$).
7. Subjects with high ACE exposure (ACE 4-8) were more often hospitalized in psychiatric wards compared with low-exposure group (ACE 1-3) ($F(1,316) = 3,541$; $p = 0,061$) as well as higher number of psychiatric diagnoses ($F(1,316) = 10,090$; $p = 0,002$). The mean number of psychiatric diagnoses was significantly higher in subjects with neurodevelopmental disorders, compared with subjects without such diagnoses (2,5 ± 1,0 vs. 1,5 ± 0,7; $F(1,316) = 97,131$; $p < 0,001$). Boys with high ACE exposure (ACE 4-8) were hospitalized more often compared with boys with low ACE exposure (ACE 1-3) (mean diff. 0,291, 95%CI: 0,069-0,512, p=0,010) as well as higher number of psychiatric diagnoses (mean diff. 0,561, 95%CI: 0,186-0,935, p=0,003).
8. To assess the association between ACEs and the presence of mental disorders we isolated the group of boys with externalizing disorders, diagnosed with neurodevelopmental disorders and raised in broken families (mean age 142,2 months) (Hosmer-Lemeshow test, p=0,779; R^2 Nagelkerke=0,429) and the group of girls with internalizing disorders, without

neurovelopmental disorders, raised in full families (mean age 158,5 months) (Hosmera-Lemeshow test, p=0,221; R^2 Nagelkerke=0,446). The adhesion to „externalizing" group presented greater risk for higher number of ACEs (OR=1,257; 95%CI: 1,064-1,485, p=0,007) and greater number of psychiatric diagnoses (OR=2,232; 95%CI: 1,639-3,039, p<0,001), the adhesion to "internalizing" group created higher risk for self-injuries (OR=1,836; 95%CI: 1,028-3,279, p=0,040) or suicide attempt (OR=2,470; 95%CI: 1,429-4,270, p=0,010).

Conclusions:

1. Children and adolescent psychiatric in-patients often experience high exposure to adverse childhood experiences such as various forms of abuse, being raised in broken families or in families with substance abuse and addiction problems or mental health problems.
2. Family members are most often the perpetrators of physical and emotional abuse.
3. Despite the identification of abuse before hospitalization only 1/5 of patients were subject to formal interventions, which indicates ineffectiveness of procedures which oblige social services and institutions to follow tasks listed in The Act of Counteracting Domestic Violence.
4. Low ACE exposure in children and adolescents who experienced abuse is linked with the presence of internalizing disorders, while high ACE exposure in linked with externalizing disorders.
5. Girls with internalizing disorders who experienced various forms of abuse are at greater risk of suicide attempts and self-injuries, regardless of the number of ACEs.
6. Children and adolescents, especially boys with neurodevelopmental disorders and externalizing disorders are more exposed to the greater number of adverse childhood experiences and psychiatric comorbidities.
7. Greater number of hospitalizations and psychiatric diagnoses is observed in boys who experienced various forms of abuse and high ACE exposure.
8. The number of ACEs has no impact on the risk of self-injuries and suicide attempts in children and adolescents with the experience of abuse.