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## The impact of early life stress on risk of tobacco smoking initiation by adolescents

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**BACKGROUND:** Early life stress is known to be associated with increased propensity to substance abuse. The present study seeks to confirm the association between early life stress and tobacco smoking initiation by adolescents.

**METHODS:** This study is based on the data of the Family and Children of Ukraine Study, which is a part of the cohort study in Europe for pregnancy and childhood "ELSPAC". Main exposures were stressful life event scores at 3 and 7 years that were calculated by summing the perceived impact score reported by mothers for each life event. Smoking status of the adolescent and age of smoking initiation, reported at the 16-years-old follow-up, were outcome measures. Data were analyzed using multivariate binary logistic regression models separately for boys and girls controlling for socio-demographic characteristics and mother's smoking.

**RESULTS:** Stressful life events score was available for 898 participants at age 3 years and for 840 participants at age 7 years and varied from 0 to 48 points, with mean equal 4.69 and 5.96 respectively. In the gender-stratified analysis, current smoking by boys or girls was not associated with early life stress measured at 3 years old. Association between smoking and early life stress at age 7 years was not observed for boys. However, girls who experienced much stress at 7 years (more than 12 points) had 3 times higher odds of smoking (OR=2.94, 95% CI=1.26-6.83).

Girls who had scored more than 12 points for stressful life events at 3 or 7 years old were re-

spectively three times (OR=3.34, 95% CI=1.50-7.42) or two times (OR=2.19, 95% CI=1.01-4.74) more likely to start smoking at 13 years old or younger.

**CONCLUSIONS:** Early life stress may have effect on vulnerability to tobacco smoking by adolescents. However, this effect was significant only for girls at high incidence of stressful life events.

**KEY WORDS:** early life stress, smoking, adolescents.

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## Влияние стресса в ранний период жизни на риск начала курения подростками

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**КЛЮЧЕВЫЕ СЛОВА:** стресс в ранний период жизни, курение, подростки.

## **Вплив стресу у ранній період життя на ризик початку куріння підлітками**

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