

Editorial



Environmental Tobacco Smoke Can Be an Important Risk Factor for Children's Behavioral Problems, and Policies to Reduce Exposure Are Urgently Required

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► See the article “Environmental Tobacco Smoke Exposure at Home and Attributable Problem Behaviors in Korean Children and Adolescents for 2012–2014 in a Nationally Representative Survey” in volume 33, e229.

Exposure to environmental tobacco smoke (ETS) kills > 800,000 people per year worldwide and is a cause of many health problems, including middle ear infection, respiratory symptoms, impaired lung function, lower respiratory illness, and sudden infant death syndrome, in children.¹ Self-reported ETS exposure during 2012–2014 among children aged 3–5 years and 12–18 years in Korea was 20%, and 39%, respectively.² Actual exposure rates may be higher than self-reported rates considering the under-reporting of ETS exposure.³ Furthermore, ETS exposure may be declining in children because the smoking prevalence among Korean adults has decreased, and knowledge regarding the hazards of smoking has improved. However, quite a large proportion of Korean children are still exposed to ETS at home.

ETS exposure among children and adolescents is associated with mental health problems including major depressive disorder, anxiety, attention deficit/hyperactivity disorder (ADHD), conduct disorder, and learning disorders,^{3,4} although causality is not definitively established. Some child behavioral problems often continue into adulthood and throughout lifetime. Moreover, children's ETS exposure is more prevalent in families with lower socioeconomic status, which should contribute to socioeconomic inequalities of health.⁵

In the current issue of this journal, Yang et al.² reported a positive association between self-reported ETS exposure of Korean children at home and behavioral problems. The authors also estimated the contribution of ETS to the total child behavioral problems based on the Korean Environmental Health Survey in Children and Adolescents.² Problematic behaviors among children with ETS exposure are positively associated with increasing age, suggesting the cumulative effect of ETS exposure population-attributable fraction (PAF) of ETS exposure that contributed to problematic behaviors of children was estimated to be 11% for 12–18-year-olds in this study. In a US study that used cotinine as a marker of ETS exposure, as well as different definitions of diagnosis, PAF was 3.6% for conduct behavior disorder, 5.9% for ADHD, and 8.2% for learning disabilities.⁶ This could be due to higher ETS exposure among children in Korea than in US, resulting from the high smoking prevalence of men and permissive attitude to smoking at home.

The mechanisms by which ETS exposure may cause poor mental health are unknown. However, nicotine seems to play a role during brain development in fetuses and children. Novel tobacco products, such as electronic cigarettes and heat-not-burn cigarettes, which are promoted as “less hazardous tobacco products” by tobacco companies, contain nicotine amounts that are comparable to conventional cigarettes and may be as hazardous as conventional cigarettes.

The best way to reduce ETS exposure among children is to strengthen comprehensive tobacco control policies, including raising tobacco tax, banning tobacco in indoor public places, banning tobacco advertisements, conducting anti-tobacco campaigns, and treating tobacco use. Home is a private place where restricting smoking is very difficult; however, addressing the issue of smoking at home as a means to protect children's health is urgently required.

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