

Smoking among Youth in East Timor-Leste: What are the Dynamics?

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In this issue of *Indian Pediatrics*, Siziya and colleagues(1) describe the prevalence and correlates of cigarette smoking among adolescents in Timor-Leste, a country facing the double burden of communicable and noncommunicable disease. In doing so, the investigators aim to identify possible factors amenable to intervention to reduce the high prevalence of smoking ($\approx 40\%$) among adolescents in Timor-Leste. The authors note that the close proximity to Indonesia, where smoking prevalence is also very high (current smoking: prevalence among boys aged 13-15 years, 24% [2006 data]; prevalence among boys and men aged >15 years, 63% [2004])(2), and “prolonged periods of liberation fighting” within Timor-Leste that displaced populations and damaged the (public) health infrastructure are potential underlying factors that challenge efforts to reduce the prevalence of smoking in the country.

The high prevalence of smoking observed among adolescents, coupled with the recent social unrest and violent conflict Timor-Leste endured during 1999 following independence from Indonesia and during 2006 as the result of fighting between pro-government and Falintil troops, provides an opportunity for further discussions about factors affecting youth tobacco use.

The lasting effects of violence and social disruption that the youth of Timor-Leste have endured may well play a role in the high prevalence of smoking. Mental health problems can be a consequence of such experiences - and cigarettes are a vehicle for a potent psychoactive agent (nicotine) that can relieve symptoms of depression and anxiety(3). Persons with symptoms of depression are

more likely to be smokers and, when followed up over time, are less likely to quit(4). The use of cigarettes by the youth of Timor-Leste thus may reflect the conscious or unconscious use of nicotine to regulate disturbances in affect that accompany exposure to violence.

Exposure to traumatic stress during childhood (adverse childhood experiences) has been shown to have an important relationship to smoking. As the number of adverse childhood experiences increases, the likelihood of becoming a regular smoker by age 14 increases, as does the risk of continuing to smoke into adulthood(5). Therefore, persons exposed to adverse childhood experiences may benefit from using nicotine to regulate their mood(3,5). For such persons, attempts to quit may remove nicotine as their pharmacologic coping device for the negative emotional, neurobiological, and social effects of adverse childhood experiences. That is to say, nicotine appears to be a sufficiently effective psychoactive agent that unconscious selection of its use could occur in situations of acute and chronic traumatic stress, such as has occurred in Timor-Leste(3-5).

The public health problem of smoking in Timor-Leste is complex and requires broad-based understanding of several major factors that influence the use of cigarettes. The counterintuitive finding that youth reporting the highest exposure to anti-tobacco messages had higher prevalences of smoking is puzzling. However, these same youth may also have been more likely to have been exposed to greater peer pressure and to more of the marketing practices of the tobacco industry(6). Before concluding that anti-smoking messages may

have had unintended consequences, investigators need to take a deeper look into confounding factors that may explain this finding.

Anti-smoking campaigns need to be strengthened and sustained. Furthermore, problems with affect regulation, socialization, and self-esteem may make the youth of Timor-Leste more likely to respond to the marketing of cigarettes by experimenting with cigarettes and becoming regular smokers. Insight into the basic underlying factors that lead to smoking during adolescence and adulthood, whether they be depression, anxiety, or social and developmental impairments, is needed. Use of nicotine by youth whose mental health and sense of well-being have been disrupted by adverse childhood experiences, including violence and social unrest, needs to be addressed.

Anti-smoking campaigns should be augmented by services that help the youth of Timor-Leste overcome the effects of traumatic stress for which the use of psychoactive substances such as nicotine may be a natural consequence. Understanding the burden of smoking and potential linkages with childhood exposure to violence and traumatic stress is a challenge, owing to inadequate data in this emerging field of inquiry. Investment is needed in information systems for monitoring trends in smoking, traumatic stressors such as adverse childhood experiences, and other root causes of chronic diseases(7).

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