



# Electronic Cigarette Use Among Rural Taiwanese adolescents and its associated factors

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## Background and objective

Electronic cigarettes (e-cigarettes) have emerged as a novel tobacco product in recent years, with a rising prevalence of usage among adolescents in Taiwan. They have become one of the primary tobacco products used by youth. Adolescence is a critical period characterized by rapid physical, psychological, and cognitive development. Thus, continuous monitoring of adolescent tobacco product usage is imperative. Additionally, there is a need to design and provide meaningful health education programs tailored to the specific needs of adolescents to steer them away from the harms associated with tobacco use.

## Method

This study adopted a cross-sectional design. Data collection took place from September 2022 to November 2022 in three rural schools located in southern Taiwan. A total of 282 adolescents participated in the study, with consent forms completed by both the adolescents and their guardians.

## Results

The prevalence of e-cigarette use among rural Taiwanese adolescents was 9.9% (12.7% for males and 6.5% for females). The primary reasons for using e-cigarettes were peer influence (34.8%) followed by preference for flavors (26.1%). Factors influencing e-cigarette use included lack of discouragement from family members who smoke (OR=3.47), weekly allowance exceeding NT\$2000 (OR=9.48), and lower perception of tobacco harm (OR=0.88).

## Conclusions/lessons learned

Compared to the e-cigarette usage among Taiwanese adolescents in 2021, the situation among rural adolescents appears more severe. Tobacco control among adolescents is a crucial aspect of overall tobacco control efforts, particularly in rural areas where medical resources are limited. It is imperative to implement and promote tobacco control programs in communities and schools through health promotion hospitals, tailored to address factors influencing e-cigarette use, thus aiding rural adolescents in avoiding the harms of tobacco.

**Table 1. Factors Influencing E-cigarette Use**

Predictor Variable	OR	p-value	95% CI
<b>Constant</b>	0.27	0.54	
<b>Would Discourage Family Members from Smoking</b>			
No (Reference Group)	3.47	<0.01	1.38-8.76
Yes			
<b>Monthly Allowance</b>			
2000 NTD or more	9.48	0.04	1.05-85.43
Less than 2000 NTD (Reference Group)	4.78	0.14	0.59-38.63
None			
<b>Awareness of Tobacco Hazards Score</b>	0.88	0.05	0.77-1.00
<b>Exposed to Secondhand Smoke at Home in the Past Week</b>			
Yes (Reference Group)	1.04	0.94	0.27-3.90
No			
<b>Has Friends Who Use Cigarettes or E-cigarettes</b>			
Yes (Reference Group)	2.04	0.13	0.80-5.18
No			
<b>Family Member Smokes</b>			
Yes (Reference Group)	1.07	0.93	0.21-5.29
No			

