



Factors Associated with Cigarette Smoking Among Young Military Conscripts in Taiwan

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Introduction

- Substantial evidence has shown that *cigarette smoking* is a leading cause of morbidity and mortality in chronic diseases such as cardiovascular disease, cancer and chronic obstructive pulmonary disease.
- In the literature, age, education level, area of residence, time served in the military, parental education level, potential risk factors associated with cigarette smoking.
- *The use of alcohol, betel-nut chewing, and cigarettes* contribute to substantial health risks and are often used concurrently among adults.
- **The purpose of this study was to identify the most important risk factors that influence smoking among military conscripts in Taiwan.**

Material and Methods

- ***Study sample-*** A cross-sectional survey, military conscripts in the southern and eastern regions of Taiwan, Aug 1 - Dec 31, 2001, **3,617 young adult conscripts**, served more than 1 month.

Methods

- ***Statistical analysis-*** We conducted χ^2 tests for each characteristic (e.g. age, education level, etc.) to evaluate the impact of each factor on cigarette smoking status, *multivariate logistic regression analyses* to assess which factors could best predict cigarette smoking behavior among young adults in Taiwan.

Results

- 3,569, male, mean age of 22 ± 2 years.
- Overall, the prevalence of current cigarette smokers was 51.3% among young adults in Taiwan.
- Smoking was significantly associated with age, education level, region of residence, and time served in the military (all $p < 0.05$).
- Multivariate logistic regression indicated that the factors most significantly associated with smoking behavior of young adults were: *education level, betel-nut chewing, alcohol drinking, parents' attitude toward smoking, proportion of peers who currently smoked, and peer attitude toward smoking.*

Table 1. General characteristics and cigarette smoking status of 3,569 young military conscripts in Taiwan*

	Nonsmoker (n = 1,715)	Past smoker (n = 24)	Current smoker (n = 1,830)	χ^2 test
→ Age (yr)				211.3 [†]
≤ 20	406 (37.0)	8 (0.7)	685 (62.3)	
21	566 (43.0)	10 (0.8)	739 (56.2)	
22	259 (56.8)	2 (0.4)	195 (42.8)	
23	199 (65.2)	2 (0.7)	104 (34.1)	
≥ 24	285 (72.3)	2 (0.5)	107 (27.2)	
→ Education level				501.7 [†]
≤ Junior high school	124 (19.1)	4 (0.6)	523 (80.3)	
Senior high school	898 (45.2)	16 (0.8)	1,072 (54.0)	
College	355 (68.7)	2 (0.4)	160 (30.9)	
≥ University	338 (81.4)	2 (0.5)	75 (18.1)	
→ Region of residence in Taiwan				12.9 [†]
Northern	304 (54.5)	4 (0.7)	250 (44.8)	
Middle	204 (47.7)	3 (0.7)	221 (51.6)	
Southern	1,130 (47.0)	15 (0.6)	1,258 (52.4)	
Eastern	77 (42.8)	2 (1.1)	101 (56.1)	
→ Time served in military (mo)				24.1 [†]
1–6	264 (43.2)	6 (1.0)	341 (55.8)	
7–12	599 (49.2)	7 (0.6)	612 (50.2)	
13–18	534 (53.1)	5 (0.5)	467 (46.4)	
> 18	318 (43.3)	6 (0.8)	410 (55.9)	
→ Betel-nut chewing status				690.1 [†]
No	1,688 (58.9)	20 (0.7)	1,159 (40.4)	
Yes	27 (3.8)	4 (0.6)	671 (95.6)	
→ Alcohol drinking status				272.6 [†]
No	1,643 (53.6)	21 (0.7)	1,399 (45.7)	
Yes	72 (14.2)	3 (0.6)	431 (85.2)	

*Data presented as n (%); [†]p < 0.05.

Table 2. Characteristics of the family and peers of 3,569 young military conscripts in Taiwan*

	Nonsmoker (n=1,715)	Past smoker (n=24)	Current smoker (n=1,830)	χ^2 test
→ Father's education level				35.9 [†]
≤ Elementary school	692 (44.5)	13 (0.8)	851 (54.7)	
Junior high school	393 (46.0)	4 (0.5)	457 (53.5)	
Senior high school	427 (51.9)	5 (0.6)	391 (47.5)	
≥ College or above	203 (60.4)	2 (0.6)	131 (39.0)	
Mother's education level				8.2
≤ Elementary school	882 (47.0)	12 (0.7)	981 (52.3)	
Junior high school	412 (46.7)	7 (0.8)	463 (52.5)	
Senior high school	340 (50.7)	4 (0.6)	326 (48.6)	
≥ College or above	81 (57.0)	1 (0.7)	60 (42.3)	
→ Father's smoking status				60.4 [†]
No	784 (56.0)	5 (0.4)	610 (43.6)	
Yes	931 (42.9)	19 (0.9)	1,220 (56.2)	
→ Mother's smoking status				12.4 [†]
No	1,624 (48.8)	23 (0.7)	1,679 (50.5)	
Yes	91 (37.5)	1 (0.4)	151 (62.1)	
→ Father's attitude towards son's smoking				360.2 [†]
Does not approve	1,133 (62.9)	10 (0.6)	657 (36.5)	
Approve	32 (14.1)	3 (1.3)	192 (84.6)	
No comment	550 (35.7)	11 (0.7)	981 (63.6)	
→ Mother's attitude towards son's smoking				246.7 [†]
Does not approve	1,393 (56.2)	17 (0.7)	1,067 (43.1)	
Approve	10 (7.7)	1 (0.8)	118 (91.5)	
No comment	312 (32.4)	6 (0.6)	645 (67.0)	
→ Percentage of peers who smoke				317.4 [†]
Less than half	427 (79.6)	3 (0.6)	106 (19.8)	
About half	470 (53.8)	7 (0.8)	397 (45.4)	
More than half	818 (37.9)	14 (0.6)	1,327 (61.5)	
→ Peer attitudes toward subjects' smoking				252.4 [†]
Do not approve	556 (71.3)	8 (1.0)	216 (27.7)	
Approve	103 (28.2)	2 (0.6)	260 (71.2)	
No comment	1,056 (43.6)	14 (0.6)	1,354 (55.8)	

*Data presented as n (%); [†]p < 0.05.

Conclusion

- From this study, we found that **education level, betel-nut chewing, alcohol intake, smoking behavior of peers, and the attitudes of parents and peers** toward smoking are all associated with the risk of a young adult conscript **becoming a habitual cigarette smoker**.
- These results provide insight for targeting critical risk factors in helping these individuals control or cease their cigarette smoking habit in the future.