

Factors associated with tobacco use among adolescents: the role of parents, peers, attitudes and skills

Emina Mehanovic (1,2), Federica Mathis (2), Romeo Brambilla (1,2), Chiara Benevenuta (1,2),
Serena Vadrucci (3), Martina Bonino (4), Federica Vigna-Taglianti (1,2)

1. Department of Clinical and Biological Sciences, University of Torino, 2. Piedmont Centre for Drug Addiction Epidemiology (OED), ASL TO3,
3. S.C. Centro Controllo Malattie, ASL TO1, 4. Nursing School, University of Torino

INTRODUCTION

Tobacco use among adolescents represents a major public health problem. Smoking initiation can be influenced by several factors such as peer smoking, social influences, individual risk conditions, parental tobacco smoking and related behaviors.

OBJECTIVES

The purpose of this study is to investigate risk factors for adolescent lifetime tobacco use and to evaluate differences by gender and socio-economical status.

METHODS

This is a secondary analysis of the baseline survey of the EU-Dap (European Drug Addiction Prevention) randomized controlled trial. The analytical sample included 12-14 years old students from seven European countries who participated in the baseline survey of the trial and answered the questions investigating lifetime smoking. Socio-demographic characteristics, friends' substance use, knowledge, attitudes and beliefs toward substances, risk perceptions, refusal and decision making skills, self-esteem, family factors, parental tobacco smoking and permissiveness were studied as risk factors for lifetime tobacco use through a forward multivariate logistic regression model.

Factors associated with lifetime tobacco smoking, by gender and SES: multivariate logistic regression model (Adjusted ORs)

Characteristic	Overall sample (n=6,041)	Boys (n=3,112)	Girls (n=2,929)	High SES schools (n=2,097)	Middle SES schools (n=1,929)	Low SES schools (n=2,015)
Boys	1.29 (1.12-1.49)	-	-	1.59 (1.23-2.07)	1.24 (0.96-1.60)	1.08 (0.84-1.39)
Age 13 vs <=12	1.71 (1.39-2.11)	1.87 (1.41-2.48)	1.53 (1.12-2.09)	2.06 (1.39-3.06)	1.64 (1.17-2.31)	1.61 (1.12-2.33)
Age >=14 vs <=12	1.96 (1.59-2.42)	2.36 (1.77-3.14)	1.56 (1.14-2.15)	2.12 (1.41-3.18)	1.77 (1.24-2.51)	2.32 (1.61-3.36)
Middle school area SES	1.22 (1.02-1.45)	1.11 (0.87-1.42)	1.31 (1.02-1.68)	-	-	-
Low school area SES	1.33 (1.12-1.58)	1.15 (0.91-1.45)	1.53 (1.17-2.00)	-	-	-
Living with one parent vs both parents	1.44 (1.14-1.82)	1.36 (0.97-1.91)	1.50 (1.08-2.09)	1.80 (1.21-2.67)	1.50 (0.97-2.32)	1.19 (0.80-1.77)
At least one parent smoking	1.42 (1.23-1.64)	1.34 (1.10-1.62)	1.50 (1.21-1.87)	1.23 (0.96-1.59)	1.33 (1.03-1.72)	1.63 (1.27-2.08)
Bad family relationships	1.30 (1.12-1.52)	1.15 (0.93-1.41)	1.48 (1.17-1.86)	1.46 (1.12-1.91)	1.40 (1.06-1.85)	1.08 (0.83-1.40)
Low connectedness with parents	1.24 (1.02-1.51)	1.31 (1.01-1.71)	1.12 (0.83-1.51)	1.17 (0.82-1.68)	1.55 (1.09-2.21)	1.08 (0.78-1.49)
Parents wouldn't allow to smoke at home	1.43 (1.15-1.79)	1.65 (1.21-2.24)	1.23 (0.88-1.71)	0.96 (0.65-1.43)	1.48 (0.98-2.23)	2.07 (1.40-3.06)
Parents would allow to smoke	1.03 (0.75-1.42)	1.13 (0.72-1.76)	0.90 (0.56-1.43)	1.00 (0.53-1.90)	1.05 (0.60-1.85)	1.18 (0.71-1.95)
Friends using tobacco						
Less than half/about half vs none	2.50 (2.10-2.97)	2.21 (1.75-2.79)	3.06 (2.34-4.00)	2.93 (2.15-3.98)	2.43 (1.79-3.30)	2.38 (1.75-3.23)
More than half/all vs none	3.79 (2.95-4.86)	3.40 (2.41-4.82)	4.34 (3.01-6.28)	4.98 (3.05-8.14)	2.83 (1.79-4.49)	3.88 (2.62-5.75)
Friends using cannabis						
Less than half/about half vs none	1.06 (0.82-1.36)	0.89 (0.63-1.25)	1.33 (0.90-1.97)	1.15 (0.74-1.80)	1.41 (0.87-2.30)	0.75 (0.49-1.14)
More than half/all vs none	1.14 (0.72-1.82)	1.48 (0.79-2.78)	0.83 (0.42-1.66)	1.23 (0.45-3.33)	1.72 (0.71-4.13)	0.90 (0.46-1.75)
Low respect for teacher	1.68 (1.40-2.01)	1.66 (1.31-2.11)	1.72 (1.30-2.27)	2.47 (1.78-3.42)	1.55 (1.13-2.11)	1.44 (1.05-1.97)
High positive attitudes toward drugs	1.36 (1.14-1.63)	1.45 (1.15-1.84)	1.28 (0.96-1.70)	1.36 (0.99-1.87)	1.25 (0.90-1.72)	1.48 (1.09-2.02)
Low negative beliefs vs tobacco	2.11 (1.82-2.46)	2.09 (1.71-2.56)	2.19 (1.73-2.76)	2.46 (1.86-3.25)	2.07 (1.58-2.72)	1.98 (1.54-2.55)
Low risk perception on smoking occasionally	1.38 (1.12-1.70)	1.50 (1.12-2.01)	1.31 (0.97-1.79)	1.79 (1.26-2.54)	1.03 (0.70-1.53)	1.34 (0.93-1.94)
Slight risk perception on smoking more packs/day	1.11 (0.85-1.45)	0.95 (0.66-1.37)	1.30 (0.87-1.92)	0.87 (0.53-1.43)	1.36 (0.86-2.16)	1.20 (0.76-1.87)
Low risk perception on using marijuana occasionally	1.75 (1.31-2.35)	1.55 (1.04-2.32)	2.08 (1.34-3.23)	1.82 (1.15-2.89)	1.63 (0.92-2.88)	1.60 (0.92-2.77)
Low self-esteem	1.20 (1.01-1.44)	1.28 (1.03-1.60)	1.12 (0.83-1.50)	1.54 (1.13-2.11)	0.98 (0.71-1.34)	1.19 (0.88-1.60)
Low tobacco refusal skills	6.09 (5.08-7.30)	5.74 (4.41-7.49)	6.55 (5.08-8.45)	5.67 (4.09-7.86)	7.04 (5.04-9.85)	5.83 (4.31-7.88)
Low decision making skills	1.22 (1.05-1.42)	1.34 (1.09-1.64)	1.10 (0.88-1.38)	1.38 (1.06-1.79)	1.13 (0.87-1.48)	1.22 (0.93-1.59)

RESULTS

Low refusal skills toward tobacco use were the strongest predictor of lifetime smoking, followed by having friends who smoke. One-parent household, parental smoking, parental permissiveness to smoke out of home, bad family relationship and low connectedness with parents proved to be associated with adolescent smoking. Wrong risk perceptions and beliefs, negative self-esteem, positive attitudes toward substances, negative decision making skills and low respect for teachers were also significantly associated with tobacco use. Differences by gender and socio-economic status were observed.

CONCLUSIONS

Forthcoming prevention programs should address the identified factors in order to prevent smoking initiation.

