

Do Physically Active Young Adults Use Waterpipe?

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Context

- Waterpipe smoking has increased recently in North America, especially among youth.
- The content and packaging of waterpipe tobacco is not currently regulated by the Canadian Food Inspection Agency (WHO, 2006).
- Similar to cigarette smoke, waterpipe smoke contains harmful constituents (Maziak 2011).
- Waterpipe use has been linked to lung cancer, heart disease, infectious diseases, and pregnancy-related complications (Maziak 2011).
- A single waterpipe session may be equivalent to smoking 2-100 cigarettes (WHO 2005; Neergaard 2007).
- Athletes may use waterpipe because of the perception that waterpipe use is less harmful than cigarette smoking (Primack, 2010).
- However, few studies have investigated the association between waterpipe use and indicators of physical activity in youth.

Objective

- To examine the association between waterpipe use and physical activity indicators in young adults.

Methods

Participants

- Data were drawn from the Nicotine Dependence in Teens (NDIT) Study, a prospective longitudinal cohort investigation of 1293 grade 7 students recruited in 10 secondary schools in Montreal (Canada) in 1999.
- Data were available for 880 participants aged 18-24 years who completed mailed self-report questionnaire in 2007-08.

Variables

- Dependent variable: waterpipe use in the past year (yes/no).
- Independent variables: team sports participation (yes/no) and meeting adult moderate/vigorous physical activity (MVPA) guidelines of ≥ 150 minutes/week (yes/no) (WHO 2010).

Analysis

- Logistic regression analyses were performed to examine the likelihood of using waterpipe according to meeting MVPA guidelines and participating in team sports, controlling for covariates.

Results

- 24% of participants used waterpipe in the past year.
- 47% of participants met MVPA guidelines.
- 24% of participants participated in team sports.
- Univariately,
 - the association between waterpipe use and meeting MVPA guidelines was marginally statistically significant.
 - similarly the association between waterpipe use and team sports was marginally statistically significant
- Multivariately,
 - those who participated in team sports were statistically significantly less likely to use waterpipe in the past year.
 - there was no statistically significant difference in waterpipe use between those who met MVPA guidelines and those who did not.



Table 1. Past year waterpipe use by selected characteristics of study participants. NDIT 2007-08

	n*	Past year waterpipe use	
		%	p-value
Age, y			
18-19	244	25	0.52
20	484	24	
21-24	150	20	
Sex			
Female	476	21	0.04
Male	402	26	
Language			
French	279	19	0.03
English	460	27	
Other	129	21	
Lives with parents			
No	200	27	0.11
Yes	667	23	
White			
No	183	20	0.14
Yes	693	24	
Annual household income, CAN\$			
<30 000	275	19	0.04
30 000-99 000	238	22	
$\geq 100 000$	169	30	
Currently in school			
No	282	21	0.09
Yes	596	25	
Employed			
No	199	28	0.05
Yes	679	22	
Met MVPA guidelines			
No	452	22	0.08
Yes	413	26	
Participated in team sports			
No	668	25	0.06
Yes	208	19	

*Totals differ because of missing data

Table 2. Adjusted odds ratios (OR) and 95% confidence intervals (CI) for past year waterpipe use. NDIT 2007-08.

		OR _{adj} * (95% CI)
Met MVPA guidelines	No	Ref
	Yes	1.29 (0.91, 1.81)
Participated in team sports	No	Ref
	Yes	0.63 (0.41, 0.95)

*Adjusted for age, sex, language, living with parents, ethnicity, annual household income, being in school, and employed.

Reflections

- The inverse association between team sports and waterpipe use may relate to:
 - psychosocial benefits related to participating in team sports such as higher self-esteem, which in turn may protect against waterpipe use.
 - individuals who participate in team sports may have greater respect for personal health.
 - group norms inherent in team sports may protect against waterpipe use.
 - individuals who participate in team sports may have less time to engage in waterpipe use because of training schedules.
- Parents should encourage their children to participate in team sports. In addition to many other benefits, team sports may protect against waterpipe use.