



# Tobacco Use and Smoking in Israel: Youth and Young Adults

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## Abstract

**Purpose of the Review** Tobacco smoking is a major cause of death and disease. In Israel, it has been reported that 22.7% of the population aged 18 and over smoke, mostly using cigarettes. Another smoking method is through a water pipe called hookah or nargila. This paper reviews recent studies of tobacco use among Israeli youth and young adults as well as research conducted by the Ben Gurion University, Regional Alcohol and Drug Abuse Research Center.

**Recent Findings** Study findings evidence high rates of smoking linked to being male, secular, non-Israeli origin, and school dropout. Hookah use may be a “gateway” to cigarette smoking. Youth and young adults reported they believe smoking prevention programs are not effective and do not have a noticeable effect on smoking-related attitudes and behavior. Motivation, peer-supported activities in school and the community, and family factors have been found to be important for possible smoking cessation.

**Summary** This article suggests multiple factors be considered, organized, and sustained to promote smoking cessation.

**Keywords** Smoking · Gender · School youth · Dropouts · Ethnicity · Religiosity · University students · Israel

## Introduction

### Smoking in Israel

Tobacco use is a preventable cause of death and disease [1–3]. It is linked to low levels of education, religiosity, academic achievement, and other factors [4, 5, 6]. In Israel, the Ministry of Health reports 22.7% of the population aged 18 and over smoke; about 50% of those smoking use 10–20 cigarettes daily [7]. Among high school age youth, 20% report smoking tobacco—mostly cigarettes but water pipes as well (i.e., hookah, nargila). About 50% of these youth believe hookah use is healthier than smoking cigarettes [7, 8], unaware that the health dangers of cancer as well as cardiovascular and lung disease (e.g., emphysema and chronic bronchitis) persist regardless of the smoking method [9].

Israeli schools exist based on religion and religiosity. The main ones are as follows: state secular (mamlachti) attended by the majority of children and youth; state religious (mamlachti dati) that emphasizes Jewish studies, tradition, and observance; independent religious (chinuch atzmai); Arab with instruction in Arabic; and, private programs. Males and females learn together in the secular schools. However, other schools have varying degrees of gender separation based on level of religiosity [10]. Secular students in Israel have been shown to have a higher prevalence and frequency of smoking than conservative or religious students [9].

Males tend to smoke more than females [4]; however, the difference is diminishing and, because of perceptions of enhancing popularity and social acceptance, more young females are using hookah [11–13]. Factors that increase the risk of smoking among youth and young adults are broadly similar regardless of gender status. They include tobacco industry marketing, easy access to tobacco products, low prices, peer pressure, approval by parents, siblings, and peers, and the perception that smoking enhances social acceptance, body image, and weight loss [4, 14–16].

Most information about tobacco use among Israeli youth is collected from those enrolled in school. However, such information does not reflect the extent of smoking by high-risk youth with learning and/or behavioral problems who attend

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alternative schools, or are truants or dropouts [17]. Approximately one fifth (i.e., 19.5%) of the country's youth who should be in the 12th grade are not attending school. Non-attendance rates are even higher for Jewish-orthodox (i.e., Haredi) teens that reject modern secular culture—45.7%; Bedouin-Arabs residing in the southern part of the country (the Negev region)—36.2%; Arabs (not Bedouin)—19.7% and those residing in East Jerusalem—36% [18]. Studies show that the current tobacco smoking prevalence is 84% among school dropouts in treatment for addiction; 65% of those referred to probation services due to delinquent activity; 29% in alternative schools due to learning difficulties or behavior problems [4, 19, 20]; and, about 12% of those in high school [7]. Considerable concern has been raised about the extent of smoking behavior among young adults, especially those engaged in the national service (e.g., Israel Defense Forces) [21].

Israel has a strong public health system. To combat tobacco use, there is a sales tax policy, restrictions on advertising products, smoke-free air laws, and government-subsidized smoking cessation services [22]. Despite the high prevalence of smoking among youth in Israel, treatment services for them are limited. Most community-based health clinics do not have the ability to respond to need—there is a lack of formal professional training among health care workers available for tobacco use treatment, and youth under the age of 18 wanting treatment must have written parent approval before receiving service [4, 23].

The purpose of this article is to share information gathered about tobacco use and tobacco use prevention and cessation among youth and young adults in Israel. Quantitative and qualitative findings are provided including information collected during stressful events (i.e., the 2014 war with Gaza and Jerusalem area confrontations). Such findings and recommendations have relevance to policy and smoking cessation efforts on national and international levels.

## Methods

**About the RADAR Center** The Ben Gurion University (BGU), Regional Alcohol and Drug Abuse Research (RADAR) Center was established in 1996 in response to the need for training, education, and research about harmful substance use and behavior in the country. It has received recognition and awards from the US National Institute on Drug Abuse (NIDA), US Substance Abuse Mental Health Services Administration (SAMHSA), US Agency for International Development (USAID), United Nations Office on Drugs and Crime (UNODC), government and non-government agencies, and universities worldwide. The RADAR Center has had a major role, along with the Institute for Health Promotion and Disease Prevention Research and Department of Preventive Medicine, University of Southern California, Los Angeles, in

promoting smoking cessation in the Middle East through a culturally modified version of Project EX [4].

## Instruments

The data collection instruments used for the quantitative reported results are the Substance Use Survey Instrument (SUSI) and the Global Youth Tobacco Survey (GYTS) Instrument. SUSI was developed by the BGU-RADAR Center in consultation with international experts including those from the World Health Organization (WHO). The WHO and US Centers for Disease Control and Prevention (CDC) use the GYTS as its data collection mechanism for the Global Tobacco Surveillance System.

## Focus Group Protocol and Questions

The RADAR Center uses qualitative focus group research methods to collect information about perceptions, opinions, beliefs, and attitudes toward tobacco use and related issues of concern. Data were collected from nine focus groups involving 93 youth at risk, primarily from the Negev region. The focus group sessions were held between February 2015 and March 2016. The focus groups included Jewish and Arab participants—females (66%) and males (34%), between the ages of 15 and 20.

The youth involved tended to have learning difficulties at school leading to dropout, problem behavior including unprotected sexual activity, substance use, and conflict with family members. A significant portion of the youth interviewed were first- or second-generation immigrants mostly from the former Soviet Union (e.g., Russia and the Ukraine) who have been exposed to repeated missile attacks since 2008. Such exposure has been linked to a range of problem behavior including mental health and substance use [24–29].

Each group session lasted between 1 and 1.5 h and was moderated by two trained Ben Gurion University graduate social work students with training in focus group methodology, especially for high-risk youth. In each group, one student was in charge of leading the session (i.e., moderator) and the other one was in charge of recording and taking notes (non-verbal communication, etc.). At the end of each group session, the moderator and note taker had a preliminary discussion about the session. Later on, the recordings were transcribed by the students. The following questions were used:

## Habits and Behavior

- Did you ever try smoking?
- What is your daily schedule and habits?
- Did you ever take part in a smoking prevention project in the past?
- Did you ever try to stop smoking yourself?

- Did you succeed and why?
- What are your thoughts about smoking prevention among youth?

### About Regional Conflict (e.g., 2014 War with Gaza)

- Describe your daily schedule during the conflict.
- What ways did you use to cope with your stress?
- How did people in your environment cope with the stress?
- Did you notice any change in your tobacco use/smoking during the conflict?

### Analysis

For the quantitative data presented in this paper, description statistics, chi-square test, *t* test, and one-way ANOVA were performed using SPSS, version 22. Focus group protocols were analyzed using a phenomenological approach to understand respondents' viewpoints and their ways of explaining them [30]. The analytic process was tri-leveled as suggested in previous literature [31]. Firstly, each protocol was read separately by each pair of students, with minimal interpretative digressions to portray the picture. Thereafter, various categories were named to correspond with the terminology used by

participants. Relationships between the categories were reviewed for predominance and marginality. Finally, each pair of students presented main themes identified in their group, and shared themes for the entire cohort were identified.

### Results

The median age of Jewish school youth studied ( $n = 537$ ) was 15.0 years, and, the average age of smoking initiation was 12.4 years. No gender difference was found among lifetime (44%) and last month (37%) smoking youth. Youth with secular status were more inclined than their religious counterparts to report lifetime (60.8%; 36.8%;  $p < 0.001$ ) and last-month smoking (52.4%; 27.8%;  $p < 0.001$ ).

The median age of school dropouts ( $n = 867$ ) referred to residential substance use treatment was 17.0 years, and, the average age of smoking initiation was 12.4 years. Among this study cohort, 99% reported lifetime and 68% last-month smoking. The median age of the university students studied ( $n = 711$ ) was 25.0 years. Current smoking was reported by 47% of all students—secular more than religious (51.6%; 34.8%;  $p < 0.001$ ).

Table 1 provides study group information about background characteristics and tobacco use.

**Table 1** Youth and young adult tobacco use

	Bedouin ( $n = 298$ )	Jewish ( $n = 537$ )	Dropouts ( $n = 867$ )	College/University ( $n = 711$ )
Age, mean (SD)	15.7 (1.2)	15.6 (1.3)	16.7 (1.1)	25.4 (4.0)
Gender	***	***	***	***
Male, $n$ (%)	151 (50.7)	408 (76.0)	588 (67.8)	149 (21.0)
Female, $n$ (%)	147 (49.3)	129 (24.0)	279 (32.2)	562 (79.0)
Religious status				
Secular, $n$ (%)	—	212 (40.1)	616 (71.0)	444 (63.9)
Religious, $n$ (%)		317 (59.9)	233 (26.9)	251 (36.1)
Age of smoking initiation, mean (SD)	12.9 (2.7)	12.4 (2.2)	12.4 (2.4)	—
Lifetime smoking, $n$ (%)	131 (44.6)***	236 (46.2)***	855 (99.0)***	—
Last-month smoking, $n$ (%)	78 (27.7)***	199 (37.6)***	545 (63.0)***	299 (40.7)***
Last-month smoking by gender, $n$ (%)	***	***	***	***
Male, $n$ (%)	62 (83.8)	153 (77.3)	363 (66.6)	45 (15.6)
Female, $n$ (%)	12 (16.2)	45 (22.7)	182 (33.4)	244 (84.6)
Last-month smoking by origin, $n$ (%)		***	***	***
Israel, $n$ (%)	—	70 (35.2)	***	191 (66.1)
Other countries, $n$ (%)		129 (64.8)	258 (47.4)	98 (33.9)
			286 (52.6)	
Last-month smoking by religious status, $n$ (%)		***	***	***
Secular, $n$ (%)	—	109 (55.6)	381 (70.9)	215 (75.7)
Religious, $n$ (%)		87 (44.4)	156 (29.1)	69 (24.3)

\*\*\* $p < 0.001$  ( $\chi^2$  test)

## Focus Group Findings

### Smoking Prevention Programs Impact

Most participants reported not remembering or receiving any smoking prevention intervention—“*I don't remember any of the school staff talking to us about smoking ... Maybe they did—but I don't remember. ... A few years ago we had a guest lecturer who's a former drug addict. He spoke about heroin addiction and his personal story. Maybe he'd said something about cigarettes but I don't recall.*”

Most participants were skeptical about the efficacy of smoking prevention programs. They believed if a youth wants to start smoking, he/she will not be affected by an “intervention” because of peer pressure or other reasons. “*There's nothing to do about it (smoking). Someone who wishes to smoke will not be affected by some school lessons. If you see your parents or your friends smoke, you'll want to be a part of that and teachers won't change it.*”

### Environment and Peer Influence

Participants believed key factors linked to smoking are the home environment and peers. They noted a youth with a family member who smokes is more likely to become a smoker. “*I began smoking long ago since all the girls in the middle school smoked. Everybody sat together and smoked during breaks and a girl who didn't ... didn't belong.*”

### Stressful Living Conditions (i.e., the 2014 Israel–Gaza War)

Lack of activities, boredom, and stress during times of regional conflict were reported to be factors that contribute to smoking—its initiation and continuation. “*The entire routine was turned upside down, we didn't have any summer break at all so we tried to enjoy as much possible. We hung out in Rita's home all day; our friends came over .... Since we were bored we smoked all the time, we lit cigarette after cigarette ... My parents didn't care where I was, so we hung around all day long in the shelter smoking and passing time.*”

Since many schools and work places were closed in 2014 because of regional conflict, focus group participants reported they spent more time with peers consuming psychoactive substances, including tobacco, alcohol, cannabis, and energy drinks. They reported such use became a learned and adopted process. “*We had nothing to do, we hung around friends' houses and smoked hookah. My mom wouldn't have allowed that, but I didn't ask her. We had a really good time; all my friends from the neighborhood came over and spent time with us .... I made a lot of new friends and joined many new (social media) groups.*”

“*My friends called and invited me to come smoke and drink (alcohol) with them, we were smoking, drinking and having a*

*good time, there were boys around and good vibes, overcoming distress*” .... “*I'd rather get hit by a missile than spend time with my mother! She was hysterical during the war and we were fighting the entire time. She pissed me off so badly, asking me to sleep in the shelter and be there the entire time ... all I wanted was to get out of the house.*”

“*I stared smoking joints with my cousin, I didn't know exactly what it was, it had a brown color (hashish) and she mixed it with her cigarette and rolled it again. Later on I was laughing so hard!*” ... “*I started smoking after the war began ... My mom caught me—I think she didn't kill me only because there was a war going on. She said “if you want to kill yourself—do it on your own expense, buy the cigarettes on your own. So I asked cigarettes from the boys.”*”

Increased smoking among family members was reported as well. “*My older sister who is 17 smoked much more. She smoked a bit before the war, but during the war, she smoked all the time. My parents were fighting with her for smoking at home, so she'd close her room's door and smoked. She's brave, I'd never dare smoke in the home (laughs)—that way I'll get busted by my mother.*”

### Smoking Hookah—a “Gateway” to Cigarettes

Hookah use is reported to be a “gateway” to cigarette smoking. Participants mentioned hookah use initiation at age 12 to 14. After smoking hookah for a while they reported feeling dissatisfied and moved to cigarettes for the simplicity of use. “*Everybody starts with a hookah when we sit together. It's fun and safer than cigarettes; it doesn't make you cough at all. We smoked hookah whenever we met and we got used to it being a part of the gathering*” .... “*We started with hookah and then when we saw someone smoking a cigarette we ask for one too... You can't go back to smoking hookah afterwards, it just doesn't satisfy you anymore.*” “*I quit smoking hookah when I had to smoke during working hours, and obviously I couldn't start the entire procedure (setting up the hookah) at work so I've switched to cigarettes.*”

### Smokers' Attitude

Participants believed smoking was a way to cope with stress, take a break, and/or look “cool” like famous rappers. “*When I smoke ... I look good and have the guts to say things I wouldn't normally say. I feel like I'm Wiz Khalifa (a famous rapper).*”

## Discussion and Conclusion

This article provides information about Israeli youth and young adult smoking attitudes and behavior. Also, it examines the impact of stressful living conditions on their smoking

behavior [24–26], as revealed by focus group findings that indicated smoking increased as a result of the Israel–Gaza war.

The findings reported are descriptive, and a number of limitations may affect the ability to generalize the results. Youth and young adults can be suspicious about information gathering especially when it involves problem behavior and as such may provide arbitrary or inconsistent responses [19, 27]. However, this concern is not believed to be relevant because of the acceptable status of tobacco use. Another possible study limitation is that data were collected primarily from one area of the country (i.e., the Negev) that may not be representative of youth and young adults living elsewhere.

The results obtained from the quantitative analysis and the perspectives of teenagers in the focus groups shed some light on what researchers may want to focus on going forward. Secular students were found to have significantly higher rates of lifetime and last-month smoking compared to their religious counterparts, and it is possible that students who identify with a religion have an increased sense of community attributable to their place of worship. They may also have older people in the religious community that abstain from smoking and, thus, set a good example for the students to abstain from smoking tobacco. School dropouts were particularly at risk for smoking, and 68% reported smoking in the last month. This could potentially lead back to what was also mentioned in the focus groups—that smoking sometimes arises out of boredom and as a way to cope with stress. School dropouts may benefit from community programs or activities that enable them to engage with others in a setting that does not tolerate smoking. Further research could examine the reasons behind differences in smoking status between religious and secular students and use those findings as a foundation for building a community-based smoking intervention.

We can see from the focus groups that preventing teens from smoking is not just about setting up the perfect smoking intervention program. Young adults are influenced by their peers and communities and smoke as a way to cure boredom, cope with stress, engage with others socially, and of course, to “look cool.” Hookah can be another way for teenagers to initiate a smoking habit, and eventually turn to cigarettes when the high from hookah is not enough. Hookah bars in Israel should strictly enforce age laws to avoid letting minors have access to tobacco at a young age, and future research could investigate if informing children and teenagers about the dangers of hookah has an effect on their perception of smoking hookah socially. In the US, only 8% of high school students reported last-month smoking [32], and this could be due in part to efforts of anti-tobacco campaigns to make smoking seem disgusting rather than cool; and as noted by teenagers in the focus groups, peer pressure and societal norms play a huge role in how young adults interact with tobacco. It is incredibly important to identify and recognize the many

factors that contribute to initiation and continuation of smoking among young adults.

Worldwide, smoking behavior tends to be shaped by cultural, economic, political, and other factors. In Israel, based on BGU RADAR Center experience and the information presented in this paper, an environmental brief intervention seems worthy of policy and program development consideration as a means of reducing tobacco use and, ultimately, its cessation among youth and young adults. The benefits of such intervention affect not only the smokers but also potentially their relations with family members, school, after school and community-based program personnel, employers, and others [29, 33, 34, 35].

Researchers may want to investigate the efficacy of what may be referred to as an eco-system approach. Specific short and long-term aims and intervention methods need to be identified, agreed on, and promoted by all involved. It involves action-targeting issues of tobacco availability, harm reduction, social norms including correcting misperceptions about health implications of smoking, tobacco pricing and marketing, as well as consistent enforcement and disciplinary actions resulting from violations of tobacco use policy and regulation. In theory, this sounds great; in reality, it is a major challenge to address when conflicting personal, professional, and economic interests are involved.

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## Compliance with Ethical Standards

**Conflict of Interest** Richard Isralowitz, Alexander Reznik, Itay Pruginin, and Maria Bolshakova declare that they have no conflict of interest.

**Human and Animal Rights and Informed Consent** This article does not contain any studies with human or animal subjects performed by any of the authors.

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