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One of several 'toys' for smoking: young adult experiences with electronic cigarettes in New York City

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Abstract

Objective—This qualitative research explores the use of electronic cigarettes and other similar 'vapor' delivery devices among young adults in New York City.

Methods—We employed 17 focus groups followed by 12 semistructured interviews to understand the beliefs, opinions and practices related to the use of electronic cigarettes among young adult smokers (N=87).

Results—Participants were mainly daily (52%) and non-daily (41%) smokers. While experimentation with electronic cigarette devices was frequently reported, participants related an overall lack of information about the devices and what they did know often reflected messages in e-cigarette marketing campaigns. Participants also used their own bodily sensations as a way to gauge potential risks and benefits of the products. Finally, young adults, steeped in a culture of personal technologies, perceived e-cigarettes as one more 'toy' among other technologies integrated into their everyday lives.

Discussion—E-cigarettes were also frequently used with other tobacco products, including conventional cigarettes. Our research indicates that public health campaigns may be needed to counter current industry marketing and inform the public that electronic cigarettes are currently unregulated, understudied and contain toxicants and carcinogens.

INTRODUCTION

Electronic cigarettes—also known as e-cigarettes, vapourisers, vape pens, e-hookah or ENDS (electronic nicotine delivery systems) —have quickly entered the global market.[1–3]

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As cigarette sales in the USA decline, the use of smokeless and novel tobacco products is increasing.[4–6] While e-cigarettes are currently a small part of the tobacco market, US sales have doubled every year since 2008, reaching approximately $2.5 billion in 2014.[7]

E-cigarette use was highest among US young adults aged 18–24 years.[8,9] However, motivations for young adult e-cigarette use may be unique. A 2009 college student study found e-cigarette use was not motivated by the desire to quit cigarettes,[10] in contrast with population[6,11] and user studies[12,13] reporting (mainly older adult) motivations to reduce or quit smoking. This study is aimed to describe why, how and under what conditions e-cigarettes are being used by young adults; to understand how they learn about e-cigarettes, integrate products with existing tobacco use, and assess potential risks and benefits.

Some have argued e-cigarette promotion would be beneficial because it may encourage smokers to substitute safer products or quit smoking.[14–16] A 2013 randomised trial reported quit rates among electronic cigarette users (5–7%) not different from nicotine patches.[17] One cross-sectional study found those who reported trying to quit smoking with e-cigarettes were more likely to have quit smoking,[18] but studies of general population samples of adult smokers,[19] teens[20] and Quitline callers[21] found e-cigarette users were not more likely to quit. Population-based longitudinal studies[11,22] and a longitudinal study of patients with cancer using e-cigarettes to quit smoking[23] found no difference in cessation with e-cigarette use.

Independent of cessation potential, e-cigarette product characteristics or marketing may result in increased harm if they encourage initiation of tobacco use among novices. In the US, teen use of e-cigarettes doubled between 2011 and 2012, with 76% of e-cigarette users reporting dual use with cigarettes.[24] Teen e-cigarette use is most common among current smokers and is associated with greater cigarette consumption.[20,25]

E-cigarettes are marketed with messages promoting their use as harmless recreation, as ways to evade smoking bans and for smoking cessation.[26–28] Although the Food and Drug Administration (FDA) released a draft of a proposed deeming rule which would include authority over e-cigarettes, as of November 2014, e-cigarettes remained unregulated in the US, with no major national educational campaigns or warning labels.

New York City (NYC) is an informative context in which to study the use of e-cigarettes. NYC has high cigarette prices (almost $12/pack), which is more expensive than many individually sold disposable e-cigarettes. At the time of this research, NYC's indoor and outdoor clean air laws did *not* cover the use of e-cigarettes. In April 2014, indoor clean air laws were extended to cover electronic cigarettes. While smoking rates in NYC decreased from 22% to 14% between 2002 and 2010, smoking increased to 16.1% in 2013.[29] An increasing proportion of smokers are 'light' smokers and non-daily smokers (73% in 2010).[30,31] The influence of e-cigarette use on tobacco use patterns is unknown and may be particularly relevant among high-risk young adults, where use is common. A 2013 survey of young adults attending bars and nightclubs in NYC found 44% of respondents were current (past 30 days) smokers (81% of smokers were non-daily) and 50% of daily smokers and 35% of non-daily smokers also currently used e-cigarettes (Ling, unpublished data). As

NYC has a strong tobacco control programme, insights in this context may be particularly useful to predict new trends in e-cigarette use and tobacco control.

METHODS

We employed focus groups and semistructured interviews to explore young adults' motivations when using e-cigarettes and how they fit into their overall tobacco use.

Study recruitment

Study subjects were young adults (age 18–27) recruited from bars located in Manhattan, Brooklyn and Queens (NYC). Young adults were invited to complete screener surveys that included basic demographic information, social activities and affiliations. Current residents of NYC reporting current (past 30 days) tobacco use were invited to participate in focus groups.

A total of 87 participants took part in 16 groups (4–8 participants each). Groups were stratified by smoking status (daily smokers, non-daily smokers) to the extent that was feasible and a few non-smokers (who had used hookah or e-cigarettes) were included. Participants received $100 compensation. All focus group participants were invited to participate in the semistructured interview phase of the study; 97% agreed to be contacted again for this purpose and 12 people completed individual interviews and received an additional $35.

Data collection procedures

Focus group discussions were conducted in September 2012 and individual interviews in July 2013. A standard interview guide was used to collect data on tobacco use and experiences. Discussion topics included definitions of smoking and smokers, experiences with tobacco, e-cigarettes and other tobacco products, perceived benefits and risks, and experiences with stopping tobacco use. All focus groups were videotaped.

Semistructured individual interviews typically lasted between 60 and 90 min. Interviews elicited more in-depth accounts of experiences with tobacco initiation, cessation and products used. All semistructured interviews were audio recorded.

Data analysis

Audio and video recordings were professionally transcribed. Data were coded using Transana (video) and ATLAS.ti software. Search terms based on reviews of literature and media were used to capture e-cigarette discussions (electronic, e-cigarette, vape, vapour, vapouriser, stick, e-hookah, pen, cartridge, Blu and NJOY e-Cigs). Further search terms were generated iteratively during review of transcriptions. Relevant data were compiled according to theme by the lead author. Memos summarising each theme with illustrative quotes were reviewed by both authors and discussed iteratively to reach consensus and theme saturation.

All study protocols were approved by the Committee on Human Research (the IRB) at the University of California, San Francisco. Pseudonyms are utilised for all participants quoted in this manuscript. No real names have been used.

RESULTS

Participant characteristics

Demographic and smoking characteristics of participants are summarised in table 1.

Among all participants, 32% reported current use of electronic cigarettes in the past 30 days, with similar proportions among daily smokers (34%) and non-daily smokers (32%). Of the current e-cigarette users (N=25), 31% reported they were currently trying to quit smoking and 50% had no intention to quit smoking within the next 6 months; 48% had made a 'quit attempt' in the past 12 months. One participant used e-cigarettes exclusively; 56% of current e-cigarette users reported daily cigarette smoking.

Themes

Seven themes related to e-cigarettes emerged: (1) access and experimentation (2) perceived risks (3) attraction to flavours (4) bodily sensations as a source of information (5) culture of technology and e-cigarette experimentation (6) increased nicotine consumption and (7) use in the context of clean air laws.

Access and experimentation—Participants reported having first tried e-cigarettes after having 'pulls' or 'puffs' offered by a friend. Bodegas and smoke shops were the most likely places where participants had first seen and purchased the devices. Two focus group participants described initial encounters with e-cigarettes:

'Hector' (FG 1) 24, explained:

> It was something strange that just appeared in the normal store that you go to every day, and you just go there one day, and you see regular cigarettes, and you just see an electronic cigarette with a big giant poster. You're like, all right, let me just try it. It's ten dollars. That's mainly it.

'Allie' (FG 16), 22, recalled:

> I was drunk in a bodega, and the e-cigarette was as much [money] as a pack. And I was like, well, shit it's supposed to be more (puffs than a pack). And I smoked that motherfucker in one night. It's, like, two packs, right, of tobacco? I just, like, sat there dragging it all night.

In an individual interview, 'Jerome', a 20-year-old musician, described motivations for purchase:

> The first time I bought them because all the commercials and stuff came out for them. I was like oh, that's the electronic cigarette and stuff and the news would be like oh, "we've got electronic cigarettes now."

When asked about ‘e-cigarette’ use, some participants reported that they had not tried these devices but later revealed their use of ‘e-hookah’ or other vaping devices with different names.

Perceived risks—Despite experimentation with electronic cigarettes, participants claimed limited knowledge about the devices (FG 3):

> ‘Margot’: “But, I don’t even know how – because are they like completely free of… it doesn’t harm you at all?…Put tar in your lungs?”
>
> ‘Grace’: “I thought it was just water vapors.”
>
> ‘Annie’: “There must still be something wrong.”
>
> ‘Margot’: “Yeah, there’s got to be a problem.”

Participants expressed a lack of information, but reported feeling comfortable enough to experiment with use. A common statement was that e-cigarettes contain harmless ‘water vapor’ rather than smoke, and ‘water vapor’ seemed to be linked to the idea that products were less harmful or even ‘good’ for users.

‘Damion’ (interview), a 19-year-old non-daily smoker, who occasionally used e-cigarettes, recounted receiving a free e-cigarette sample at a concert:

> It was super fun… it was my first time smoking this thing and I really got a kick out of it. You can just smoke on it forever…and it’s not smoke, it’s vapor, so I guess it’s good for you. It’s fun.

‘Damion’s’ assertion that e-cigarettes are ‘good for you’ may indicate that he had no health concerns about the product or could show a sense of relative safety in comparison to combustible cigarettes. Experimentation with e-cigarettes in the context of a concert, alongside his repetition of the term ‘fun’, indicates that he primarily experienced the device as recreational (rather than for cessation, for example). Unlike finishing a single cigarette, the device is something that he can ‘smoke on forever’, further explaining, “It’s still giving smoke, so I keep doing it.” ‘Michael’ (FG 4), 19, also reflected on the link between water vapor and safety, commenting:

> Actually, I know people who quit with that …I mean sometimes they still use that but it’s water vapor so in the end it’s harmless —or remotely harmless.

Attractive flavours—Flavoured solutions were an attractive e-cigarette characteristic identified by participants. Non-daily smoker ‘Briana’ (FG 5), 26, commented:

> I thought it was cool, because it’s like water. It’s just like the feeling of having a cigarette, but it…didn’t have the smoke taste, you can put…different flavors in there. I just remember one…[it] was sweet kind of. I was like, “oh…I would do this.” [laughs].

Similarly, ‘Jerome’ (interview) described being drawn to the product’s sweetness:

> I bought an e-cigarette…it tastes like a cigarette, but the vapor, it’s sweeter…that’s why I liked it, because it tasted sweet.

'Jerome' also reported using hookah to smoke 'sweet tobacco'. He speculated that e-cigarette companies were adding sugar to the product in order to make the vapour flavourful.

Commenting specifically on menthol-flavoured e-cigarettes, focus group participant 'Benjamin' (FG 12), 27, described his device:

> I had a menthol one. It wasn't super menthol-y. It just tasted like a mint basically. I think it was for the relief if I wanted to smoke. One hit or two hits, and you were fine. It was like smoking an entire cigarette. So, I did it while I was at work basically.

Bodily sensations become a source of information to gauge the relative risk and safety of products.

'Jack' (interview), a 19-year-old Russian-American, commented:

> the feeling you get in your lungs when you inhale it…feel expansion, but it's not smoke, it's vaper-y…. It just *feels cleaner*. There's not that smoke smell. I like that my fingers don't turn yellow.

Similarly, several participants described vapour as 'not as strong' as traditional smoke.

Several focus group participants reported negative bodily sensations. Some described the vapour as 'harsh' or 'burning'. 'Casper' (FG 13), 21, commented:

> It's from the device getting hot, I think, because I used to have a vaporizer that I smoked weed with and I know if you used it for too long it would get hot and burn your mouth. Because you're supposed to just vape it, not burn it…you put tobacco or whatever in it and you're supposed to vape it for a certain amount of time but if you do it for too long it actually burns it and gets too hot.

Culture of technology and e-cigarette experimentation—E-cigarettes fit into a landscape of technology used in participants' everyday lives. For example, 'Jerome' (interview) referred to e-cigarettes as one of several 'toys for smoking', which he categorised as part of a technological collection that also included a mobile phone, Mp3 player and flash drive. Others focused specifically on the technological aspects of plugging in and charging e-cigarettes, referring to the devices as 'robot cigarettes'. 'Kareem' (FG 13), 18, described trying electronic cigarettes for the first time:

> …we all tried it and it was fun. It didn't take over for real cigarettes but…installing it, having it charge — it's like a game.

While some participants were drawn to the technological aspects of the device, for others, the technology was off-putting. 'Danielle' (FG 1), 26, described the device as 'weird', explaining, "you push a little button and a light at the end lights up." 'Jonathan' (FG 9), a 23-year-old 'pack-a-day' smoker, explained that he had never actually tried one, because he does not "want to be that person." Further elaborating, he explained:

> It's like a glowing pole. It glows. It's not a burn; it's a glow. I don't want that in my life.

Participants also distinguished between products for public and private use. ‘Grace’ (FG 3), 20 (an occasional user of e-cigarettes) commented that while she thought she might use e-cigarettes when home alone, in social situations she only smokes ‘real’ cigarettes to avoid the stigma of the ‘silly’ product. Similarly, ‘Jack’ (interview) commented:

> It kind of had this weird stigma. I felt like anyone smoking an e-cigarette was kind of like a poser a little. It’s not the real thing.

Increased consumption of nicotine—Participants also sensed that using electronic cigarettes led to increased nicotine consumption. ‘Jack’ (interview) reflected that when he first purchased a disposable e-cigarette from a ‘7–11’ convenience store, he wanted to cut back on his use of combustible cigarettes:

> I didn’t really enjoy it because you don’t get the same satisfaction as smoking a real cigarette. When I went a week smoking an e-cigarette, after I stopped, I started smoking more [combustible] cigarettes…I was constantly inhaling the e-cigarette. I’m not sure how much nicotine it has, but I was smoking more often than I would a regular cigarette. I probably developed.

Similarly, ‘Mateo’ (interview), a 20-year-old coffee shop worker, commented:

> I really did like it. But I [stopped because I] knew I would just keep smoking more…I was using it all the time…I would have been pulling all day…and I didn’t want to become more addicted [to nicotine.]

Such experiences illustrate the potential for e-cigarettes to lead to increased nicotine exposure.

This theme also emerged in conversations about using electronic cigarettes to quit. ‘Christopher’ (FG 9) 25, explained:

> They’re dangerous too. I have a good friend of mine, who smokes about a pack and a half a day, and he’s going to have a drink or two. But he tried smoking the e-cigarette. His mom got one and everything. He sat there sucking on that thing all night. It didn’t satisfy him as a cigarette did, but in the morning he had a nicotine hangover. It was so weird.

When ‘Benjamin’, (FG 12) 27, and ‘Omari’, 25 (FG 12), were asked whether they knew anyone who had successfully quit using e-cigarettes, ‘Omari’ said those trying to quit “just get addicted to *e-cigarettes*.” ‘Benjamin’ added, “That’s true. You’ve got a whole bunch of little metal cigarettes around your room.”

Use in response to clean air laws—At the time these data were collected, NYC had not yet included e-cigarettes in its smoke-free laws. Accordingly, participants discussed how e-cigarettes were used to smoke in places where conventional smoking was not allowed.

‘Grace’, (FG 3) 20, commented:

> I bought one, once, but just because they’re fun…You can be on the train and smoke this thing and it’s kind of a novelty, you know what I mean? But my ex-

> boyfriend used to be a really big smoker…he started to buy the electronic cigarettes and you can smoke whenever you want, all day.

Participants also shared observations of how e-cigarettes changed the social landscape of smoking, particularly in smoke-free spaces. 'Jessalyn' (FG 16), 21, noted:

> I had a friend who got one and made a point of the fact that you're actually legally allowed to smoke them anywhere because it's water vapor.

'Allie' (FG 16), 22, agreed, adding:

> You always see people on the train who are so fucking proud of themselves, too. They're like, "tell me not to, tell me not to." But… maybe that's colored by the fact that I have a friend who I know actively tries to get people to be like, "Are you smoking a cigarette? Don't do that." Because he'd be like, "no, it's actually just steam and water" …rebellious, like, I'm smoking inside but you can't tell me to stop.

While this 'rebellious' action may resonate with the identity exploration and risk taking seen in emerging adulthood,[32] it was also viewed with characteristic ambivalence. This behaviour potentially creates jarring social interactions among those who may not be able to distinguish between electronic and conventional cigarettes. 'Terry', 26, was upset by the use of electronic cigarettes in the bars she frequents:

> It's socially aggressive because most people don't know what it is. And so, it looks like you're really flouting…it makes people really uncomfortable.

DISCUSSION

While much of the debate over e-cigarettes centres on whether such devices are promising cessation tools for chronic smokers,[15223334] our research suggests that it is equally important to consider how devices are taken up by young adults in ways that may promote dual use or nicotine addiction. This research begins to address questions of why, how and under what conditions e-cigarettes are being used.[35]

This study adds to the literature on prevalence among youth and young adults,[10202536] by examining the ways in which young adults are taking up e-cigarettes—including their beliefs, opinions and practices related to the devices.[303738] Our work confirms the study by Choi *et al* with young adults in Minnesota, reaffirming attraction to flavoured products and the perception that e-cigarettes may be 'healthier'. Our data were collected approximately 2 years after Choi *et al*, which may provide additional insight within the context of rapidly increasing product availability and e-cigarette radio, television and internet advertisements.[39] In NYC, the relatively low cost compared to cigarettes also motivated purchase.

Participants agreed that one attractive feature of e-cigarettes was use in smoke-free spaces, a sentiment found in other studies.[40] Unlike previous studies, participants also commented on the social confusion created by use in smoke-free spaces, due to similarities between

electronic and combustible cigarettes. E-cigarettes may also renormalise (what appears to be) the act of smoking in smoke-free spaces.[3]

Participants were attracted by sweet product flavours and willing to experiment with e-cigarettes, even with limited information about the devices or potential health risks. Perceptions of safety potentially reflect e-cigarette marketing, particularly descriptions of aerosol as 'water vapor'. A 2013 formal content analysis of e-cigarette retail websites found that one common theme was portraying vapour as less harmful than traditional secondhand smoke.[26] This study adds the insight that participants used their own bodily sensations as a source of information about the relative safety or risk of e-cigarettes. Users' experience of risk at an embodied level[4142] may be particularly important in contexts with little information regarding product safety.

Among several participants, e-cigarettes were perceived as another 'toy' integrated into existing gadget collections. This perception is distinct from understanding e-cigarettes either as a drug-delivery device or tobacco product, and may affect safety perceptions. The association of the devices with narratives of technical innovation (frequently seen in advertising) may lead users to assume that e-cigarettes are an improved or safer version of smoking.[26]

Some participants recognised the potential of e-cigarettes to increase nicotine use, and potentially, addiction. Using e-cigarettes throughout the day and in smoke-free spaces led to feeling increasingly addicted to nicotine. Repeated nicotine use and its role in addiction is of broader interest in tobacco research.[4344]

As a qualitative study, our relatively small sample can only provide insight into how some young adults in NYC integrate e-cigarettes into their tobacco use. While we cannot assume these experiences to be broadly representative, this work begins to address how e-cigarettes are integrated into everyday practices and social contexts. This work, for example, uncovered a need to develop a comprehensive taxonomy of vapour devices. Studies using a single or outdated terms may significantly underestimate use. Further indepth qualitative work, including ethnographic observation, will be needed in order to more fully document the complex beliefs, thoughts and practices related to the adoption of e-cigarettes, as well as their potential effects.

CONCLUSION

This research suggests that young adults are integrating e-cigarettes into existing patterns of tobacco use. E-cigarette use was motivated by pricing, promotional events, flavours, perceptions of safety, the desire to quit smoking, the ability to use devices in smoke-free spaces and the perception that e-cigarettes are novel technological gadgets. Educational campaigns may be needed to counter claims, such as e-cigarettes delivering 'harmless water vapor'. The observation that flavours motivated trial suggests that flavours in vapourising solutions should be prohibited, similar to the restrictions on characterising flavours in conventional cigarettes enacted under the US Family Smoking Prevention and Tobacco Control Act of 2009. These and other youth oriented marketing tactics that have long been

prohibited for conventional cigarettes[284546] may be contributing to young adult uptake of e-cigarettes.

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What this paper adds

- This qualitative research presents data from focus groups and semistructured interviews with young adults living in New York City to gain a deeper understanding of how young adults perceive and make sense of electronic cigarettes in the context of an environment with strong tobacco control policies.
- We found that young adults participants lacked information about e-cigarettes, but were willing to experiment with them as a novelty or for recreation. Marketing claims, flavours, bodily sensations when using the products, comfort with electronic personal technology, ability to use in smoke-free environments and concerns about nicotine addiction all appeared to impact the use among young adults.
- Our findings indicate that education is needed about e-cigarettes' 'lack of regulation' and 'addiction' potential. Countering unsupported marketing claims (eg, 'harmless water vapor') may change perceptions of safety of electronic cigarettes among young adults.

Table 1

Demographic characteristics of participants (N=87)

	Total (%)	FG1 N=9	FG2 N=4	FG3 N=4	FG4 N=9	FG5 N=3	FG6 N=6	FG7 N=4	FG8 N=4	FG9 N=5	FG 10 N=4	FG 11 N=4	FG 12 N=6	FG 13 N=3	FG 14 N=4	FG 15 N=6	FG 16 N=4	FG 17 N=4	Interview only N=1
Age																			
18–20	25	0	1	4	1	0	0	1	0	0	2	1	0	1	0	5	1	1	0
21–24	46	4	3	0	6	1	0	2	2	2	0	3	4	2	3	0	3	1	0
25–29	29	5	0	0	2	2	0	1	2	3	2	0	2	0	1	0	0	2	1
Gender																			
Female	44	3	2	4	5	3	3	0	2	2	3	1	3	0	0	2	3	0	1
Male	56	6	2	0	4	0	3	4	2	3	1	3	3	3	4	4	1	4	0
Racial/ethnic category																			
Non-Hispanic white	52	5	3	4	3	2	4	2	2	3	1	1	2	2	2	3	3	2	1
Non-Hispanic black or African-American	9	3	0	0	1	2	0	0	0	0	1	1	1	0	0	0	0	0	0
Non-Hispanic Asian/Pacific Islander	3	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
Hispanic	23	0	0	0	4	0	2	1	2	1	1	1	2	1	2	1	1	1	0
Multiple Races (non-Hispanic)	13	1	0	0	1	0	0	0	0	1	1	0	1	0	0	0	0	1	0
Unknown/not reported	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Educational status																			
Currently in college	38	0	1	4	2	1	3	1	3	2	2	0	1	0	3	5	0	2	0
Graduated	41	5	2	0	5	2	3	3	1	2	1	1	2	2	1	1	3	2	0
College dropout	10	2	1	0	1	0	0	0	0	1	0	1	2	0	0	0	0	0	1
High school education only	10	2	0	0	1	0	0	0	0	0	1	2	1	1	0	0	1	0	0
Smoking status																			
Non-smoker	7	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0
Current non-daily smoker	41	6	1	1	4	3	3	1	0	3	2	2	4	0	0	5	0	0	0
Current daily smoker	52	3	3	3	4	0	2	3	4	2	1	2	1	3	4	1	4	4	1
Intent to quit smoking																			
Not planning to quit	16	2	1	0	1	0	1	0	3	1	0	0	1	0	1	1	1	1	0
May quit in future, but not in next 6 months	30	2	1	4	4	0	1	2	1	0	1	1	0	1	2	0	3	2	0
Will quit in next 6 months	7	2	0	0	0	0	1	0	0	0	0	0	1	1	0	1	0	0	0
Will quit in next month	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1

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	Total (%)	FG1 N=9	FG2 N=4	FG3 N=4	FG4 N=9	FG5 N=3	FG6 N=6	FG7 N=4	FG8 N=4	FG9 N=5	FG 10 N=4	FG 11 N=4	FG 12 N=6	FG 13 N=3	FG 14 N=4	FG 15 N=6	FG 16 N=4	FG 17 N=4	Interview only N=1
I am currently trying to quit	23	3	1	0	2	0	0	2	0	2	1	2	2	1	1	2	0	1	0
Not applicable*	22	0	1	0	2	2	3	0	0	2	2	1	2	0	0	2	0	0	0

*All participants regardless of smoking status answered the full questionnaire; while we expected non-smokers would state the Intention to Quit smoking question was ‘not applicable’ to them, some current (mainly intermittent and light) smokers also selected this option.