Published in final edited form as:

Health Behav Policy Rev. 2018 November ; 5(6): 50–55. doi:10.14485/HBPR.5.6.4.

“It Felt Like I Was Smoking Nothing:” Examining E-cigarette Perception and Discontinuation among Young Adults

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Abstract

Objective: In this study, we sought to understand why young adults from urban low-income regions discontinue using e-cigarettes.

Methods: We recruited 97 tobacco users aged 18–26 years from Baltimore, Maryland to participate in 17 focus groups. Qualitative data were analyzed using framework analysis.

Results: Being less satisfying than combustible tobacco, perceived cumulating costs, and negative physical effects were expressed as top reasons for never using or discontinuing the use of e-cigarettes.

Conclusion: Understanding why young adults discontinue e-cigarette use is critical to inform e-cigarette intervention efforts and public policy. If e-cigarettes are to be promoted as harm reduction devices for combustible tobacco users, it will be important to ensure that they are affordable, satisfying, and formulated to minimize negative physical effects.

Keywords

e-cigarettes; urban health; young adult health; tobacco alternatives

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Conflict of Interest Disclosure Statement

All authors have declared that there are no competing interests to report.

Electronic cigarette use (e-cigarette use, also called vaping) has increased considerably among young adults between the ages of 18 to 24 years, with 35.8% of these individuals reporting that they had ever tried an e-cigarette and 13.6% being current users in 2013-2014.¹⁻⁵ In Maryland, 4.5% of adults reported that they used an electronic nicotine delivery system either every day or on some days, and those rates may be higher in the East Baltimore community where traditional cigarette and smokeless tobacco use has been elevated.⁶ Over the past several years, vaping stores have opened across the United States, including throughout Baltimore, and are concentrated in urban lower income neighborhoods,⁷ the setting for the study presented here.

The potential public health impact of e-cigarettes is currently under debate,⁸ as the advocacy for e-cigarettes as cessation or harm reduction devices^{9,10} is contrasted against possible negative health effects such as irritation, respiratory disease, an increased risk of certain cancers and nicotine dependence.¹¹ Some authorities argue that intervention and policy in this arena should facilitate the use of e-cigarettes as cessation devices while preventing use of e-cigarettes among those who do not already use combustible tobacco.¹⁰ Two lines of research can inform this goal. First, research to understand why nonsmokers initiate e-cigarette use provides evidence as to the features and benefits of e-cigarettes that attract non-smokers, so that they can be regulated. Initial research in this area has focused primarily on why young adults use e-cigarettes, identifying motivations such as curiosity, convenience, and appealing flavors.¹² It also has been found that many young adults believe e-cigarette smoking is less addicting and harmful than cigarettes and is more socially acceptable or “cooler” than using other tobacco products.^{9,10,13,14} However, we know much less about why young adults never use or dislike and discontinue the use of e-cigarettes. This understanding is necessary to inform intervention and policy that facilitates the successful use of e-cigarettes as cessation devices among combustible tobacco users.^{12,13,15}

One study reported that there are clear differences in patterns of adolescent e-cigarette use in urban versus rural areas and that urban youth current smokers are nearly twice as likely as rural cigarette smokers to use e-cigarettes as well.¹⁶ Additionally, other studies among adult e-cigarette ever users found that the top reasons for the discontinuation of e-cigarettes were loss of interest, health concerns, high cost, and the view that e-cigarettes were less satisfying than combustible tobacco.^{12,13} Whether the above factors are also important determinants for the discontinuation of e-cigarette use among young adults in an urban setting remain unexplored. Whereas regulatory policies thus far have steadily reduced tobacco use over several decades, populations with higher income have experienced greater declines than those with lower income.¹⁵ As e-cigarettes continue to increase in popularity,² understanding why young adults from urban low income regions not only initiate, but also discontinue e-cigarette use is critical to inform future e-cigarette interventions and policies that aim to prevent tobacco-related health disparities for populations with lower income. These individuals may be particularly vulnerable to combustible tobacco use, and face different facilitators of tobacco use and barriers to cessation compared to their non-urban peers. The current study addresses this need through a qualitative study examining why young adult tobacco users in Baltimore, Maryland have never used or disliked and discontinued their use of e-cigarettes.

METHODS

A total of 17 mixed-sex focus groups were conducted between March and June 2017. The discussions varied from 4 to 10 participants each, with a mean of 6. The focus group interview guide was developed based on concepts identified in the literature, and our previous qualitative research conducted in Maryland with predominantly urban young adults.

Study Population

Participants were recruited through a variety of means including flyers, word of mouth, and active recruitment at local community events. Enrollment settings included community centers, residences of youth, local high school and college campuses, and health fairs. Eligibility was restricted to young adults (18-26 years old) who reported use of any tobacco product during the past 30 days and were residents of Baltimore, Maryland (enrollment was primarily targeted in the East Baltimore region, an urban area of Baltimore City where residents are predominantly of low income status and where traditional cigarette and smokeless tobacco use has been elevated).

Focus Groups

Discussions lasted 60 minutes. Questions specific to the current analyses were: “Do you currently vape or use an e-cigarette?” “Why do you currently vape or use an e-cigarette?” and “Why did you stop vaping or using an e-cigarette?” Individuals who shared that they had discontinued the use of e-cigarettes, as well as those who indicated that they had never used e-cigarettes, were probed further for elaboration on their motivations for quitting or ever initiating. All discussions were facilitated by the same experienced researcher in a community setting and were digitally audio-recorded with the participants’ permission.

Data Analysis

The current analysis focuses on portions of the discussions dedicated to reasons why participants have never used or disliked and discontinued their use of e-cigarettes. Audiotapes of the discussions were transcribed verbatim and checked against the recordings for accuracy. Transcripts were then analyzed, and interpreted using framework analysis. First, 2 investigators independently conducted open coding to identify themes. The other team members then reviewed the transcripts and the themes to achieve consensus about the coding of specific themes. Each transcript was then thematically hand-coded and cross-checked by the research team for agreement about the application of the codes. Particular attention was paid to deviant/contradictory cases and to group dynamics using the transcripts supplemented by field notes.

RESULTS

Participant Characteristics

A total of 97 young adults (63 men, 34 women) participated in the focus group discussions. Sixty-four (66%) had ever used an e-cigarette. Table 1 reports the frequencies of use across the various tobacco products. Most participants were African Americans (68%), with a mean

age of 21 years ($SD = 2.8$). Most had a high school degree (89%), with half (51%) indicating that they were a current university student and one-fifth (19%) reporting that they were employed full-time at the time of this study.

Reasons for Non-use or Dislike and Discontinuation of E-cigarettes

Not as satisfying as combustible tobacco.—Although there were positive aspects to using e-cigarettes, many participants felt that e-cigarettes produced less of a satisfying high than combustible tobacco and reported this as one of the top reasons why there was discontinued use. One individual indicated how “... it didn’t really do nothing for me. It wasn’t like a Newport thing, it didn’t push me high enough, I just felt like I was smoking nothing.” Another individual from a different discussion emphasized her preference for e-cigarette use in a social setting but eventually discontinued them due to the lack of physical effects. This quote, along with a few other illustrative quotes for the other major themes, are presented in Table 2. The lack of reduction in cigarette cravings due to the ineffective high from e-cigarettes, compared to combustible tobacco, was a recurring reason why some of our participants either relapse to cigarette smoking and/or decided to participate in dual-/poly-use.

Perceived cumulating costs.—Many participants acknowledged that the high cost of using e-cigarettes was an influential factor in their e-cigarette smoking decision and that it was a reason why they had not tried e-cigarettes or why there was discontinued use. For example, one woman shared how although she preferred smoking e-cigarettes, she had to discontinue using them due to their perceived cumulative cost. Comparisons were often negatively drawn regarding the higher upfront cost of an e-cigarette (especially for a more advanced system) to a single cigarette.

Negative physical effects.—Most users agreed that although they like the appeal of the flavor of e-cigarettes, the product’s appeal was significantly limited by the negative physical effects that came along with smoking one. Examining additional reasons for discontinuing e-cigarette use, some participants reported negative effects such as “getting lightheaded” or that the e-cigarette had a bad taste (“tastes like chemicals”). In further discussing product preferences, some participants also notably mentioned how the negative physical effects that they felt from using e-cigarettes led to their skepticism of this tobacco product. Experiencing these negative physical effects ultimately increased their perception that e-cigarettes were more harmful than combustible tobacco.

DISCUSSION

We examined reasons for e-cigarette non-use and discontinuation among young urban adults. This study extends the limited literature examining e-cigarette non-use and discontinuation^{12,13} by providing in-depth qualitative data from a sample of urban young adults living in Baltimore, Maryland. Our data indicate that the negative physical effects and lack of satisfying high from smoking e-cigarettes were the top reasons for e-cigarette discontinuation. This aligns with current evidence^{12,13,17} indicating that e-cigarette users often negatively compare the taste and feel of an e-cigarette to a combustible cigarette.

However, the young adults in this study also reported that the perception of cumulative costs of e-cigarette use was an additional factor as to why they either never used or disliked and discontinued their use of e-cigarettes. For those that discontinued their use of e-cigarettes, it is equally pertinent to highlight that unlike a number of previous studies,^{11,18} our participants did not actually mention throat-mouth irritation and coughing as some of the negative physical effects that they would experience when smoking e-cigarettes. Finally, some participants seemed to have inaccurate perceptions regarding the harm of e-cigarettes.⁹ It is possible that unpleasant physical effects of e-cigarettes (eg, the liquid burning, taste of chemicals) may lead consumers to perceive e-cigarettes to be more harmful than combustible tobacco.

Our findings have several practical implications. If e-cigarettes are to be promoted as cessation devices, they should be priced to be affordable to urban youth who use combustible tobacco. Additionally, e-cigarettes should be designed to provide an equally satisfying high to combustible tobacco and formulated to minimize negative physical effects. Despite the addictiveness of nicotine, e-cigarettes are advantageous from a health perspective because there is now adequate evidence to conclude that these products are at least capable of suppressing smoking urges.⁹ However, the lack of reduction in cigarette cravings due to the reduced high of e-cigarettes, when compared to combustible tobacco, could cause more harm to current users with e-cigarettes being ineffective harm reduction aids. Furthermore, it is critical to ensure young adults have an accurate understanding of e-cigarette harm, particularly in relation to combustible tobacco. Education campaigns could support this endeavor. At the same time, it is also critical to ensure that e-cigarettes are not designed or marketed in a way that entices non-tobacco users to initiate e-cigarette use.

Our findings should be interpreted in light of limitations. The generalizability of our findings is limited by the inclusion of a convenience sample from a relatively lower income region within Baltimore. Additionally, the cross-sectional nature represents only a snapshot of this topic at one point in time and may not reflect opinions regarding future products or trends in use. A strength of this study is the in-depth qualitative examination to derive reasons why young adults in this region have never used or disliked and discontinued their use of e-cigarettes. Findings here can be used to inform the development of subsequent research to assess these factors among a larger number of young adults in this region of interest.

Individuals from urban lower income neighborhoods have not benefited from past initiatives to prevent and reduce tobacco use as much as those of higher income. This study highlights how factors such as the perceived cumulative costs coupled with the lack of reduction in cigarette craving make e-cigarettes a less attractive smoking cessation tool compared to traditional nicotine replacement therapy for lower income individuals than they may be for individuals with higher income. If, in fact, e-cigarettes are to be used as an effective harm-reduction aid¹⁹ to reduce income-related tobacco use disparities for young adult smokers from an urban setting,²⁰ educational initiatives, intervention efforts, and public policy should focus on making e-cigarettes affordable, as equally satisfying as combustible tobacco, and formulated to minimize negative physical effects.

IMPLICATIONS FOR HEALTH BEHAVIOR OR POLICY

If e-cigarettes continue to increase in popularity, understanding why young adults from urban low-income regions not only initiate, but also discontinue e-cigarette use is critical to inform future e-cigarette educational initiatives, interventions, and policies that aim to prevent tobacco-related health disparities for populations with lower income. The current study addresses this need through a qualitative study examining why young adult tobacco users in Baltimore, Maryland have never used or disliked and discontinued their use of e-cigarettes. These young adults living in an urban setting may be particularly vulnerable to combustible tobacco use and face different facilitators of tobacco use and barriers to cessation compared to their non-urban peers.

Findings from this study highlights how factors such as the perceived cumulating costs coupled with the lack of reduction in cigarette craving make e-cigarettes a less attractive smoking cessation tool compared to traditional nicotine replacement therapy for lower income individuals than they may be for individuals with higher income. If, in fact, e-cigarettes are to be used as an effective harm-reduction aid to reduce income-related tobacco use disparities for young adult smokers from an urban setting, educational initiatives, intervention efforts, and public policy should focus on making e-cigarettes affordable, equally satisfying to combustible tobacco, and formulated to minimize negative physical effects. At the same time, it is also critical to ensure that e-cigarettes are not designed or marketed in a way that would entice non-tobacco users to initiate e-cigarette use.

Acknowledgements

This work was supported by the Cigarette Restitution Fund at the Johns Hopkins University. Dr. Matson's time was supported by a career development award [K01DA035387]. Dr. Le was supported by the National Cancer Institute grant T32 CA 0093140 [Platz EA].

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Human Subjects Approval Statement

All participants were treated in accord with the Principles of the Ethical Practice of Public Health of the American Public Health Association, gave their informed consent to participate. The study was approved by the Johns Hopkins Institutional Review Board (Protocol 7627).

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Table 1

Frequencies of Various Tobacco Use in the Past 30 Days

Type of Product	N (%)
Cigarettes	62 (64%)
Cigars, cigarillos, or little cigars	60 (62%)
Chewing tobacco, snuff or dip	7 (7%)
Hookah	39 (40%)
Vaping or electronic cigarette	46 (47%)
Marijuana	71 (73%)

Table 2

Reasons for Non-use or Dislike and Discontinuation of E-cigarettes from Young Adults (18-26 Years Old) from Baltimore, Maryland

Theme	Example Narrative
Not as satisfying as combustible tobacco	“But [the e-cigarette] was just like for fun. I didn’t really feel anything from it. I was actually good [off smoking cigarettes for a while] and then over spring break this year, I like started smoking [cigarettes] when I was drunk [again] and [I] like actually felt [the high from the cigarette and so] I was doing it more.” (<i>female e-cigarette smoker</i>)
	“It didn’t really fill me with the same effect as tobacco did. The vapes were more light... it is not really what you would expect in a cigarette. They might say it is but when you actually hit a vape, it is not what you really expect from a cigarette. It doesn’t fill the need that tobacco did.” (<i>male e-cigarette smoker</i>)
	“I don’t like it [because] it doesn’t do anything for me. I didn’t really feel nothing, because it was like nothing special” (<i>male e-cigarette smoker</i>)
Perceived cumulating costs	“Yeah it really does [suck], I mean unfortunately that was one of the reasons [why I had to stop] too. It was like even more expensive than smoking cigarettes. How do I explain this? They are so many different types of them. Like she, [another participant], said there is the crappy ones that you buy and then you just throw them away. Like the Blu or the ones that look like cigarettes which is kind of messed up. I don’t know why they make those at all. And those are terrible and just not worth buying. Because what are they, like \$7, like the same thing as a pack and they say they are supposed to be like the same amount of smoking, but it is not. It is just not. And then you can get crappy ones that you change like the coils and you put the juice into it, and then you can get better versions of that, and then you can get like better versions of that, and if you spend more money you can get like nicer pens but, and like if you get bad juice too, it is like gross. And it will wreck it, like it will break it. It breaks, smoking is easier like cigs are literally easier.” (<i>female e-cigarette smoker</i>)
	“It is \$80 for the thing [the vape], I got to get the juices, then I got to charge it. Yeah, yeah [it] definitely [is used more in the wealthy communities]. College campuses have a lot of vapors and then if you go somewhere where people don’t have \$80 to smoke, then they smoke cigarettes.” (<i>male e-cigarette non-smoker</i>)
	“Yea, I would never do it again... [it’s] one of those rich people one’s.” (<i>female e-cigarette smoker</i>)
Negative physical effects	“I wasn’t feeling lightheaded at first, [but then later] I’m like ‘okay... this is why you slow down’. I was ok but then suddenly I was like, ok, I can’t do this. I have to sit down.” (<i>male e-cigarette smoker</i>)
	“Yeah, I like the flavors and that’s about it. It is too strong for me because it gives me a headache, like immediately. I like the flavors so I am going to keep going back and forth for the flavor, but after a while I get a headache because I don’t like it.” (<i>female e-cigarette smoker</i>)
	“If you get file juice on your skin, it burns... like really bad. I don’t know what is in it but we are breathing it.” (<i>male e-cigarette non-smoker</i>)
	“I mean it [e-cigarettes] was cool, but the Black and Milds are better for me. The e-cig is nasty, it ain’t official, it ain’t right.” (<i>male e-cigarette smoker</i>)