

Rates of Current Tobacco and Electronic Smoking Device Use Among Filipinos in Hawai'i

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Abstract

Tobacco use continues to damage the health of Filipinos. In Hawai'i, Filipinos have the second highest rate of smoking among adults and they are the fastest growing minority population. Electronic smoking devices are becoming popular and accessible. This study explored attitudes and practices of Filipinos in Hawai'i who use electronic smoking devices (ESDs), as well their knowledge of the effect of smoking and/or vaping on health and their awareness and motivations use smoking cessation programs. A convenience sample of 178 Filipinos who reported that they smoked and/or vaped responded to the online survey from January to March 2018. Reasons for starting to use ESDs included liking the different flavors (43%), being curious about vaping (38%), and viewing vaping as healthier than cigarettes (30%). Among respondents, 12% said they would like to quit smoking and 11% wanted to quit vaping, and very few felt that smoking and/or vaping behaviors impacted their health. They also demonstrated limited knowledge of cessation methods and products. Tobacco and vaping cessation programs for the Filipino community in Hawai'i are much needed because this population is at risk of developing smoking-related diseases.

Keywords

Filipino health, smoking, electronic smoking devices (ESDs), vape, smoking cessation

Introduction

Hawai'i has the third lowest rate of adult tobacco use in the United States at 16.8%.¹ However, tobacco use continues to affect Hawaii's most disparate populations, including Filipinos. Filipinos have the second highest rate of smoking among the adult minority populations in Hawai'i.² Coronary heart disease, which is directly related to tobacco use, is also prevalent in Hawaii's Filipino population.² In 2008-2009, the coronary heart disease mortality rate for Filipinos in Hawai'i was "153.5 deaths per 100,000 compared to the Healthy People 2020 goal of 100.8 deaths per 100,000."³ Tobacco-free lifestyles for Filipinos will reduce their risk of coronary heart disease, lung cancer, and other chronic diseases which disproportionately impact Filipinos.⁴

A 2016 analysis of data gathered in the Behavior Risk Factor Surveillance System (BRFSS) reported that 11.5% of the Filipino adult resident population in Hawai'i smoke regularly,⁵ a smoking rate that is lower than the overall smoking rate of Hawai'i adults. Filipinos have the third highest smoking rate in the state, behind Native Hawaiians (1st) and Caucasians (2nd). The BRFSS also revealed that 6.9% of Filipinos smoked daily, and 4.5% smoked on some days.⁵ The report did not provide data on the current number of Filipinos who use electronic smoking devices (ESDs), also known as e-cigarettes or vapes.

Filipinos had the highest percentage of smokers who stopped smoking for a day (70%).⁵ However, 96% of the Filipino population who currently smoked reported that they did not quit smoking for more than 6 months. This indicates that Filipinos attempt to quit smoking, but they relapse and continued to smoke. Also, Filipinos have limited knowledge in cessation methods compared to East Asians and whites in Hawai'i.⁶

ESDs expose users to high levels of toxins that may increase their risk of developing chronic diseases.⁷ Rather than encouraging smokers to quit, ESDs tend to reduce smoking cessation rates, and research suggests that "ESD use among those that never smoked at baseline, quadruples the odds of being a smoker at follow-up."⁸ Currently, ESDs are the only nicotine products that remain unregulated. Retailers are not required to have a license to sell their vaping products. ESDs are also the only nicotine products that do not have a wholesale tax.

Because Filipinos have high smoking rates, it is necessary to understand their motivation to quit smoking and their knowledge of smoking cessation services. This research study's objectives were to (1) explore Filipino smokers and ESD users' attitudes towards quitting as well as their quitting behaviors, (2) measure respondents' awareness of programs aimed at helping people to quit smoking and/or vaping, such as the Hawai'i Tobacco Quitline, and (3) assess this population's beliefs about how their smoking and/or vaping behavior may affect their health.

Methods

Sample

A convenience sample of 178 Filipinos self-reported that they smoked cigarettes and/or vaped from January 2018 to March 2018. To be eligible for the survey, the participant had to be of Filipino ancestry, 18 to 65 years old, a current cigarette smoker and/or current user of an electronic smoking device or vape product, and able to read and speak English well enough to complete the survey.

Measures

The Hawai'i State Department of Health's Tobacco Prevention and Control Program and 'Imi Hale Native Hawaiian Cancer Network's Native Hawaiian Smokers Survey in 2005 served as the model for the current research survey tool, the Filipino Smokers Survey. A survey consisting of 44 questions asked about

the respondents' knowledge, attitudes and practices of tobacco, ESD use, and smoking cessation resources. Respondents also assessed whether their health conditions were based on their smoking and/or vaping.

The survey asked respondents who smoke cigarettes to report the average number of cigarettes per day they smoked, the age they started, and the age they became a daily smoker. Respondents were asked their reasons for initiating vaping, how long they had been vaping and where they regularly purchased their supplies. For example, the question aimed at ascertaining respondents' reasons for initiating vaping included items such as: I started vaping to quit smoking, vaping as safer/healthier than smoking cigarettes, vaping causes no harm to others nearby, vaping is cheaper than buying cigarettes, I started vaping because I was curious about it, I can vape in more areas including no smoking areas, and I enjoy the different flavors. Respondents' options were "Yes," "No," and "Not sure." Respondents could answer "Yes" to more than 1 answer and were required to answer a follow-up question for each option selected, about whether it was still true at the time they responded.

Participants were also presented with questions on how they felt about stopping their smoking, including if they would like to completely quit smoking, quit vaping, quit smoking but continue vaping, smoke less than now, or if they were thinking about quitting but are not ready, or had no interest in quitting. Quitting smoking was defined as not smoking for at least a year without experiencing any relapse. Those who indicated that they had ever tried to quit smoking were asked in a follow-up question to report any cessation program used. Respondents had the option to choose more than one answer including the Hawai'i Tobacco Quitline, support groups, nicotine replacement therapy, counseling from a health professional, an online course, and "I'm not sure." Similar to the Native Hawaiian Smokers' Survey, health conditions among respondents were assessed with a question about whether they had ever been told by a doctor or health care worker that they have any of the following health outcomes: heart disease, lung disease, pre-diabetes, diabetes, high blood pressure, asthma, cancer and other. Demographic variables included participants' age sex, type of employment, education level and languages spoken at home.

Procedures and Data Analysis

The survey was disseminated through listservs that were associated with Filipino organizations in Hawai'i. Community partners publicized flyers that included information on accessing the survey through a QR code, a link online and contact information to request for a hard copy. Individuals could access the survey online through REDCap, a program managed and developed by the University of Hawai'i John A. Burns School of Medicine (JABSOM) RMATRIX II Biostatistics and Health Sciences Data Analytics team. It was also administered in person to participants at University of Hawaii's (UH) com-

munity colleges and university campuses. The survey took 10 to 15 minutes to complete. A \$10 gift card was provided to participants. This study was approved by the UH Institutional Review Board (2017-00828).

All survey data were recorded and managed in REDCap. Smoking and vape use were compared by frequencies and percentages. Statistical analyses were performed using SPSS version 24.0 (IBM Corp; Armonk, NY).

Results

Demographic data are provided in Table 1. The study population consisted of 178 Filipinos; 54% were male and 42% female. Of the respondents, 22% were ages 18-20, 40% were ages 21-29, 19% were ages 30-39, 8% were ages 40-49, 4% were ages 50-59, 3% were ages 60-65, and 3% did not report their age. In educational attainment, 28% of respondents reported completing high school or less, 44% reported some college, 17% had college degrees, and 7% had graduate school or professional degree. Respondents spoke a variety of languages, with 97% speaking English, 26% Ilokano, 20% Tagalog, less than 2% Visayan, and 7% other languages.

Table 2 presents the data on the respondents' smoking behaviors. The percentage who vaped only and reported never smoking cigarettes (36%) was higher than that of cigarette smokers who reported never vaping (32%). Dual users, who currently smoked and vaped, were 11% of respondents, and 21% reported they vaped but smoked cigarettes in the past. Among those who smoked cigarettes, 67% preferred the menthol flavor while 33% preferred non-menthol. Among those who vaped, 57% reported vaping for more than one year, 21% for 6 months to 1 year, and 22% for less than 6 months. Those who had vaped for more than a year reported for an average of 3 years.

Respondents' attitudes toward vaping are described in Table 3. In giving their reasons for starting to vape, 43% of respondents stated that they liked the different flavors, 38% were curious about vaping, 30% viewed that vaping was healthier than cigarettes, 19% were trying to quit smoking, 16% thought that vaping caused no harm to those around them, and 14% stated that vaping was cheaper than smoking cigarettes. When the ESD users were queried if these factors contributed to their continued vaping, 96% said they continued to vape because of the different flavors.

Among ESD users, 32% reported they vaped to quit smoking, and 25% reported they had never tried to quit smoking (Table 4). This suggests that ESDs attract smokers who are interested in quitting tobacco use, but they are likely to continue smoking cigarettes. The current state law restricts the use of ESDs to certain areas to control the exposure of the public to aerosols and other dangerous toxins.¹⁰ However, 68% of respondents who vaped said they believe this law does not affect them (Table 4).

Table 1. Characteristics of the Survey Sample (N=178)		
Demographics	n	%
Gender		
Male	96	54
Female	74	42
Other	7	4
Languages Spoken		
English	172	97
Tagalog	35	20
Ilokano	46	26
Visayan	3	2
Other	13	7
Age		
18-20 years old	39	22
21-29	71	40
30-39	34	19
40-49	15	8
50-59	8	4
60-65	5	3
No Answer	6	3
Educational Level		
High school or less	50	28
Some college	78	44
College graduate	30	17
Graduate school/Professional degree	12	7
Other	8	5
Employment		
Employed for wages	99	56
Self-employed	9	5
Student	50	28
Other	17	10

Table 2. Smoking and Vaping Behavior (N=178)		
Description of Smoking/ Vaping Behavior	n	%
I smoke cigarettes	56	32
I smoke cigarettes and vape	20	11
I only vape now, but I have smoked cigarettes in the past.	38	21
I vape only. I have never smoked cigarettes.	64	36
Type of Cigarette Preferred		
Menthol	51	67
Non-menthol	25	33
Number of Years Vaping		
Less than six months	27	22
Six months to one year	26	21
More than one year	69	57

Table 3. Attitudes Toward Vaping (n=122)						
Reasons for first starting to vape	Is this still true for you now?					
	n	%	Yes	%	No	%
I was trying to quit smoking	34	19	26	77	8	24
I thought it was safer/ healthier for me than cigarettes	53	30	42	79	11	21
It causes no harm to those near me when I use it	28	16	24	86	4	14
It was cheaper than buying cigarettes	24	14	20	83	4	17
I was curious about it	67	38	32	48	35	52
I could use it anywhere including no-smoking areas	16	9	7	44	9	56
I liked the different flavors	77	43	74	96	3	4
Other reasons	11	6				

Table 4. Perception on Quitting (n=122)		
Quitting Smoking and Vaping	n	%
I vape to quit smoking		
Yes	39	32
No, I do not vape to quit smoking	52	43
I have never tried to quit smoking	31	25
The new law now makes it illegal to vape at areas where smoking is banned. Does this affect you?		
Yes	18	15
No	83	68
Not sure	21	17

Only 12% of the respondents said they would like to quit smoking cigarettes, while 11% of current ESD users would like to quit vaping, 16% of respondents would like to smoke less, 33% think about quitting, 6% would prefer to quit smoking cigarettes but continue vaping, and 22% had no interest in quitting (Table 5). Of those who said they would like to quit smoking, 42% have already attempted to quit at least 3 times.

In examining knowledge about any quit smoking programs, 28% of respondents were familiar with quit smoking programs and services. However, 38% did not know any services to help them in quitting, 19% were unable to recall knowing of such programs, and 15% were unsure (Table 5). When asked about the type of services they preferred to use to help them quit smoking, 30% preferred nicotine replacement therapy, 25% would seek help through the Tobacco Quitline, and 46% were unsure of what services they preferred (Table 5). Among those who visited their physicians within the past year, 46% reported that they received a recommendation from their physician to quit smoking, 44% reported that they did not receive such advice, and 10% were unable to recall their experiences with their physicians.

In exploring their health concerns for smoking and/or vaping, the majority of respondents (60%) viewed their behavior as not impacted their health. Only 40% of respondents claimed that their health has changed as the result of their smoking/vaping (Table 6). All respondents reported that their doctor or health care worker had told them they have a health condition, with 26% reporting high blood pressure, 23% asthma, 11% pre-diabetes, 11% diabetes, 6% emphysema, and 5% heart disease (Table 6).

When asked about the concern for children, 78% of the cigarette smokers expressed concern for their children's health from exposure to tobacco smoke, while 13% were not concerned. The remaining respondents (9%) had no feelings about it one way or the other. Among those who vaped, 57% expressed concern for the children in their family being exposed to vaping (Table 6).

Attitudes toward quitting smoking and/or vaping	n	%
I would like to completely quit smoking	22	12
I would like to quit vaping	20	11
I would like to quit smoking but continue vaping	10	6
I would like to smoke less than I am now	28	16
I think about quitting, but I am not ready to do so at this time	59	33
I do not want to quit at all	39	22
Have you ever tried to quit smoking		
Yes	74	42
No	104	58
Do you know of any quit smoking programs		
Yes	50	28
No	67	38
I don't remember	34	19
I don't know	27	15
Preferred program(s) to help quit smoking		
Tobacco quit line	45	25
Support group for smokers	21	12
Nicotine replacement therapy (patches, gum)	54	30
Counseling from a health professional or health counselor	20	11
Computer or web-based support or online course	36	20
Other	11	6
I'm not sure	81	46

Evidence of effect of smoking on overall health	n	%
Yes	71	40
No	107	60
Current health conditions		
Heart disease	8	5
Emphysema/lung disease	10	6
Pre-diabetes	20	11
Diabetes	19	11
High blood pressure	46	26
Asthma	41	23
Cancer	5	3
Other	75	42
Concerned for children being exposed to tobacco smoke		
Very concerned	78	44
Somewhat concerned	60	34
No feelings about it one way or another	17	10
Not too concerned	7	4
Not at all concerned	16	9
Concerned for children being exposed to vape		
Very concerned	42	24
Somewhat concerned	59	33
No feelings about it one way or the other	36	20
Not too concerned	19	11
Not at all concerned	22	12

Discussion

This study was the first to assess attitudes and behavior of Filipino ESD users in Hawai'i. There were more respondents in this study who were ESD users (68%) than exclusive cigarette smokers (32%). This allowed a careful examination on their current vape preferences and reasons for vaping. This study was timely because of the growing trend of ESD use among Hawaii's youth. Although it is illegal for individuals under 21 years old in Hawai'i to use ESDs, 11% of high school students are current vape users.¹¹ It is alarming that 22% of our respondents were under 21 years old and smoking/vaping. Young ESD users are more likely to use flavored vape products (ie, sweet, candy flavors) due to their taste and smell.¹² There is cause for concern that youth vape users may become adult vape users who have no knowledge of tobacco cessation programs and have no desire to quit.¹³ Culturally relevant smoking prevention and cessation intervention services can help prevent the further use of tobacco and vaping products, especially among users who started prior to middle school, when vape use initiation occurs.^{12,14} Parents of elementary school students should be educated about the dangers of tobacco and vape products to prevent children's initiation of use of tobacco products.

The results of the current study could aid in the development of approaches that address the high rates of cigarette and vape use among Filipinos. Although the majority of the respondents to this survey (97%) spoke English, it is still essential to develop health materials and education awareness programs that are culturally tailored and designed for Filipinos. A campaign that would be useful to Filipino smokers and ESD users would include: education about the illegality of the use of ESD in public places (similar to cigarettes) and by those who are under 21 years old, health education about the dangers of ESD products, information and location of tobacco cessation programs, and tips on seeking support from health care providers and family members. It is especially important for health providers to address the detrimental effects of smoking and vape use, since more than half of the respondents did not perceive that these behaviors impacted their health. This is particularly disconcerting because respondents reported that they had health conditions such as hypertension, asthma, diabetes, which smoking cigarettes or vaping could exacerbate.

The social networks of Filipino smokers and ESD users may motivate them to go for regular health screenings to discover the risks associated with smoking and/or vaping, especially for early detection of coronary heart disease and other chronic diseases.² While American institutions rely heavily on creating resources for individuals, this approach is not regularly practiced in the Filipino culture. Social networks among Filipinos are based on a collectivist framework that relies on kinship

among family and community members.² Tobacco prevention and cessation services can be integrated in churches, community health centers, Filipino community centers and various locations where Filipinos congregate and participate in extracurricular activities. The Filipino kinship system is a vital source for Filipino families and community members who have migrated and settled in Hawai'i.

The limitations of this study include the small sample size of the respondents and that the majority of the respondents lived on the island of O'ahu. Although participants were recruited from social media sites, Filipino organizations, and college campuses, other venues such as churches could have been pursued to expand the reach of the study. Another limitation was that only frequencies were reported.

Conclusion

This study of Filipino smokers and ESD users is a first step forward to identifying this population's needs regarding tobacco prevention and cessation. Future interventions in tobacco/ESD prevention and cessation are needed to explore how Filipinos can decrease mortality and morbidity of tobacco-related diseases. Findings reinforce the need for planning, providing needed services, research, and information dissemination for Filipino smokers and vape users.

Conflict of Interest

None of the authors identify any conflict of interest.

Acknowledgements

This project was supported by the BUILD EXITO Program funded by the National Institute on Minority Health and Health Disparities through Portland State University to University of Hawai'i (1RL5MD009591), the University of Hawai'i at Mānoa Office of Public Health Sciences, and the University of Hawai'i RMATRIXII program funded by the National Institute on Minority Health and Health Disparities (U54MD007584). We would like to thank the RMATRIX II Biostatistics and Health Sciences Data Analytics team for their assistance in REDCap, 'Imi Hale Native Hawaiian Cancer Network funded by the National Cancer Institute (1U54CA153459) in the support of the survey development and utilizing its Native Hawaiian Smokers Survey, Hawaii's Filipino-serving organizations who assisted in the dissemination of the survey, and all our Filipino participants.

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