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Brief Report

Vape Shop Employees: Do They Act as Smoking Cessation Counselors?

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Abstract

Introduction: This study examined smoking cessation advice offered by vape shop employees, as well as their perceived awareness of vaping research.

Aims and Methods: This cross-sectional study was conducted in 121 vape shops in the Greater Los Angeles area of Southern California in four multiethnic communities (Hispanic/Latino, African American, Korean/Asian, and non-Hispanic White). A 35-minute interview assessed the employee's tobacco product use, perceptions of vaping research, and experience advising customers to quit cigarette smoking.

Results: Among 121 vape shop employees surveyed, 106 (88%) reported that they provided smoking cessation advice or counseling to customers. Nearly half (45%) reported having no vaping-related research knowledge, while 30% were aware of provaping studies only. Approximately 85% of employees had quit cigarettes by switching to e-cigarettes instead, whereas 15% were dual users. Only 49% believed that vaping products contribute to nicotine addiction among youth. Those who provided advice on quitting cigarette smoking reported significantly lower knowledge of e-cigarette research than those who did not provide advice ($p < .01$).

Conclusions: Most vape shop employees provide advice to customers who desire to quit cigarette smoking and initiate electronic cigarette use. However, they report a low level of awareness about e-cigarette research. Future research is warranted to examine the specifics of advice provided by vape shop employees. Training programs for vape shop employees and educational campaigns about evidence-based scientific findings on vaping may be beneficial.

Implications: Almost nine out of 10 surveyed vape shop employees offered cigarette smoking cessation advice to their customers, while almost half of the retailers report not being aware of any vaping-related research studies. Providing employees with training on evidence-based cessation advice could help protect customers. Also, training programs for vape shop employees and educational campaigns about the risk of nicotine addiction could potentially increase their motivation to avoid sales to minors and to warn adults about nicotine addiction.

Introduction

Electronic cigarette (e-cigarette) sales and use have increased rapidly within the past decade, resulting in a proliferation of brick-and-mortar vape shops.¹ These retailers sell and promote e-cigarettes and e-liquids, while also providing a unique environment for customers to learn about new e-cigarette products, receive cessation advice, try flavors, and socialize.²⁻⁴

In May of 2016, the U.S. Food and Drug Administration (FDA) extended its regulatory authority to e-cigarettes by classifying them as a tobacco product.⁵ Despite vaping enthusiasts' claims, and findings from earlier studies that concluded e-cigarettes are less hazardous than combustible cigarettes,⁶ debate over the relative safety posed by e-cigarettes continues.⁷⁻⁹ Moreover, growing evidence indicates that youth who use e-cigarettes are more likely to initiate combustible tobacco use or engage in dual use in the future.^{7,10,11}

Vape shop employees serve as one of the main points of contact for customers who are interested in trying e-cigarettes. Customers might expect vape shop employees to have knowledge about the health effects of e-cigarettes and methods of quitting cigarette smoking; yet vape shop employees are not health professionals and are not required to obtain such training. The level of literacy in evidence-based e-cigarette research among vape shop employees is unknown. Many vape shop employees underestimate the harm of e-cigarette use and often provide guidance on vaping products and share personal vaping experiences, acting as smoking cessation counselors.^{4,12,13} The percentage of vape shop employees that quit cigarette smoking and offering cessation advice is not known.

In this study, we investigate the percentage of a sample of vape shop employees that offer advice on quitting cigarette smoking in ethnically diverse neighborhoods; whether or not employees, themselves, quit smoking and switched to e-cigarette use; and employees' level of awareness of vaping research. We hypothesize that employees that report lack of awareness of e-cigarette research, who perceive that e-cigarettes are safer than combustible cigarettes, or who successfully switched from combustible cigarettes to e-cigarettes, would be more likely to provide smoking cessation advice than other vape shop employees.

Methods

Shop Recruitment and Data Collection

This cross-sectional study was conducted in vape shops in the Greater Los Angeles area in Southern California. In 2018, Yelp was used to identify 143 vape shops in locations with relatively high proportion of residents representing four ethnic groups (based on U.S. Census data²; 122 (85%) of these shops agreed to participate in the study. At one shop, the respondent declined to answer the question about providing counseling advice; hence, we excluded this shop from the analysis. Of the 121 vape shops in the analytic sample, 29 were recruited in non-Hispanic white areas, 32 in Korean/Asian areas, 30 in Hispanic/Latino areas, and 30 in African American areas.

Sampled vape shops were visited by two or three trained research members between 10 AM and 5 PM during workdays, and asked shop owners, managers, or clerks (based on availability) to participate in the study. After obtaining verbal consent, a 35-minute interview was conducted with one employee per shop to assess tobacco-related behaviors and document the attitudes and beliefs of retailers toward e-cigarettes relative to other tobacco products. If more than one employee per shop was available to take the survey

($n = 7$ of 121 shops), only one employee per shop was surveyed (whoever was closest physically to the interviewer at the time approached).¹⁴ All employees were informed that their responses would be kept anonymous. Those who agreed to participate in this study received a \$50 gift card. The study was approved by the university's Institutional Review Board.

Measures

Self-reported measures of gender, age, and ethnicity were obtained. E-cigarette and tobacco use behavior were assessed with the items: "Have you ever used a nicotine containing product?" and "Have you used a nicotine-containing product in the last 30-days?" (yes or no). Those who answered "yes" then indicated the type of product (e.g., cigarettes without filters, cigarettes with filters, e-cigarettes) they currently use (last 30 days) and have used in their lifetime. Their past quitting was assessed by asking: "Did you quit cigarette smoking by using e-cigarettes instead?" (yes or no).

Perceptions of product safety were assessed by asking "How safe do you think each of the following nicotine containing products are on a scale of 1–10?" (10-point scale, ranging from 1 = no danger/quite safe to 10 = dangerous/not safe at all). These products included cigarettes without filters, cigarettes with filters, e-cigarettes, cigars, regular hookah, and tobacco pipe. Combustible tobacco items were averaged (Cronbach's alpha = 0.80) into an index representing perceived safety of combustible tobacco products. Belief about using e-cigarettes for harm reduction was assessed with the question, "How strongly do you feel about the following statements regarding your general attitude towards the use of e-cigarettes? Electronic cigarettes are harmful to your health" (10-point scale, ranging from 1 = strongly disagree to 10 = totally agree).

Attitudes regarding harmfulness of vaping products to minors were assessed by responses to the following question: "In your opinion, do e-cigarettes and other vaping products contribute to young people becoming addicted to nicotine?" (yes or no).

Whether vape shop employees offered cessation advice to their customers was assessed with the question, "Do you offer counseling or advice to customers that want to, or have quit smoking?" (yes or no).

Knowledge of vaping research was assessed with the question: "Are you aware of any e-cigarette research (either for, or against vaping)?" (yes or no). Those who answered "yes" were further asked to explain their answer by specifying the type of research they were aware of (for or against vaping), the results of the study, and where it was published. Two experienced coders then analyzed this open-ended item (Cohen's kappa = 0.94) to create the "awareness of vaping research" variable (coded as 0 = aware of antivaping studies only, 1 = aware of studies about both vaping benefits and risks, 2 = aware of provaping studies only, and 3 = not aware of any research [including those who learned about e-cigarette safety from YouTube or other social media platforms]).

Data Analysis

We report demographic characteristics, tobacco use behavior, prevalence of offering quitting advice by vape shop employees, and awareness of research. We also report bivariate associations between provision of cessation advice and other study variables. Pearson's chi-square tests were calculated for categorical study variables, while t tests were calculated for continuous variables. All statistical analyses were conducted using Stata software (version 15.1; Stata Corp,

College Station, TX). Odds ratios with 95% confidence intervals were reported with statistical significance set at $p < .05$ (two-tailed).

Results

Of the 121 vape shop employees surveyed, 83% were males, with a mean age of 29.1 years ($SD = 9.0$); 27% were non-Hispanic white, 12% were Asian, 21% were Hispanic/Latino, 2% were African American, and 38% were of other ethnicities (e.g., Filipino, Middle Eastern). In addition, 54% were managers, 37% were customer service/clerks, and 19% were shop owners. The mean length of employment was 34.6 months ($SD = 20.9$). Lifetime cigarette use was reported by 111 (93%); 94 (85%) reported quitting cigarettes by switching to use of e-cigarettes, and 15% were dual users of combustible cigarettes and e-cigarettes.

Eighty-eight percent of the employees provided smoking cessation counseling advice to customers. Almost half of the respondents (54 [44%]) were not aware of vaping-related research studies, 36 (30%) reported awareness of studies that support vaping, 18 (15%) reported awareness of antivaping studies, while 13 (11%) were aware of studies about both vaping benefits and risks.

Vape shop employees rated e-cigarettes as less dangerous than combustible cigarettes (3.2 vs. 8.7, respectively, $p < .01$; on a scale of 1 = no danger to 10 = dangerous). Moreover, employees strongly supported the statement that e-cigarette products should be used as a harm reduction device (9.4 [$SD = 1.7$]; 1 = strongly disagree to 10 = totally agree). Half of the participants (51%) did not agree with the statement that vaping products may contribute to youth nicotine addiction. No variations across racial/ethnic neighborhoods were found.

Comparison of Employees Who Provide Smoking Cessation Advice Versus Employees Who Do Not

Vape shop employees who provided cigarette cessation advice to customers were more likely than other employees to be aware of provaping research only (32% vs. 13%) or were not aware of any research studies at all (46% vs. 33%) ($p < .01$). No other study variables were associated with the “offering cessation advice” item (Table 1).

Discussion

Most vape shop employees reported offering smoking cessation advice or counseling to their customers. Those employees who provided quitting advice were significantly less likely to be aware of vaping

research compared with those who did not provide this counseling. Our results support findings from past studies that many vape shop retailers view e-cigarettes as relatively harmless products and may overestimate their benefit for cessation of combustible cigarettes.^{4,12,13}

Vape shop retailers strongly agreed with the use of e-cigarettes as a harm reduction device. Among those employees who used cigarettes in their lifetime, 85% reported they had used e-cigarettes to quit smoking. Vape shop employees are uniquely situated to explain the risks and benefits of e-cigarette products and proven methods for quitting combustible products.⁴ However, they may not have the cessation counseling training to offer impartial evidence-based advice. Given that 15% of those who provide counseling advice were still dual users, their role as pathfinders may be questionable. Moreover, only half of the surveyed vape shop retailers believed that e-cigarettes contribute to youth nicotine addiction, which suggests they may not be familiar with recent studies showing a link between adolescent e-cigarette use and subsequent combustible cigarette initiation.^{10,11} Educating vape shop employees about the risk of nicotine addiction could potentially increase their motivation to avoid sales to minors and to warn adults about nicotine addiction. Research examining the nature of counseling advice provided by vape shop employees, as well as how customers are interpreting these messages, is warranted.

This study has several limitations. First, only vape shops in Southern California were observed, which might limit generalizability to other geographic areas. Second, the amount of time spent in shops, and the role of the store employee interviewed, varied, which could influence the data obtained. However, no systematic bias of time in shop or employee role was uncovered. Third, information about what a respondent considered advice or counseling was not collected in this study, and some of the participants may have misinterpreted the definition of “counseling,” which may have affected our results. Further studies should consider collecting such data using a qualitative approach to obtain a better understanding about the discussions that occur in vape shops. Finally, given the nature of the data (self-reported), recall and social desirability biases may have affected the results.

Since employees do engage in providing smoking cessation advice, training in evidence-based smoking cessation strategies may be helpful and contribute to the protection of customers. Additionally, given the low level of self-reported awareness about e-cigarette research among vape shop retailers, educational materials on evidence-based conclusions about vaping may help these employees advise customers about the health risks of vaping. The FDA has a web site

Table 1. Vape Shop Employee Perceptions and Cessation Advice Behavior^a

	Total sample ($n = 121$)	Provided cessation advice		p^b
		Yes ($n = 106$)	No ($n = 15$)	
Perceived safety of e-cigarettes scale, mean (SD)	3.2 (1.6)	3.3 (1.6)	3.0 (1.6)	.30 ^c
Perceived safety of combustible tobacco scale, mean (SD)	8.7 (1.4)	8.7 (1.4)	8.8 (1.4)	.66 ^c
E-cigarettes contribute to youth nicotine addiction (Yes)	49	50	43	.64 ^d
E-cigarettes should be used as a harm reduction device mean (SD)	9.4 (1.7)	9.4 (1.7)	9.4 (1.5)	.94 ^c
Awareness of vaping-related research				
Not aware or aware of provaping studies only	75	78	47	<.01 ^d
Aware of studies about vaping risks	25	22	53	

^aData are expressed as percent (%) unless otherwise indicated.

^bFor the difference between those provided and not provided counseling advice to customers.

^cCalculated using the independent samples t test.

^dCalculated using the χ^2 test.

for retailers.¹⁵ Training and certification by FDA may be possible options offered through the FDA web site to ensure that employees in vape shops are providing sound scientific advice to consumers.

Supplementary Material

A Contributorship Form detailing each author's specific involvement with this content, as well as any supplementary data, are available online at <https://academic.oup.com/ntnr>.

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Declaration of Interests

The authors declare that there is no conflict of interest. The authors alone are responsible for the content and writing of this paper.

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