

# Perceived benefits and risks of e-cigarettes among vape store owners: A qualitative study

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## Introduction

- The rate of electronic nicotine delivery systems (ENDS) use has increased from 4.9% in 2011 to 9.4% in 2013 among adults who are current cigarette smokers.
- Recent studies attribute this shift to popular beliefs that ENDS are less harmful than cigarettes and are considered to be an effective cessation tool.
- ENDS can be sold online, at convenience stores, or at specialty stores known as vape shops
- In the United States today, there are about 8,500 vape stores that sell various types of e-cigarettes, e-juices and accessories.
- In 2014, vape sales accounted for \$1.5 billion of the estimated \$2.5 billion U.S. ENDS product sales
- Vape shops are playing an important role in this market.

The present study sought to:

- Explore vape store operators' perceptions of the benefits and risks of ENDS
- Identify reasons for vaping among their customers and what information the vape store operators provide to the consumers.

## Methods

### Vape Store Selection

- Vape stores were located in the southeastern region of the U.S., including Florida, Georgia, North Carolina, and South Carolina
- Cities were randomly selected within each state
- Five vape stores per state were identified using internet searches and were contacted to participate
- Upon receiving consent, telephone interviews were conducted by a trained interviewer using a semi-structured interview guide.
- Interviews of approximately 20-30 minutes were conducted with 20 vape store owners
- Participants were given gift cards worth \$50 to compensate them for their time

### Inclusion Criteria:

- Participants were owner or manager of the vape shop, ≥ 18 years of age, and spoke English

### Data Analysis

- Recorded interviews were transcribed, and the data were analyzed using NVIVO analytical software.
- All relevant codes were identified independently by the authors using three transcripts. A master list was designed using all the identified codes.
- Transcripts were coded independently by the authors using the master list.
- The master list was refined iteratively when a new theme emerged.
- Inter-rater reliability was assessed to examine coding agreement. Any discrepancies were resolved through consensus among the authors.

## Results

**Table 1.** Themes and excerpts/quotations regarding benefits and risks of ENDS

Themes	Example excerpts/quotations
<b>Benefits of using ENDS</b>	
Improvement in, physical and psychological health, and olfactory organs	"The benefits of using an e-cigarette is – before the e-cigarettes came I smoked two packs a day. I couldn't climb a set of stairs to save my life; I just stayed out of breath."  "Since I've started vaping I smell that litter box smell! So you know, my food tastes better too."
Help quit or reducing number of cigarettes	"It provides a good alternative to people to cut back on smoking or quit and still provide them with the same satisfaction they get when they're smoking"  "Just being able to quit without some of the hassle. I mean, a lot of people issue is the mouth to hand coordination that goes along with smoking."
Less harmful compared to smoking	"But nicotine itself hasn't really shown harmful products as much as the tar and stuff has inside of the cigarettes itself"  "Basically you are cutting out combustion from cigarettes and getting rid of the vast majority of harm that is caused from traditional analog smoking"
Cosmetic	"So you don't have that smell lingering around. It doesn't discolor your teeth like cigarettes do"
<b>Risk of using ENDS</b>	
Health related including allergy, addiction, and dry mouth	"And they'll break out, and the breakout looks like a little rash. And then they find they're allergic to propylene glycol."  "You know, nicotine is addictive, nicotine is often times compared to caffeine, you are addicted to caffeine, you are addicted to nicotine."
None	"Some say sometimes that it may irritate their throat"  "In my opinion there are none"
Uncertain	"I personally haven't experienced any negative results of electronic cigarettes."  "Unfortunately, that's not something we entirely know yet, I mean, it's such a new industry. As of right now, that's such a hard question for me to answer because personally I don't see a ton that are – that we know of right now. But we don't know the long-term use risks of this product yet because it is so new."
<b>Reasons for use</b>	
Cessation	"It benefits the people that are ready to quit."
Replacement for cigarettes in smoke-free places	"There are some, there are some people that utilize the e-cig because they're in certain situations where, like say for work, or certain, you know, environments where they're not allowed to smoke, but they still want that sensation of smoking"
Personal lifestyle	"There is a new younger crowd that is using vaping and not even smoking"

## Results

### Sources of information about ENDS

Different sources were used by the vape store owners to obtain ENDS-related information: websites and online forums, trade shows and conventions, media, and press. In addition, they referred to their own personal experience, networks of friends, and other vape store owners.

### Information about ENDS shared with customers

Vape store owners reported they provided instructions on how to use ENDS, helped with selection of nicotine levels and e-juice flavors, provided general information, discussed benefits of ENDS and shared relevant website details and research findings. Most of the information was shared orally, but some also provided customers with printed materials such as flyers and pamphlets. Some of them used their business website and Facebook page to communicate or share relevant product-related information.

### Information needs

They indicated that having information on long-term health impact, health benefits, and ENDS devices and their components and e-juice product safety and devices will be helpful.

- "I mean yeah it would be great if there were maybe some kind of official information sites for dealing with nothing but electronic cigarettes and safety, safety precautions and stuff of that nature".
- "Well, really, just some more research into the benefits and any health problems that could be associated with it, with the juice itself, just inhaling the vapor."

## Conclusions

- Most vape store owners perceived ENDS to have health benefits and to be less harmful than cigarettes
- Most vape store owners perceived ENDS to have no health risks, and a few reported risks of allergies to propylene glycol.
- Vape store operators indicated that most of their customers used ENDS as a cessation tool or to help reduce the number of cigarettes smoked.
- Vape store operators indicated they relied on their personal experience, manufacturers, websites and forums, and word of mouth for information.
- They used Facebook and their companies' website to share information with their customers
- Limitations:
  - This was a qualitative study of 20 vape store operators, thus findings from this small sample may not generalize to other vape stores in the U.S.
  - The interviews were conducted by telephone, which limits the ability to capture non-verbal cues
- Future interventions should focus on improving vape shop owners' awareness of the risks and benefits of ENDS use.

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