



## OBJECTIVES

- To explore the extent to which youth qualities of self-control, views on risk-taking, and leadership skills are associated with vape use.
- To determine whether the views of self, as a risk-taker, leader, and or person in control of their behaviors, increased or decreased with every profile of higher ENDS use.

We hypothesize that adolescents that describe themselves as risk-takers with limited self-control and leadership skills are more likely to have high degrees of vape use.



Image 1: Group of adolescents



Image 2: Adolescent with vape

## BACKGROUND

Adolescence is generally considered a time of increased risk-taking, from comparatively benign risks like curfew breaking to more serious risks like sexual behavior, alcohol use, and drug use. Concurrently, pressure from peers and social media heightens, and youth exposure to and curiosity about vaping also increases. Youth characteristics like leadership skills, high self-control, and low likelihood of risk-taking may serve as protective factors for youth and prevent vape initiation.

## MEASURES

**Risk-taking:** We asked respondents “How much of a risk taker are you?” The answer choices ranged from 0 (not a risk taker at all) to 10 (very much a risk taker).

**Self-control:** Respondents were asked to consider how true the following statement was for them, “I control my own behaviors and activities.” The answer choices ranged from 0 (not true) to 10 (very true).

**Leadership:** We asked respondents how true the following statement was for them, “I consider myself a leader.” The answer choices ranged from 0 (not a leader) to 10 (a leader).

Two sample t-tests assessed differences between the reported average ratings from each usage profile.

## MATERIALS AND METHODS

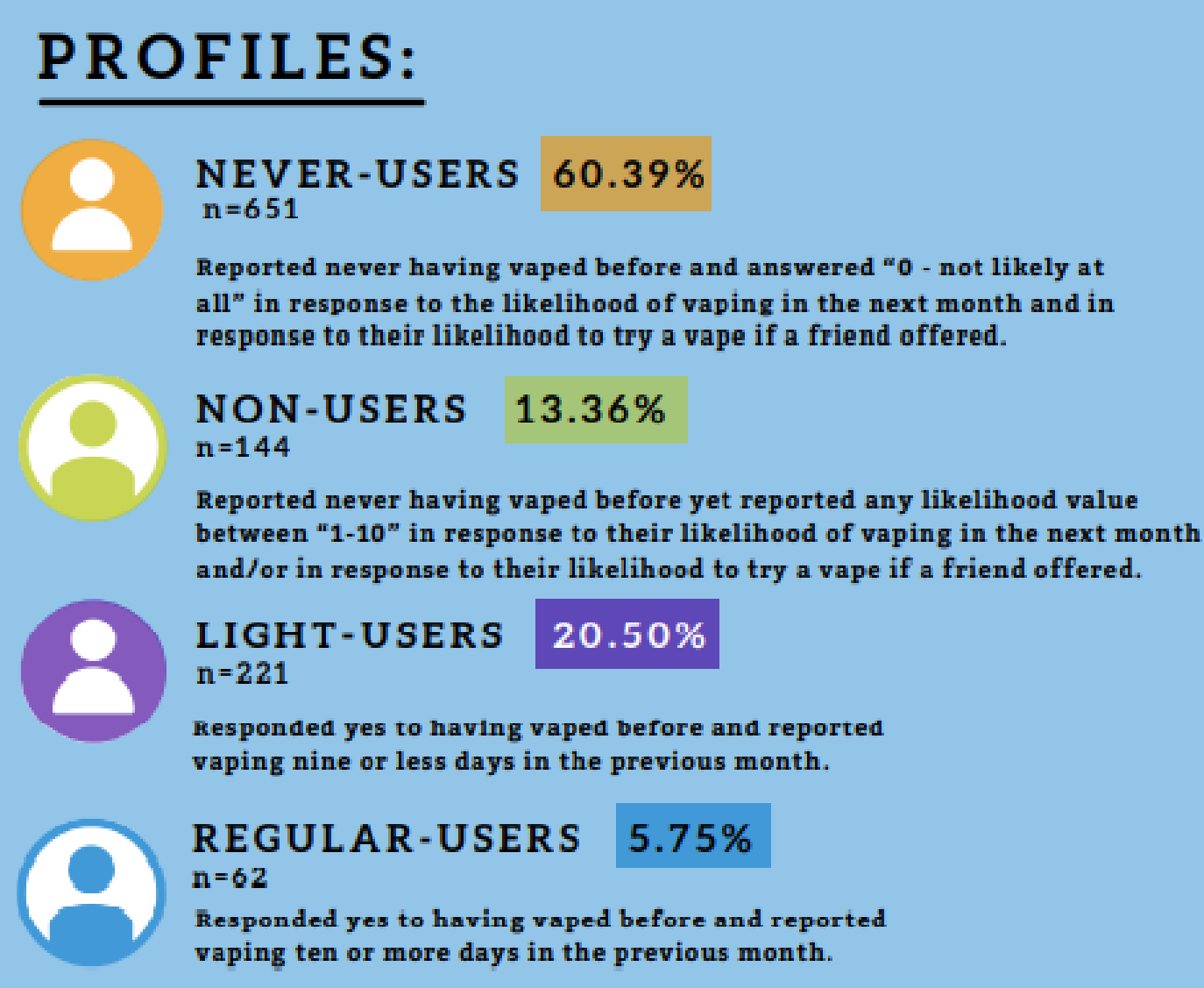
In May 2020, KDH Research & Communication (KDHRC) contracted a firm to recruit and administer a one-time online survey (the Vaping Attitudes Youth Perspectives Survey (VAYPS) to youth, aged 13 to 17, across the United States. Qualification criteria was limited to age only and the final sample consisted of 1,100 youth. We achieved an equal mix of age and gender, with percentages of race closely mirroring national averages among this age range. The VAYPS consisted of 181 questions pertaining to vape-related attitudes and behaviors and explored demographic, psychographic, social, and behavioral variables.

We used data from VAYPS to create four profiles of varying degrees of vape use to compare ratings of characteristics of self. We designed these profiles to represent incremental intensity of vape use ranging from: never-users, who have no or low likelihood to initiate vape use to regular-users who already use vapes regularly. We present the questions and answer choices we used to create these use profiles in Table 1 and the usage profile breakdowns in Figure 1.

Table 1: Questions and answer choices to create ENDS use profiles

Questions	Answer Choices
How likely are you to try a vape in the next month?	11-pt scale from “0-Not at all likely” to “10-Extremely likely”
If one of your five closest friends offered you a vape in the next month, would you try it?	11-pt scale from “0-Not at all likely” to “10-Extremely likely”
In the past 30 days, on how many days did you vape?	“0 days” “1 to 2 days” “3 to 5 days” “6 to 9 days” “10 to 19 days” “20 to 29 days” “All 30 days”

Figure 1: ENDS use profile breakdown



## RESULTS

Overall, never-users report highest levels of perceived self-control yet have lowest perceptions of being a leader.

- Risk-taking:** Never-users had the lowest risk-taking perceptions among all youth profiles. Reported perceptions of being a risk taker grew with each increased vaping profile.
- Self-control:** Youth perceptions of self-control were highest among never-users and second-highest among regular-users.
- Leadership:** Never-users were least likely to consider themselves leaders, while regular-users were most likely.

Table 2 shows the average rating and standard deviation of self-reported views of self-control and risk-taking by vaping profile.

Table 2: Youth self-reported views of self-control and risk-taking

Variable		Never-users	Susceptible-users	Light-users	Regular-users	Overall
Self-control rating	Average rating 0-10 (SD)	8.34* (1.99)	7.49 (2.04)	8.02 (1.88)	8.23 (1.93)	8.15 (2.00)
Risk-taking rating	Average rating 0-10 (SD)	4.80** (2.47)	5.83 (2.51)	6.27 (2.34)	7.53 (2.17)	5.40 (2.57)

\*Significantly higher than susceptible-users (p<0.001) and light-users (p=0.04)

\*\*Significantly lower than susceptible-users, light-users, and regular-users (p<0.001)

Two-sample t-tests between profiles revealed that never-users reported significantly lower perceptions of being a risk taker than susceptible-users, light-users, and regular users; all with p-values near zero. Susceptible-users reported significantly lower perceptions of being a risk taker than regular-users, with a p-value near zero. Light-users reported significantly lower perceptions of being a risk taker than regular-users (p<0.001).

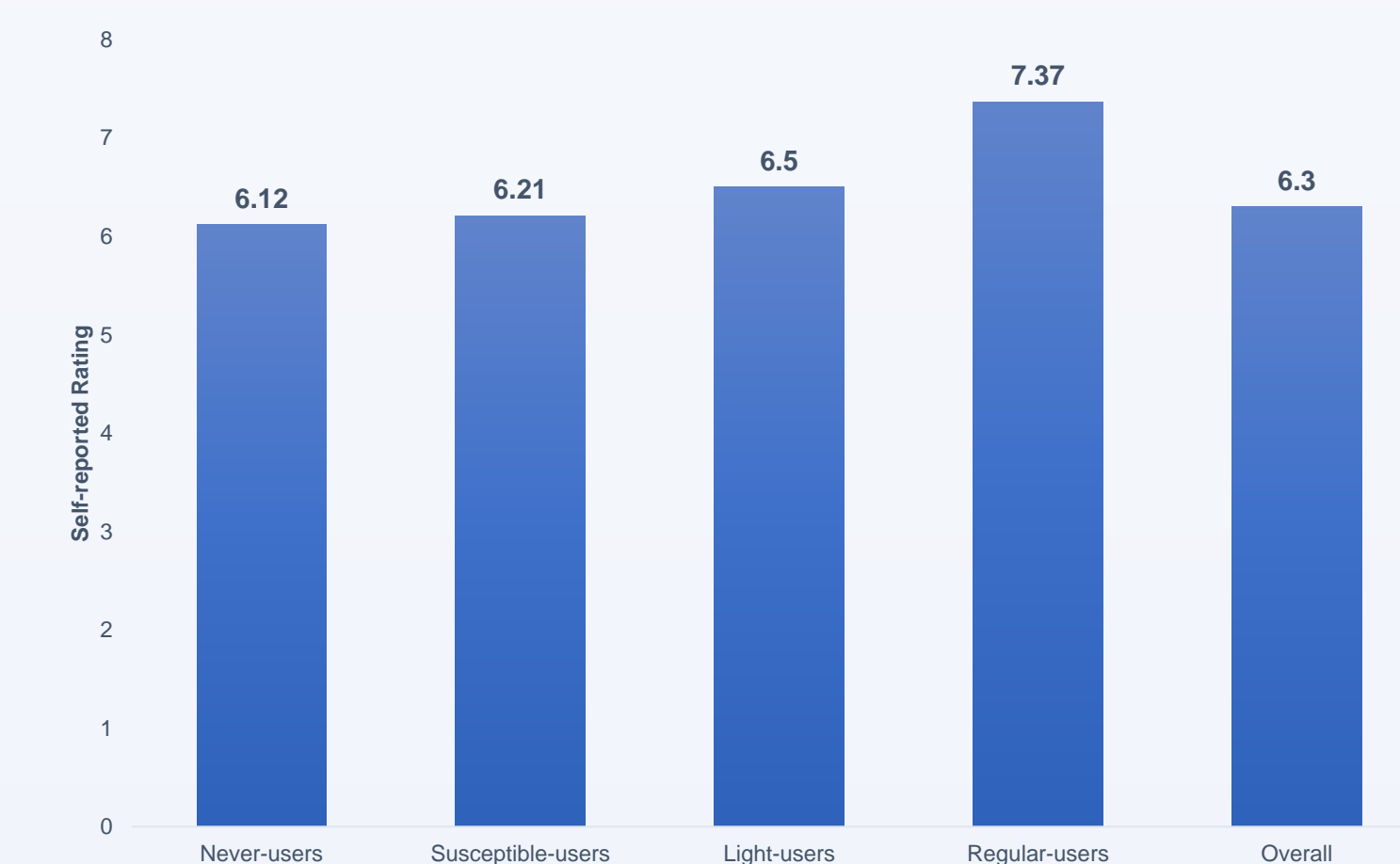
Within self-control, never-users reported significantly higher ratings for perceptions of their self-control than susceptible-users (p<0.001) and light-users (p=0.004). Additionally, susceptible-users reported significantly lower ratings for self-control than light-users (p=0.01) and regular-users (p=0.02).

## RESULTS (continued)

Regular-users reported significantly higher ratings for viewing self as a leader than light users (p<0.01), susceptible-users (p<0.01), and never-users (p<0.001).

Figure 2 shows the average reported ratings from an 11-point subjective scale (0-10) for youth leadership. Graph results are from two-sample t-tests conducted between each profile comparison.

Figure 2: Youth self-reported leadership rating by profile



## DISCUSSION

As pressure from outside sources like peers and social media increases, youth are exposed to vapes more often, making it harder for susceptible youth to resist vape initiation. Regular-users readily admit to risk-taking behavior, consistent with their behavior. However, regular-users believe that they have high self-control and identify themselves as leaders.

While never-users had the expected high self-control and low risk-taking ratings, susceptible-users had low leadership rating and concerningly, a low self-control rating. Lack of these attributes may contribute to susceptible-users willingness to begin vaping in the future.

One limitation of the study is our reliance on youth self-reported descriptions of self.

## CONCLUSION

As hypothesized, youth with higher vape usage had significantly higher risk-taking ratings. However, regular-users also reported high leadership and self-control ratings, deviating from our hypothesis.

Adolescence, as a time period, is associated with poor impulse control and a greater likelihood of risk-taking behaviors. While never-users had the highest self-control and lowest risk-taking ratings, susceptible-users had the lowest self-control rating even though they had not vaped before. This vulnerable group of adolescents need additional support to interrupt the vape cycle before it starts.

## RECOMMENDATIONS

- Use longitudinal approaches to continue researching the characteristics of self that may decrease susceptibility to vape initiation and degree of vape usage.
- Consider further research on self-control and addiction as it relates to youth who vape.

## ABOUT KDHRC

KDH Research & Communication (KDHRC) provides timely dissemination of new research in public health and social services fields. Our mission is to produce and disseminate creative, science-based programs that improve the health and well-being of the nation’s youth, family, and communities.

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