Introduction

According to the Centers for Disease Control and Prevention (CDC), approximately 8.1 million Americans used electronic cigarettes in 2018.

CDC estimated the highest prevalence among young people ages 18 – 24.

Ongoing COVID-19 increased mental, economic, and social stress can affect future e-cigarette use.

Since this virus primarily affects the upper respiratory system, its effects can impact future e-cigarette use.

This study examined the link between COVID-19 and vaping among young adults ages 18 – 24 due to stressors associated with the ongoing pandemic.

Methodology

• COVID-19 OR Coronavirus
• E-cigarette OR Vaping
• Stress(ors)

Search Terms

• Articles written in English
• U.S. based articles
• Samples of young adults ages 18-24
• Cohort or Cross-Sectional study designs

Table 1. Review Matrix

<table>
<thead>
<tr>
<th>Title</th>
<th>Author Year</th>
<th>Study Population</th>
<th>Study Design</th>
<th>Significant Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary impact of the COVID-19 pandemic on smoking and vaping in college students.</td>
<td>Sokolovsky, A.W., et al. 2021</td>
<td>U.S. (n=18,567) enrolled in college and report use of e-cigarettes (n=69)</td>
<td>Cohort study</td>
<td>Vaping frequency decreased from prior closing to since closing; however, decreased frequency does not mean decreased quantity. 24 participants (28.9%) passed past week use since closing</td>
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<tr>
<td>Changes in cigarette and e-cigarette use among US young adults from before to during the COVID-19 pandemic: news exposure and risk perceptions as potential predictors</td>
<td>Bennett, B., et al. 2022</td>
<td>Young adults in the U.S. who reported use of e-cigarettes between 2019 to 2020 (n=587)</td>
<td>Cohort study</td>
<td>There was a correlation between greater exposure to COVID-19 news, fewer days of e-cigarette use within the past month, and no e-cigarette use within the past month for the W3 e-cigarette users who wished to quit. W3 cigarette non-users were more likely to initiate smoking if they were younger, the perceived smoking risk was lower, and they had smoked cigarettes and e-cigarettes throughout their lives.</td>
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<td>Decreases in smoking and vaping during COVID-19 stay-at-home orders among a cohort of young adults in the United States</td>
<td>Denlinger-Apte, R., et al. 2022</td>
<td>Young adults from 11 colleges and universities in North Carolina and Virginia who reported e-cigarette use between Spring 2019–Fall 2019 (n=127)</td>
<td>Cohort study</td>
<td>Wave 14 and 15 determine participants had a 41% odds of reporting 30-day e-cigarette use.</td>
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<td>Impacts of COVID-19 on electronic cigarette purchasing, use and related behaviors</td>
<td>Maloney, S.F., et al. 2022</td>
<td>U.S. Young adults who’ve reported e-cigarette use (n=126)</td>
<td>Cohort study</td>
<td>E-Cigarette health considerations, perceptions of COVID-19 and E-Cigarette risks, access to E-Cigarette supplies, alternative products, increased use, altered routines and E-Cigarette use, initiatives to minimize E-Cigarette use, and COVID-19 protection were identified as ten clusters.</td>
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<td>Increased nicotine vaping due to the COVID-19 pandemic among US young adults: associations with nicotine dependence, vaping frequency, and reasons for use</td>
<td>Parks, M.J., et al. 2022</td>
<td>U.S. 12th graders who were surveyed at age 18 (n=1444)</td>
<td>Cross-Sectional Analysis</td>
<td>About 16.8% vapers increased use, 44.4% decreased, 38% didn’t change</td>
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<td>Perceptions of tobacco product-specific COVID-19 risk and changes in tobacco use behaviors among smokers, e-cigarette users, and dual users</td>
<td>White, A.M., et al. 2021</td>
<td>U.S. Young adults who’ve reported e-cigarette use (n=143)</td>
<td>Cohort study</td>
<td>56.1% of e-cigarette users felt their risk of contracting was higher: 27.3% e-cigarette users increase vaping whereas 23.8% decreased</td>
</tr>
</tbody>
</table>

Results

• Of the 31 articles included in the review, 24 did not meet the inclusion criteria, resulting in 7 articles included in the review.

• Two research articles showed the impact of stay-at-home orders on e-cigarette use.

• Only one of those studies found that e-cigarette use decreased among the study population (n=1,244) when stay-at-home orders were enacted.

• The other five studies examined other potential stressors, such as news exposure (n=687), moving home versus living independently (n=69), access to e-cigarettes (n=126), and risk of contracting the coronavirus (n=143) on e-cigarette use.

Discussion

• The vaping patterns of young adults were examined to identify possible COVID-19 stressors.

• Many factors may contribute to fluctuations in vaping due to COVID-19 including increased stress, decreased access to products, and initiatives to minimize e-cigarette use.

• Future research should examine how global issues effect the population so that researchers can determine preventative interventions to decrease smoking rates.

References