

Vaping: How Bad Is It?

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Abstract

This paper discusses the pressing issue of whether or not vaping is dangerous. Adolescents are surrounded by people both their age and older partaking in vaping, juuling, and other types of e-cigarettes. Scholars have been researching the health effects and the social effects that have directly occurred because of vaping. The following paper will analyze many texts in order to inform the audience on the pressing new information being found. Students are being faced with this new potentially fatal hobby and have no idea about the drastic effects that may be taking place within their lungs. There have been advances in research that allows people and society to make an educated decision on how dangerous vaping is to adolescents. The information laid out in this paper presents available research that will allow the public to have a better understanding of the outcomes that come with vaping at such a young age.

Vaping: is this new fad affecting the next generation? Within recent years, our community is being faced with a new social activity that may be causing more harm than good. Everyone from parents, scientists, teachers, public health professionals, etc. are facing this issue. E-cigarettes are being pushed on to our youth and there is not much information on the matter. Adolescents are being presented with these new devices and we do not know the effects they have on their bodies. Inhalants are a complex topic that needs more research, so this paper will begin to explain the basic ideas that will help the reader decipher if vaping is truly dangerous.

There are many different points of view on the matter of e-cigs and inhalants. In *The Guardian*, Linda Bauld begins to explain how e-cigarettes are indeed benefitting people within their journey of quitting smoking. She claims that “switching from smoking to vaping will have health benefits;” she continues to go on and explain that overall there has been a reduction of youth that partakes in smoking cigarettes due to the new use and availability of vapants (Bauld, 2018). Vape, e-cigs, and juuls have been banned for adolescents in many countries, but Bauld suggests that this is going to change due to the recent studies that have come out with evidence suggesting that vaping does not indeed lead youth to begin smoking tobacco. She states that studies cannot prove that the reason adolescents began smoking is because of the vaping; she infers that the events may be completely unrelated (Bauld, 2018).

Another source that also supports the use of vape is from *Scientific Reports* where Riccardo Polosa, as well as other scientists, wrote “Health Impact of E-cigarettes: a prospective 3.5-year study of regular daily users who have never smoked” (2017). This scientific study followed around a group of millennials that continually partook in e-cigarette use. The study claims that there was “no significant change from the baseline was observed over the 3.5-years observation person in the EC group. No significant difference was found between EC users and control subjects. None of the lung function variables showed a significant between-group” (Polosa, 2017). The scientific article ran an experiment that revealed that there were no significant findings that the vape leads to further health implications. On the other hand, the article does state that long term effects from vaping have “never been formally tested in a research study” (Polosa, 2017). Polosa, and his team of authors in

this scientific study, also state that since the “particle size in ECs aerosols are well within respiratory range, these particles can penetrate deep within the lungs, therefore the concern for long term exposure to ECs aerosol emissions many carry some health risk” (Polosa, 2017). One final claim from this specific piece of text informs the reader that “flavorings in the liquid are generally considered safe to eat but have largely unknown effects on the lung when heated and inhaled. Chronic exposure to high levels of diacetyl...have been shown to be associated with cases of bronchiolitis obliterans (i.e. ‘popcorn lung’)” (Polosa, 2017). There are scientific ties to vaping being harmful and so it is only a matter of time before it is proven very dangerous.

“Students Vape in Face of Uncertain Health Effects” by Josephine Chu, touches on the idea that scientists ultimately do not know much about the affects vaping has on the human body. Chu included first statements of young people on the matter. She interviewed a young 18- year-old girl who believed, ““doing smoking tricks with friends, without the added risk of addiction is a cool bonding experience”” (Chu, 2015). This statement shows how little the youth of this generation know about vaping and e-cigs; they are unaware of the physical harm that vaping causes to their body. Students are only looking at the superficial reactions to the smoke tricks that they are performing in front of their peers.

As mentioned before, Kimberly Wagoner, and co-authors, claimed in “E-cigarettes, Hookah Pens, and Vapes: Adolescents and Young Adult Perceptions of Electronic Nicotine Delivery,” that many students believe that “electronic cigarettes are perceived to be accessible, easy to conceal, convenient, and modern”(Wagoner, 2016). This article informs the reader that inhalants are indeed unregulated by the FDA; this was alarming to many people because they then stated that they “wouldn’t want to be inhaling something that isn’t being regulated by anyone” (Wagoner, 2016). Although most people do not experience drastic side effects from inhalants, some people who partake in vaping, claimed that they had a few health effects like “nausea and headaches” (Wagoner, 2016). People have an internal drive to live and be healthy, therefore when adolescents think about the detrimental harm that they are potentially causing to their own lungs by vaping, they worry.

To many people’s surprise, adolescents are often swayed to believe something if they are exposed to it in their everyday lives. Generation Z is constantly on social media where a positive exposure to vapors is being implemented into their minds. The *Journal of Health Communication* informs the reader that there are actually “robot accounts [that] are perceived as credible and appear highly ranked in search results with hashtags” (Martinez, 2018). Actually, “66.4% of tweets had a positive tone versus sources coded as Organization in which 82.6% of tweets have a positive tone” (Martinez, 2018). The overall tone on Twitter, a social media platform, is overwhelmingly positive towards vape and e-cigarettes. Positive statements on social media may ultimately lead to the next generation to think that these are fun, safe alternatives that allow them to be cool, but they are not aware of how dangerous they could be. Likewise, Martinez states that, “it is important for researchers and public health professionals to note that organizations are disseminating mostly positive information about e-cigarette” (Martinez, 2018). These statements have a large impact on society and are causing many people to think that vaping and juuling is beneficial and so, they do not think of the potential side effects.

The final text used in this paper is titled “Hey, Can I hit Your Juul?; The Truth Behind the ‘Cigarettes’ of Gen Z” explains that the juul was originally invented by Stanford University as a tool for people who are trying to quit tobacco cigarette smoking. The article quotes the *New York Times* saying, “E-cigarettes deliver nicotine through a liquid that is heated into a vapor and inhaled, cutting

out the cancer-causing tar of combustible cigarettes. However, vaping liquid contains additives such as propylene glycol and glycerol that can form cardiogenic compounds when heated” and they found “substantially increased levels of five carcinogenic compounds in the urine of teenagers who vape” (“Can I Hit Your Juul?,” 2018). Adolescents are being exposed and encouraged to take part in this new drug that is not researched enough to know the long-term and potentially harmful effects. And ultimately, “we don’t know the lifelong risks of inhaling these flavorings and dyes, which are extremely worrisome” (“Can I Hit Your Juul?,” 2018).

After researching the previous articles, it is easy to see that this new social movement is not a black and white issue. There are a lot of perspectives on whether vaping, e-cigarettes, and hookah is harmful to people and their bodies, especially youth. As mentioned in this paper, some people truly believe that there is nothing wrong with people inhaling water vapor. For instance, Polosa states that “there is concern as to whether chronic exposure to their residual toxicological load may nevertheless carry a risk for lung health” (Polosa, 2017). By presenting this statement he and his fellow authors are blatantly calling out people who do believe that it is harmful since there is no official proof of the long-term effects.

On the other hand, a lot of people do think that vaping is playing with fire, since we indeed do not know what effect this has on our bodies. One of the most common ideas that has been tossed about revolve around the idea that there are chemicals within the vape juice that could potentially be very harmful. This chemical is the diacetyl; diacetyl is a compound that is used in other foods such as the buttery flavoring in microwave popcorn. This compound is “safe to eat, but have largely unknown effects on the lung when heated and inhaled;” this can be very dangerous because the lungs are very essential to life and if the diacetyl is harming the lungs there is going to be a large problem in the coming years (“Can I Hit Your Juul?,” 2018). “Hey, can I Hit Your Juul? the Truth Behind the ‘Cigarettes’ of Gen Z” quotes *The New York Times*’ stating “vaping liquids contain additives such as propylene glycol and glycerol that can form carcinogenic compounds” (“Can I Hit Your Juul?” 2018). Carcinogenic compounds are defined by Merriam-Webster dictionary as “producing or tending to produce cancer (Merriam-Webster). Carcinogenic compounds are alarming because if an adolescent partakes in juuls, where one juul pod is equivalent to 200 puffs of a cigarette, then they are potentially causing cancer to develop (“Can I Hit Your Juul?,” 2018).

Adolescents are especially biased on this matter. Generation Z and Millennials alike are both partaking in this addictive hobby. Many of the sources mentioned above use both professional and personal accounts on the matter. McNally, a 22-year-old female, states that “people who continue to Juul in college are doing it out of habit” (“Can I Hit Your Juul?,” 2018). Juuling and vaping were created in 2017 by Stanford University in order to help people quit smoking; this concept was designed to aid people in quitting cigarettes and not for recreational use (“Can I Hit Your Juul?,” 2018). Since people think that “doing smoke tricks with friends without the added risk of addiction is a cool bonding experience,” and they are not aware of the serious effects that they could be causing to their lungs just to “bond” with those around them (Chu, 2015). The problem most likely began with the idea that it is a fun and cool way to hang out with friends, but they were not aware that they were actually playing with fire when they began using nicotine. Nicotine is a poisonous alkaloid C₁₀H₁₄N₂ that is the chief active principle of tobacco and is used as an insecticide” (Merriam-Webster). Although, it is tobacco combustion “that cause the most adverse health effects of smoking” (Polosa, 2017) rather than nicotine, it is still a chemical that is used along with the

tobacco products that cause people that smoke to become addicted since it is indeed an “addictive chemical” (Wagoner, 2016).

Since the Juul was originally created and intended for people who are wanting to cease smoking, companies claim that they do not market towards adolescents. Some people and researchers that think vaping is good utilize facts such as “youth smoking rates continue to decline at an encouraging rate” (Bauld, 2018). They are not wrong, but they are simply stating that the amount of youth participating in cigarette smoking is declining, they are not including vaping rates; therefore, the youth are not smoking cigarettes but rather hitting juuls, vapes, and hookahs which may be even more dangerous than cigarettes (Wagoner, 2016).

Overall, these scholars have attempted to research this complicated topic. There are valid points from both for and against vaping. Both sides implemented ideas that are logical and practical to our day-and-age. As time goes on and more research is conducted, many researchers are siding with the group against vaping, e-cigarettes, and hookah. The students interviewed in Wagoner’s article when a Gen Zer stated that the “lack of regulation made the products seem riskier and would deter use” (Wagoner, 2016). There are indeed a lot of carcinogenic ingredients that are in the vape juices (“Can I Hit Your Juul?,” 2018). If students knew that this recreational habit could eventually lead to cancer, then they would rethink before trying. Carcinogenic compounds are very serious and it was proven that students who partake in juuling, vape, etc. have increased levels of carcinogenic compounds in their urine (“Can I Hit Your Juul?,” 2018). High levels of carcinogenic compounds are very scary and are extremely dangerous.

Unfortunately, there are a few points and flaws that can be found within these scientific articles. There were a few limitations that came with these studies. One of these factors came with small sample sizes or too many personal accounts without much science to back it up. Although the researchers told the reader that they were aware of the problems, it still causes the data to be on the verge of unreliable. The information used from sources chosen were used based off of the information that were aligned and supported another researchers’ work. There are a lot of differing opinions and perceptions when it comes to this matter of whether vaping is dangerous. Other than these few flaws, these sources are reliable and credible. There is a crucial need for long-term effect studies to be performed in order for people to come to a conclusion on the matter. Adolescents need to be informed on what the real effects of their hobby may be having on their life forever. There is no easy answer to this matter. There is no black and white here, but with enough evidence, people may have their eyes opened and the number of people partaking may decrease. Parents and educators need to have the research to tell young children, who have yet to try vaping, in order to inform them of the risks that their older siblings and friends may have already fallen into. Therefore, there is no conclusive evidence that vapes and e-cigarettes are not harmful. Hopefully, in the upcoming years, there will be more studies conducted that will give scientists and adolescence the truth about this new fad.

Since inhalants are a new complicated hobby, it is crucial for people to learn more about it in order to make an educated decision on how to approach the topic. If parents and educators are just claiming that vaping is bad without any medical or logical proof, it may prove to be very difficult to convince adolescents to stop their habit. Hopefully within the next couple of years, there will be a long-term study conducted that will offer evidence to the pros and cons of adolescents using these devices. If research is not conducted on this issue, affecting adolescents, it is going to continue down

a dangerous route where it has the potential to cause drastic negative health problems. Therefore, there should be research studies conducted as soon as possible for the sake of our world.

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