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An Investigation of the Response by Arkansas Administrators to Students Vaping in Their Schools

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AN INVESTIGATION OF THE RESPONSE BY ARKANSAS ADMINISTRATORS
TO STUDENTS VAPING IN THEIR SCHOOLS

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Dedication

I would like to dedicate this dissertation to my wife and son, who have never stopped

believing in me, along with my parents, who pushed me my whole life to become the

man I am today. Without their support, this could not have been possible.

Acknowledgments

Thank you to my committee members, Dr. John Freeman, Dr. Steve Bounds, and Dr. Mike Hernandez for seeing this through with me. Thank you to my fellow colleagues who pushed me to accomplish this goal, as without their encouragement, this would not have been possible.

Abstract

AN INVESTIGATION OF THE RESPONSE BY ARKANSAS ADMINISTRATORS
TO STUDENTS VAPING IN THEIR SCHOOLS

Andrew Craig Schroeder

As school safety continues to be a growing issue in public schools, this study

takes an exploratory approach to examine the impact vaping is having on public schools

in Arkansas. Student vaping is rapidly becoming a common issue in schools. This study

examined the response to vaping from administrators in Arkansas. The study surveyed

82 Arkansas Public School Administrators serving grades anywhere from 1st grade

through 12th grade. The questions included multiple choice, open response, and Likert

Scale type questions to gather a plethora of data to gain insight about the response

administrators are implementing in their schools. Questions focused on five areas,

administration/school demographics, prevention, education, cessation, and student

influences. This allowed the researcher to explore administrators responses to vaping to

comply data that can be used to guide stakeholders in making decisions about how to

address vaping on each campus. The findings also suggest that administrators do not have

sufficient resources to address this issue. A suggestion from the findings is that

stakeholders need to increase priority for developing plans and policies around vaping so

that schools can be better prepared to address this rising issue in the future.

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Chapter I: Introduction

Vaping is becoming an increasingly popular trend among adolescents and young adults (Douglass & Solecki, 2017). According to the Centers for Disease Control and Prevention (2020),

> The use of battery-operated electronic cigarettes (also known as e-cigarettes) has been on the rise despite many unanswered questions about their safety and long-term effects. E-cigarette use, also called "vaping," works by inhaling aerosol, formed through heating a liquid consisting of a variety of additives that include nicotine, tetrahydrocannabinol (THC), cannabinoid (CBD) oils, flavorings, and many other substances (Hwang & O'Neil, 2020, p. 453).

Vaping use is a growing health concern among our youth as it promotes nicotine use at a young age, with the potential to lead to the use of traditional cigarettes (Hawg & O'Neil, 2020). We know traditional cigarettes have well-documented health risks, but as the number of users of vapes increases, more data will be needed to educate users about the risk associated with using these products.

With the increasing use of these products among our youth, it is necessary to explore what school administrators are doing to educate their students about the potential risks of using vapes and to help them refrain from using them. Many schools offer health classes that are essential for promoting healthy habits among students that will hopefully become habits for a lifetime (Centers for Disease Control and Prevention, 2019). If schools have an influence on shaping students' health behaviors, it is important to understand what school leaders are doing to educate their students about the potential health risks of vaping.

The focus of this study was to investigate the actions that school administrators are taking to educate students on the use of vapes, and vaping products and to prevent their use. As the prevalence of vape use is rising in schools and as more data is being gathered to address the health risk and potential long-term effects on the users' health, it was necessary to explore what school administrators have done to address these issues in their schools including being proactive about educating students on the potential health risk, while also exploring the actions administrators took to support cessation for students who are already using the products.

The importance of understanding the actions administrators used to address vaping in their schools allowed for insight into how educators can better support the health needs of their students. Educators are focused on growing the whole child: mind and body. In addition, the results of this study provide valuable data that can help other administrators understand how to address this health concern on their campus by understanding what others are doing that may or may not be working on their campus.

Most research has been focused on the rise of youth using vapes and the potential health risk and long-term health effects, but there has not been much research on how schools are addressing this new issue. Exploring the actions school administrators have taken to prevent the use of vapes while supporting the cessation of the product will allow other administrators and educators to understand how they can address this health concern in the future. If this is understood, the data can be used to extend prior research associated with the rise in vape use among students, while preparing schools to provide a school environment that not only discourages this potential health risk but helps to educate students about making educated, healthy choices.

Background of the Problem

Vaping is becoming a health concern that is rapidly growing among our youth (Douglass & Solecki, 2017). An analysis of the National Youth Tobacco Survey revealed high school students increased vape use from 1.5% in 2011 to 20.8% in 2018, while middle school students increased from 0.6% to 4.9% (Cullen et al., 2018). As more youth are using the products there is an increased health risk associated with this use. Cullen and her colleagues (2019) continued researching vape use by surveying high school and middle school students in US schools and their data suggests that 4.1 million high school students and 1.2 million middle school students are using vapes. These rates are rapidly growing and have potential health-related concerns for youth and educators who have a responsibility to teach our youth not only about academics but about making healthy life choices and habits that will help them live healthy lives.

Even though research is not complete on the risk of using vapes, there is research about the chemicals in the products that have a strong potential of leading to health issues. With the various vape manufacturers, it is hard to identify specifically what chemicals are used in the production of the products and there have even been compounds in vapes that are not listed on the labels. For instance, studies have shown vapes contain formaldehyde, acetaldehyde, and acrolein, which are known carcinogenic toxicants (Stratton et al., 2018).

Because it is difficult to identify what chemicals are being used in these products, many of the potential health risks associated with using these products are unknown. With these potential health risks associated with using vapes and the rise in their use among our youth, it was necessary to explore the actions of school administrators to

address this health risk in their respective schools. As more use these products, there will be an increased probability that more health concerns, issues, or accidents will occur.

As expressed above, vapes have some potential health risks associated with their use and this is not just isolated to certain schools. It is even an issue in our public schools in Arkansas. According to the Arkansas Prevention Needs Assessment (APNA) Student Survey (2020), students reported in 2020 that approximately 5% of 6th grade students have used a vaping product, while 8th grade students reported almost triple at approximately 15%, 10th grade at almost 25%, and 12th grade almost 30%. As more data is gathered about student usage it is important to be proactive about educating our youth about this potential health risk. School administrators need to be prepared to battle this rise of vape use in schools and this study provides help for educators to prepare to address this issue while providing needed support to reduce student usage in the future.

This study identifies the actions school administrators take to address, prevent, and educate, the increased usage of vaping among students in their buildings. The researcher argues there is a need to identify these actions as student usage of vapes is increasing, as well as having potential great health risks associated with long-term use. The data collected from the research questions, provide educators with valuable information to counter the usage of e-cigarettes and vapes at such a young age and create opportunities to educate students on a potential life-affecting health choice. Gathering these data was beginning to tackle a growing drug issue among our youth.

Given the supporting information above, student usage of vapes is becoming an increasing health risk in schools and among our youth. With the rapid growth of vape use, it is imperative that research was conducted to explore the actions of school

administrators in response to student usage of vapes, so educators can better address

student usage and prepare to educate students who have not attempted usage while

providing cessation support to students who are current users.

Problem Statement

Vapes are becoming increasingly prevalent among our youth. "Current e-cigarette

use increased significantly by 77.8% among high school students and 48.5% among

middle school students during 2017-2018" (Gentzke, 2019, p.160). This increased usage

of vapes among our youth is apparent, but it is not yet known how school administrators

are addressing this issue within the schools.

Absent from the literature was research focused on the actions of school

administrators in their response to this increasing issue among our youth. Understanding

the actions that are taken to address these issues, allows information to be gathered that

can be useful in educating our youth about the potential health effects of vaping, along

with providing support for the cessation of the use of vapes.

School administrators must make sure students are safe at school, which is why it

is important to explore how schools are addressing vape use on their campuses. The data

gathered about each school's actions provide missing data about the prevention and

cessation of e-cigarettes so schools can provide a safe school environment for all.

Purpose of the Study

The purpose of this study identifies the actions of school administrators to educate

and prevent student vaping usage within Arkansas schools. A recent study, in the United

States, revealed that 33.6% of adolescents aged 16-19 years have used a vape (Hammond

et al, 2019). With almost a third of our youth aged 16-19 years of age, research was

conducted to explore what school administrators are doing to educate our youth about the potential dangers of vaping, while also how they are trying to prevent vapes within their school walls. The study focused on the actions that school administrators have been implementing to prevent student vape use on campus, how they are educating students on vapes, and what supports are available for the cessation of vapes in schools.

The participants in the study are current K-12 school administrators in the K-12 setting in Arkansas. The study gathered qualitative and quantitative data via online surveys that were sent out via email and website. The data focuses on the school administrators' actions in educating and preventing student vaping usage within their schools. The study provides valuable data for school administrators when developing plans to address vape usage within their buildings. Data can be used to seek effective actions to address this drug usage allowing educators to make better decisions that could lead to positive solutions and happy, healthy students.

Research Questions

Not only is student academic success a priority for school administrators, but they are also focused on student health and safety. School administrators have the responsibility to make sure student health and safety are supported, which is why it is necessary to explore how they are addressing student vape use.

This study identifies the school administrators' actions in educating and preventing student vaping usage within Arkansas schools. Accordingly, the following research questions provide direction for this research.

Research Question 1: What are school administrators' actions to prevent e-cigarettes and vaping in Arkansas Public Schools, and what are their perceptions about those actions?

Research Question 2: What are school administrators' actions to educate students about e-cigarette and vape use in Arkansas Public Schools and, what are their perceptions about those actions?

Research Question 3: What are school administrators' actions to provide support to students about the cessation of e-cigarettes and vapes in Arkansas Public Schools, and what are their perceptions about those actions?

Research Question 4: What are school administrators' actions to understand what influences and why students are using e-cigarettes and vapes, and what are their perceptions about those actions?

Theoretical Framework/ Conceptual Framework

The basis for this study focuses on the Theory of Reasoned Action (TRA). "According to the Theory of Reasoned Action (TRA), behavior can largely be predicted by the individual's attitudes towards performing the behavior in question, through the intervening effect of the behavioral intention" (Al-Suquri & Al-Aufi, 2015, p. 189). The study focused on identifying the actions school administrators are implementing to educate, prevent, and address student use of vapes. The data gathered provides insight to the actions administrators have implemented to address the issue, which provides evidence about practices that are effective in reducing the use of vapes in Arkansas Public Schools.

This theoretical model focuses on, "both personal attitudes and social or 'normative' factors, which exert a direct influence on behavioral intentions and are the strongest predictor of actual behavior" (Al-Suquri & Al-Aufi, 2015, p. 189). Understanding how students are influenced into using vapes through school administrators' experiences provides data about how school administrators can better address this growing issue in Arkansas Public Schools and ultimately benefit student health.

Significance of the Study

The significance of the study could potentially have a positive impact on student health. Understanding the actions provide other educators with evidence to effectively address the growing issue of student use of vapes. The study focuses on gathering data from school administrators about how they are addressing these issues and their perceptions about what is or is not working for them. As actions were compiled and analyzed for trends, the evidence could be used to effectively address student use of e-cigarettes and vapes, while ultimately protecting their health.

If school administrators fail to act on these issues immediately, student health could be greatly jeopardized and have long-term health effects. As experiences, actions, and perceptions are identified, further research could be conducted to implement the trends identified, if any, that show potential to have a positive effect on student health, and prevention of student use of vapes.

This is not an issue that is going away. School administrators can use the data from this study to make educated decisions about student health, which in turn can affect student achievement positively. In a recent study by Reuter and Forster (2021, p. 14),

"Study respondents who reported having vaped before had lower GPAs than respondents who had never vaped." Therefore, it was essential to study the actions of school administrators, so students can grow minds and bodies.

Research Design/ Nature of the Study

For this study, the researcher focused on the actions of school administrators in addressing the education and prevention of the use of vapes among students in Arkansas Public Schools. To study this issue, the researcher used an exploratory design to gain information on what was being done in the schools and the perceptions of these administrators as to how effective these actions are. Exploratory research investigates a problem that has not been thoroughly investigated to this point to have a better understanding of the problem, but without a conclusive result (Stebbins, 2001). Exploratory research design uses quantitative and/or qualitative data to examine a problem and is open to a variety of data collection methods (Stebbins, 2001).

In this study, the method employed to gather the data needed to answer the research questions was a survey administered to building administrators across the state of Arkansas seeking to find out how they address the issue of vaping from a disciplinary perspective and an educational/preventive perspective.

Exploring these actions and experiences allowed the researcher to identify trends that could have positive effects on student health and student academic performance. As the focus of the study is on the experiences in Arkansas Public Schools the exploratory approach was best suited as it focuses on experiences, similarly to phenomenology, but with a broader and larger participant pool than is used in phenomenology where a small number of interviews are used to collect data. Incorporating demographic and some

perceptual items in the survey, allowed the researcher to contrast the data collected across groups and learn more about the actions of these building administrators than can be learned through a small number of interviews. Understanding these experiences provide valuable evidence that could help school administrators effectively address these student health risks, in addition to potentially affecting student academic achievement and success.

Definitions of Terms

Vapes, vaping, E-Cigarettes -Vaping according to the Centers for Disease Control and Prevention (2020), The use of battery-operated electronic cigarettes (also known as e-cigarettes) has been on the rise despite many unanswered questions about their safety and long-term effects. E-cigarette use, also called "vaping," works by inhaling aerosol, formed through heating a liquid consisting of a variety of additives that include nicotine, tetrahydrocannabinol (THC), cannabinoid (CBD) oils, flavorings, and many other substances (Hwang & O'Neil, 2020).

Assumptions

The following assumptions are noted in this study.

1. It is assumed that the use of vapes is regularly used on Arkansas Public School campuses. The Arkansas Prevention Needs Assessment Survey supports the data revealing youth use vapes within the schools.

2. It is assumed that survey participants in this study have experienced issues with student vape use. The Arkansas Prevention Needs Assessment Survey supports the data revealing youth use vapes within the schools.

3. It is assumed that this study is an accurate representation of the current situation in Arkansas Public Schools. Surveying the current K-12 building administration population within the Arkansas Public School system allows for an accurate representation of the current situation.

4. It is assumed that the respondents will answer accurately and truthfully using a Google Form to document the accuracy of the evidence and maintain confidentiality.

5. It is assumed that respondents have implemented actions on their campus to address student use of vapes, including disciplinary and preventative actions.

6. It is assumed that the actions implemented are focused on student vape use and no other drug use on each campus.

7. It is assumed that administrators have knowledge or evidence of the reasons students use vapes.

Limitations

1. School administrators lack knowledge about the effects of vapes. School administrators may be unaware of the potential health risk of their students using these products or the use in general among their student population.

2. School administrators may lack knowledge about students' influences on vape use.

3. Schools may have not implemented any actions to prevent or discourage student use of vapes.

4. Access to literature about administrators' actions in schools addressing student vape use is limited as the issue is recent and studies have yet to be developed to explore potential issues associated with these new behaviors.

5. Sample size of respondents may not provide all actions implemented or allow for the study to draw conclusions on what actions are effective.

6. The study does not sample student responses to compare evidence between administrators and students, allowing for a more accurate understanding of why students use vapes.

7. The amount of time to collect the data, could limit the number of responses from school administrators, limiting the overall picture of the actions implemented and their effectiveness.

8. The survey does not include responses from staff, students, or parents to focus the data on the actions of the school administrators.

Delimitations

1. The survey of school administrators was delimited to only Arkansas Public Schools in grades K-12. This is because the data supports strong usage among youth in schools.

2. The study was an exploratory approach to better understand the actions of school administrators from a quantitative perspective, but also a qualitative perspective, allowing for a thorough investigation of the actions within Arkansas Public Schools.

3. The survey was delimited to be delivered online through Google Forms, to provide accurate documentation of responses, while maintaining the confidentiality of respondents.

4. The survey was delimited to actions implemented to address student vaping use and no other drug usage on the school campuses, as data supports a strong usage of vapes among students in schools.

5. The study was delimited to school administrators only, which does not include other staff, students, or parents, experiences of the actions.

Summary

Vape use among students is a growing health risk within schools. They are easily accessible and easily hidden, which makes them hard to address. They are also advertised and promoted as healthier than traditional cigarettes which makes them seem less dangerous. Even though researchers do not fully understand the health risk associated with the use of these products, there is data that supports there is a risk. As more and more youth use these products there is an increased risk of health issues as the sample pool is growing rapidly. This is the reason and purpose of this study. Youth within schools are increasingly using vapes, which creates health concerns among educators. It is the responsibility of educators to educate youth for mind and body. Therefore, it is necessary to study what school administrators are doing to combat this growing problem. Identifying what they are doing to prevent and educate youth on the use of these products can help other administrators support their students, while also identifying what could provide the most effective benefit for students and the future of their health.

The next two chapters focus on the literature associated with vape use among youth and how the researcher will address the methodology of the study. Chapter 2 will include a literature review that will summarize current literature about the issues related to the student and what research has been completed to support the need of this study. Chapter 3 will give an overview of the methodology, the research design, the sample size, the survey questions, the collection instrument, and the reliability and validity of the collection. This laid the base for the implementation of the study. It was the groundwork for how and why the study was conducted.

Chapter II: Literature Review

Vaping is becoming more and more popular on school campuses. A study conducted by Fakeh et al. (2020) revealed that 37% of students observed other students using an e-cigarette or vaping one to four times on school property in the last 12 months. With the rise in vapes on school campuses, there is also an increase in potential health and academic effects, which is why it was important to understand the depth of student usage on campus, how vapes affect students' health, and academic performance, and what has been done to prevent the use of vapes among students. The researcher gathered data to better address these potential issues, by seeking the perceptions and actions of school administrators in how they are addressing the prevention of student vape use on their campus, while also exploring their perceptions and actions to address prevention and how they are seeking to understand the behaviors that influence student use of vapes.

The literature was gathered using the library database ProQuest in which the researcher searched the database using the search terms "vaping" and "education," focused on peer-reviewed documents. After organizing the literature, the literature was put into themes. The focus of the three themes are as follows: student usage of e-cigarettes and vapes, health and academic effects of student drug use, and prevention of e-cigarette and vape use. These themes will allow the researcher to explore each factor associated with vape use among our youth and within our schools.

The first smokeless, tobacco-free electronic cigarette was invented by Herbert Gilbert (1963). Even though e-cigarettes have been readily available for many years, there, "Recently, has been an alarming increase in the rate of e-cigarette use among adolescents" (Hwang & Neil, 2020, p. 453). With this increasing rate of vaping among

our youth, it has become an issue within schools. School administrators are being challenged with a new issue that has not been around for long. Part of the challenge of addressing this behavior is the usage of these products is not easily detectable. They are also highly addictive and can contain various chemicals that can have unknown health risks.

Vape use has increased from 1.5% in 2011, among high school students to 20.8% (3.05 million) in 2018 (Cullen et al, 2018). These numbers are alarming. As these numbers continue to rise at what seems like an uncontrollable rate, it was imperative to research what school administrators are doing to address this issue. This sharp increase means there are more and more students on campus using these products, which creates more health risks with unknown long-term effects for our students and youth across the state and country.

The majority of the current literature focuses on e-cigarette and vape usage among adolescents, and potential health risks. Since the rise in use is fairly recent, it is difficult to determine the health risk our students and youth face, but as more and more are using vapes it is becoming an issue that must be explored. Researchers are beginning to gather data about student usage within schools, but there is minimal research about what school administrators are doing to prevent, educate and understand why students are using vapes. Schools must educate the whole student, mind, and body. If students are using these products within their walls, educators must understand this challenge they are facing and how research can provide answers to battle this challenge. With schools and educators facing this new challenge, it was important to gather data about what schools are doing to combat this new trend that is reaching epidemic proportions. The more

information that is gathered, the more information which will be available to provide educators with guidance to help educate and prevent potential health risks associated with vape use among their students and youth.

The focus of this study was on school administrators' perceptions and actions to address the current trend in vape usage on their campuses. Gathering data about these perceptions and actions can educate other school leaders as to how they can best support this need in their building or district. The problem the researcher sought information about provides data to identify the actions of school administrators to prevent student vaping use in their building, the actions of what school administrators are doing to educate students in their building, and actions of school administrators' efforts in understanding why students are choosing to vape. This data was gathered to help educators make informed decisions about addressing these issues among their students and youth.

The data gathered about the issues above can provide support to school administrators, educators, and even parents, so they can hopefully understand how to address student vaping among students in public schools. The more information, which is understood about the actions school administrators are implementing currently, could help other school administrators make decisions in addressing the prevention and education of student usage of vapes, along with potentially reducing health risks and creating a learning environment for students to bloom in a healthy school environment. The more our educators are informed the more they can help all students create healthy habits for a healthier lifestyle.

Student Usage of Vapes

Student usage of vapes has drastically increased within our schools. The researcher personally spoke to several school administrators who are battling student use on their campus. Administrators are installing vape detectors in restrooms to discourage student vaping, but are not eliminating the issue. The researcher receives several reports daily from vape detectors in his building, relaying information that students are vaping on campus. It was this challenge, which sparked the research as student health and safety are of utmost priority.

To better understand student usage, we must begin with what is influencing this usage. Social media, peer pressure, and perceptions that products are safer are a few reasons that contribute to the increased use of youth using vapes. Some studies relate student use to social media driven by the tobacco industry. Social media is conveying vape usage as the norm, exposing users and non-users to content that promotes and encourages vape use as normal and socially acceptable (Vogel et al., 2020). When youth see vape use on social media, they tend to perceive it to be safe and acceptable. A study suggests that the more an adolescent used social media, the increased likelihood that he or she would view vapes in a positive light and as less dangerous (Vogel et al., 2020).

Social media advertises vaping use as acceptable, but it is also a platform for youth to glamorize their personal use to their peers. Youth see their peers "advertise" it, by posting videos or pictures using the product, making their peers think it is acceptable to do, in turn, influence the use of vapes through social media of their peers. Social media advertisements for vapes promote use by having influencers who are paid by advertising

companies or social media platforms to promote the product to their followers on their

social media (Vogel et. al., 2020).

This was a similar trend to when traditional cigarettes were introduced. "Vaping

is a driver of the metamorphic transformation of the tobacco industry," (Cano et al., 2020,

p.22). Tobacco is heavily regulated in regard to advertising but vapes allow for a

loophole that is largely driven by advertising on social media. The tobacco industry took

advantage of this new product, which allowed them to promote a "safer" alternative to

cigarettes. Vapes are advertised as "safer" as the byproduct is water, but users can still

get the buzz from the nicotine they seek from traditional cigarettes. With this newfound

product, the tobacco industry began to take advantage of advertising they could not do for

traditional tobacco products. Vapes do not have to follow federal regulations that banned

advertising for traditional cigarettes.

A study focused on, "E-cigarette advertising found wide-ranging techniques used

by their manufacturers, including sponsorship of sports teams and stadia, product

placement, price promotions, group voucher discounts, celebrity endorsement,

advertising through traditional billboard, radio, television, and print and social media" (de

Andrade et al, 2016, p. 289). With the prevalence of social media and advertising, vapes

are being presented in a positive light in front of our youth.

Other factors influence use among our youth. Youth state that vapes are safer and

healthier. They describe them as "safer", "harmless", "more acceptable", "healthier", and

"less toxic", than smoking" (de Andrade et al, 2015). This perception that they are safer

and healthier contributes to their use. This was similar to when traditional cigarettes were

advertised. Vapes have been labeled as "cool", "safe", and "healthier", which has

contributed to the increased use among our youth. Youths express that they view vapes as safe and healthier. Youth states, "nicotine's no' bad for ye (not bad for you) - ah (I) think it's addictive but it's no' bad for ye-cos they have that in hospitals to purify the air or something" or "It's easier tae (to), like come off the fags an' go onto the e-cigarettes than just to come off the fags … because then the e-fags are still gieing ye (giving you) the nicotine but … there's no' a (not all) the bad effects on your body" (de Andrade et al, 2015, p. 291). It is these statements that provide evidence for the above claims.

A third factor is peer influence. "The literature on teen vaping identifies peer influence as one of the most common drivers of teen -e-cigarette use" (Groom et al, 2021, p. 2). Youths see their peers using the product and it appears safe, so they try it. Youths have been traditionally been influenced by their peer groups. As noted earlier, youth see their peers using vapes on social media, which leads to a false sense that their use is "safe" and "cool". One study noted, "peer group cigarette smoking had an important relationship with adolescent e-cigarette use and this relationship was greater among never smokers than former smokers" (Hwang & Park, 2016, p. 10). With vapes appearing safer than traditional cigarettes, youth who have never tried either are more willing to use vapes because of these perceptions, which are influenced by their peers' use.

These factors that are contributing to youth vaping influenced the need for this study. As this issue continues to rise, it was important to study how schools and administrators address this as the numbers are steadily increasing. It is a product that is not easily detectable as traditional cigarettes. It produces vapors that are odorless or have a common smell that is not easily detected. E-cigarettes and vapes are small, do not require a flame, and produce only water vapor. These challenges make it harder to

combat, but it is important to address them as these products are addictive, carry potential health and safety risks to our youth, and can potentially lead to other drug use.

As we have discussed what is influencing student use, it is important to discuss the rate of student use. The 2021 National Youth Tobacco Survey revealed that 11.3% of high school students currently use vapes and 2.8% of middle school students; this is more than two million youth currently using vapes with two in five using the products frequently and one in four using them daily (Food and Drug Administration, 2022). This issue is not going away. Students are increasingly using these products at an uncontrollable rate.

Arkansas is no different in the increase of their youth using vapes. In 2020, it was reported that 10.3% of their students used vape flavor, 14.3% used vape nicotine, and 6.7% vaped marijuana, with a total of 17.1% using any type of vape (Arkansas Department of Human Services, 2020). This rate of use in the state is trending for rapid growth if educators and administrators do not seek research and resources to better understand and prevent student use.

A more recent study revealed that vapes are the most used tobacco product by high school and middle school students; 11.3% for high school students and 2.8% for middle school students (Genzke et. al., 2021). Each study has been consistently finding evidence that vaping among our youth is at a high rate, which means this issue is within schools and why all educators must understand this challenge that is being created with this drug. Educators must understand how and why it is important to find support for our youth to encourage cessation of this potential lifelong habit that poses a potential health risk.

Student Health and Academic Effects

  With the increase in student and youth vape use, it is important to explore how this use is affecting student health and academic performance. There is some risk to youth's health when they use these products. Even if the effects are not immediate, there is more and more supporting evidence that there could be some adverse health issues arising from the use. "Surveys of adolescents have found an increased risk of respiratory symptoms" (Gott et al, 2019, p. 3). As this issue is a fairly recent one, there has not been a plethora of research on how it affects student health or academic performance.

  A survey of over 45,000 youth in Hong Kong who use vapes reported that 18.8% of users had some form of respiratory symptoms related to the use of the products (Wang et al., 2016). This sample of adolescents supports possible symptoms related to vape use. Even though the symptoms may be mild, there is more evidence of the possible effects in another study.

  In addition to the previous study, more than 10,000 adolescents in the United States were studied about their use of vapes over the last 30 days and the effects on their respiratory system. The study revealed that there is a positive association between bronchitis and shortness of breath, but it was not directly related to a specific device but suggests that the more frequent use of these products increases the risk of respiratory symptoms (Chaffee et al., 2021). Again, these symptoms seem to be related to the use of these products, but more research needs to be conducted to gather more reliable results. With these two studies showing trends of health issues related to youth use of vapes in our schools, it is important to seek how school leaders and staff can address this rising issue before more students are affected by the potential health concerns associated with

vape use. As more research is completed, the evidence may remove the smoke hiding the risk of this use and its potential dangers, enlightening our youth about the dangers and effects of using these products.

Vaping on the surface seems safer than traditional cigarettes, but does not come without health concerns. As stated above youth perceive vaping to be a safe and healthy option in place of traditional cigarettes. Add nicotine to the mix and one has created a potential lifelong habit that could create health issues, and/or lead to other drug use with greater health risks. Some of these potential health issues can also happen with short-term use, which is why it is important to understand this issue, so we as educators can protect our students and educate them about the potential dangers of using these products, both for the short and long term.

Vape health risk is not completely known as the products have not been used long enough to determine long-term effects, but many suggest there is reason to worry. When a person vapes, they are inhaling a chemical into their bodies and lungs, which could have adverse reactions or consequences. As students use these products, it is difficult to identify what chemicals are put into these products, which enhances the potential danger of this use. Students are using vapes daily in our schools, and neither educators nor students know what is in these products. These unknown chemicals further complicate the risk, as when they are heated and inhaled into the lungs and body, it is difficult to identify the effects as the chemicals are undergoing a chemical reaction when heated, which could change how it affects the body. Even though long-term effects cannot be gathered there are some potential health risks associated with using a vape as chemicals are being introduced to the body. Long-term research is a minimum, but some very recent

data shows that there is the possibility of immediate health risks associated with vape use that could even result in death.

> Since August 2019, the Centers for Disease Control and Prevention (CDC), the US Food and Drug Administration (FDA), state and local health departments, and other clinical and public health partners have been dealing with a nation-wide outbreak of vaping related severe lung illnesses, also referred to as "e-cig, vaping, or product use-associated lung injury (EVALI)" (Besaratinia & Tommasi, 2019, p. 664).

As the number of users rises the more likely the risk of these consequences increases. Since there is such a sharp increase in use among our youth, these health risks are more likely to increase as well. Even though these incidents are fairly isolated and not all may have these illnesses, there is a larger likelihood that the increased use among our youth, increases the likelihood that several will experience these health issues. "As of 18 February 2020, a total of 2,807 hospitalized EVALI cases or deaths has been reported to CDC from all 50 states, the District of Columbia, and two US territories, including Puerto Rico and US Virgin Islands" (Besaratinia & Tommasi, 2019, p. 664). These are not all youth, but as numbers increase in use among our youth, the risk for this number grows drastically, increasing the chance for dangerous health issues.

One of the most concerning risks of using vapes is that it is nearly impossible to identify what chemicals one is inhaling. Not knowing the chemicals our youth are putting into their bodies sets a scene that has potential unforeseen consequences. "E-cigarettes contain a battery-power heating element, usually a metal coil, that heats an "e-liquid" mixture of solvents, nicotine, and flavoring chemicals" (Schmidt, 2020, p. 1). The vape is

essentially heating chemicals to make a chemical reaction, which the user inhales. When these chemicals enter the body, it is not yet known their side effects or what chemicals or chemical reactions are creating these issues. Beginning in January 2021, the FDA requires manufacturers of e-cigarettes, vapes, or vape products to disclose their ingredients on their website (New York Department of Health, 2021). Again, as educators, we must educate our youth about these dangers. This is alarming information as the unknown chemicals and chemical reactions of vape use could have harmful even lethal consequences. It is concerning that our youth are using a product that could potentially cause unknown health issues.

Some research has begun to explore deeper into what is actually in these products. One researcher has discovered that some vapes expose users to nickel and chromium. Ana Maria Rule, an assistant professor of environmental health and engineering at John Hopkins University has found a relationship between Nickel and chromium and increased levels of metal in users who use vapes (Aherra et al, 2017). This exposure has potential health risks to our youth as exposure to these metals has been linked to other health issues, including cancer. Both Nickel and chromium are known and probable human carcinogens according to the American Cancer Society. If products have these elements, then there could be unknown health risks associated with using vapes. Along with the potential risk of metal exposure, some e-liquid solvents could affect the alveoli of the lungs. Another study suggested that long-term vape use could physiologically damage lung cells and reduce one's autoimmune systems (Madison et al, 2019). Even though these studies are limited they expose the potential threat vapes have on our youth who are using these products daily.

A couple of other potential risks are the flavoring chemicals and how it reacts with other chemicals, and what other drugs could be potentially put into vapes. Diacetyl is a chemical used for flavoring and is associated with the development of "popcorn lung" and was found in 39 of the 51 vapes that were tested in a study (Allen et al., 2015). Even though these chemicals are common in foods we eat, there could be hidden risks when they are heated and inhaled into the lungs. For example, cinnamaldehyde has been shown to impair respiratory immune cell function (Clapp et al., 2017). This means that when a student breathes the vapors of a vape with cinnamaldehyde there is evidence that shows the effects of the chemical on the lung cells of the user. These effects include toxic effects on those cells. This is one example that poses a health risk to our youth that could lead to serious unforeseen consequences.

Each of these factors can take its toll on our youth's health. Some specific adverse effects include airway inflammation and injury, effects on immunity, and alveolar inflammation and injury. As more adolescents use these products the increase of these health issues greatly increases. Since the evidence is not complete there is not a full understanding of the long-term effects of continuous use over many years, but the short-term evidence is revealing concern that short-term effects could have serious and permanent damage to the user's lungs.

One study even suggests that continued vape use is related to gene changes, cytotoxicity, oxidative stress/inflammation, and susceptibility to infection (Willis et al., 2021). This means that as users continue to use vapes, the chemicals can negatively affect the user's health by damaging their immune system, which increases the user's likelihood

of contracting a disease or illness or having increased health risks related to a person's respiratory system.

These studies provide evidence of how easily vape use can affect a person's airways. The chemicals from the use are keeping gas exchange in users' lungs from properly exchanging and contribute to possible permanent damage to the user's lungs. It is important to understand this as it is necessary to educate our youth about these effects to hopefully deter their use and have long-term effects.

Along with the risk of negative effects on our health, there is limited research about how it could affect students' academic performance. A study revealed that participants who "reported having vaped before had lower GPAs than respondents who had never vaped" (Reuter & Forster, 2021, p. 14). Even though there are unknowns about academic effects, there could potentially be a great concern. If serious health issues arise from the use, then this could potentially lead to students missing school and indirectly affecting their academic performance.

Continuing there is evidence that vapes can negatively affect our immune systems. "Reporting of respiratory symptoms by e-cigarette users suggests an increased susceptibility to and/ or delayed recovery from respiratory infections" (Gott, 2019, p. 5). What this means is that using vapes decreases the body's ability to effectively fight off infections. If the body is having difficulty fighting infections, then users are at risk for catching diseases or infections that are not directly related to the vape use, but are a secondary effect, as the use of these products can negatively affect the body's immune system, in turn keeping the body from effectively protecting itself from foreign invaders. Gott (2019, p.5) explains,

Exposure to e-cigarettes may also broadly suppress important capacities of the innate immune system. If this is the case, then e-cigarette and vape use affects the immune system in a negative way that could detrimentally affect a person's health. This could be understood as how autoimmune disease affects the body. Autoimmune diseases can affect the human immune system, reducing its ability to fight off disease, which results in more serious infections that would not normally cause as many issues as with a person with a healthy immune system. So, students who are using e-cigarettes and vapes regularly could have unintended health issues that are secondary issues created by the product's effects on the user's immune system.

Along with potential autoimmune compromising vape use has the potential to cause alveolar inflammation and injury to the lungs. As more research is conducted on the effects of vape use there has been an increase in understanding of its effects. As noted above, one of the potential issues is inflammation. Research suggests that using vapes can increase inflammation in the lungs and throat, which can lead to asthma and COPD because usage compounds the inflammation with a weakened immune system leading to an increased chance of having negative health consequences (Willis et al., 2021). The issue is the long-term effects and how it affects other bodily systems, which can create more serious health complications. These health risks can happen quickly with limited vape use, the study suggests. Some of these are serious, but there is not enough evidence to identify if any permanent damage is a consequence of the user's habit of using these products consistently.

Lastly, there is a potential health risk for those with limited exposure. Data suggest that minimum exposure can have a negative health risk associated with the user's lungs. Staudt et al. (2018, p.8)," observed changes in the biology of the small airway epithelium, alveolar macrophages, and (indirectly) lung capillary endothelium," in users with very limited exposure. This is important as health effects can be almost immediate. As student use increases rapidly, this means there is more and more likely that our youth and students have an increased and unnecessary health risk associated with the use of vapes.

Chapter III: Methodology

The focus of this study was to understand the actions of school administrators to address student use of vapes on campus, identify ways they are addressing the issue to prevent student use on campus, identify their perceptions of what is influencing students using these products, and what school administrators are doing to educate students on the potential health risk associated with the use of vapes to increase student cessation of these products. Understanding what administrators are doing to prevent this use, why students are using these products, how administrators are acting to discourage student use, and how administrators are educating students about the use of these products, allows educators to educate the whole child.

In this chapter, the research questions are explained along with, the methodology, the sample population, the design, and analysis of the research so that schools can better understand how administrators are addressing the student use of vapes, their perceptions of why students are using these products, and what they are doing to prevent and education student use on their respective campuses. This is important because there is not enough research available to know the full effects of vapes on students' health, but what research is available suggests there are health risks, and it is the responsibility of educators to not only educate students' minds but also their habits to make healthy choices that they will carry on throughout life.

Research Questions

As stated above vape use among students has rapidly increased for many reasons. As these numbers rise, they have entered schools. They are small, easy to hide, and usually do not have a scent, and if they do, it is something that is not usually alarming, as

it is associated with something we are pleasantly familiar with. These traits allow it to be used within schools and are creating an issue for educators to prevent. Therefore, it was necessary to gather data about what administrators are doing to prevent and educate youth about using vapes, whether it is on campus or at home. Educators have the responsibility to educate the whole student, mind, and body. The following research question seeks to understand the actions of educational administrators to address student vape use, including their perceptions of what influences students to use these products, and what they are doing to educate students about this issue to prevent or stop the use.

Research Question 1: What are school administrators' actions to prevent vaping in Arkansas Public Schools, and what are their perceptions about those actions?

Research Question 2: What are school administrators' actions to educate students about vape use in Arkansas Public Schools and, what are their perceptions about those actions?

Research Question 3: What are school administrators' actions to provide support to students about the cessation of using vapes in Arkansas Public Schools, and what are their perceptions about those actions?

Research Question 4: What are school administrators' actions to understand what influences and why students are using vapes, and what are their perceptions about those actions?

Data was gathered via an online survey delivered in partnership with the Arkansas Association of Educational Administrators (AAEA) via Google Forms to collect responses about the actions of educational administrator action in relation to the research questions. With the help of the AAEA, the survey was emailed through their contact list

to reach administrators across the state. The responses will be gathered into an Excel

Spreadsheet for analysis. The questions seek responses to better understand the role of

the educational administrators' actions in how they are addressing student vape use

within their building, what they feel is influencing students to use these products, and

what they are using to educate students on use, prevention, and cessation.

Research Methodology

This research focused on a mixed methods approach as qualitative and

quantitative data were gathered to answer the research questions. The mixed methods

approach allowed the researcher to gather data from both qualitative stances, while also

from a quantitative stance, which will allow a more thorough picture of the actions within

the schools. Qualitative researchers gather data from experiences that describe and or

explain a phenomenon (East & Peters, 2019). A qualitative study was the primary focus

of the study because the study focused on school administrators' actions and experiences

of how he or she has addressed student use of vapes on their campus. Qualitative

researchers are focused on people's perceptions, experiences, and processes from the

perspective of the person (Mohajan, 2018). While a quantitative study is also included to

analyze how often particular actions are occurring.

Collecting qualitative data allowed the researcher to gather information about how

other school administrators address the vape issues in their buildings, while the

quantitative data provided insight into the frequency of the actions. This is important

because educators are facing a new challenge that is easily hidden within their walls but

also has potential health consequences for the students using the products. The more

information the researcher gathers about how administrators are addressing these issues

can provide needed insight into how administrators can support this need, and educate

youth about using vapes, while also understanding how students are being influenced to

use the products so that educators cannot only prevent youth from starting but also

provide support to help student stop using the products altogether.

　　These experiences or observations are more effectively analyzed through a mixed

method approach, as they allow for the understanding of how the actions affected the

students, but also the frequency that the actions were implemented could reveal the

effectiveness of the implementation of the actions. Quantifying the data by collecting

information about similar experiences, allows a thorough understanding of how these

experiences affect students in the schools based on the frequency of implementation of

the actions. Qualitative research can be defined by two criteria "how to do things and the

outcome" (Aspers & Corte, 2019, p. 155), while quantitative allows a review of data

based on the frequencies of how things are done and the frequency of the outcome. This

research focused on both aspects as the researcher seeks to understand how school

administrators are addressing vape use by students, but also how they feel the outcome of

their actions is affecting student use. Using a mixed methods approach allows data to be

collected based on the actual experiences of educators and the frequency of those actions,

which could lead to a possible distinction in how their experiences affect student use of

vapes on their campus. As data was gathered through the study, administrators who have

implemented actions provided positive experiences related to the prevention, education,

and cessation of students using vapes in schools, which in turn could lead to healthier

students, a healthier school, and a healthier lifestyle.

Research Design

      The focus of this mixed methods study was to understand the experiences of school administrators' actions in relation to the use of vapes by students on school campuses, this includes what administrators are doing to prevent this use, what they believe is influencing the use, what they are doing to educate students not to start, what they are doing to support students with cessation of these products and how they feel their actions are impacting students whether positively or negatively so that educators can make decisions to better address this issue and support the overall student, mind, and body. The research design for this study focused on an exploratory approach as we are focusing on the experiences of school administrators.

      An exploratory approach was used as it can be helpful to study areas that other researchers have not explored, or the content can be sensitive (Donalek, 2004). Using this design allowed the researcher to collect data from experiences that could guide others in understanding the role school administrators have in addressing student vape use on their campus. As this issue is increasing in schools, it was imperative that the researcher explored school administrators' experiences so that information can be gathered to identify what works well in their school which can be communicated to other school administrators, guiding them to making better decisions in their schools to address issues of vape use among students in his or her building. In turn, allowing schools to support not only the minds of students but their health and bodies, so they can live potentially long and healthy lives, can also possibly support more productive citizens for the future.

      To gain these insights the researcher surveyed educational administrators about the actions they implemented to prevent student vape use on their campus, their

perceptions of how students are influenced to use these products, and what they are doing

to prevent, education, and provide support for the cessation of the products for students.

As data was gathered from the surveys, the qualitative research approach allows the

researcher to analyze the participants' experiences to gain an understanding and insight

into the problem.

Population and Sample Selection

The target population for this study was educational building-level administrators

in K-12 settings in Arkansas Public Schools, who have experienced students using vapes

in their buildings. Focusing on this population allows for first-hand experiences to

provide insight into the research questions.

The study was a census of grade K-12 educational building-level administrators

who are working in Arkansas Public Schools. Administrators answered an online Google

Forms survey with a pre-developed open-ended question to allow them to communicate

their experiences and provide insight into positive and negative experiences they had

based on what they did in their individual schools. The survey was emailed with

assistance from the Arkansas Educational Administrators Association (AAEA) using

their email distribution list. The survey was sent once and then a follow-up email two

weeks after the initial communication was also sent to encourage administrator responses.

After the data were gathered, they were organized into themes and similarities in

an Excel Spreadsheet, so that common actions and perceptions could be analyzed to

provide administrators with information that they can possibly use to support schools

with vape use issues among their students. Participants' identities and affiliations were

kept anonymous. A census was appropriate for this study so that diverse perspectives can

be captured across the state of Arkansas. Qualitative studies are focused on how the experience highlights the phenomenon being studied (Ishak & Abu Bakar, 2014), but also allows for a variety of experiences to be communicated. The researcher chose a census survey to provide adequate and diverse opportunities to gather data about the experiences that can seek to reveal the experiences of educational administrators and their actions to address student vape use on school campuses.

A census was appropriate for this study as it allowed data to be gathered from all K-12 administrators in the state of Arkansas, which allowed for a more complete picture of data collection addressing the research questions. It also allowed representation from a diverse population in the state of Arkansas, allowing for differences in perspective and actions to be analyzed.

Instrumentation

The source of the data for this mixed methods research study was a pre-developed questionnaire specific to educational administrators who have experienced students using vapes in their schools. The questions were based on the research questions to provide an understanding of educational administrators' actions in addressing student use of vapes, their perceptions of what influences the use, and how they are educating students for prevention and cessation. Questions were developed after researching a variety of studies focused on previous research exploring how administrators are addressing the issue, but also using the a priori experience of the researcher as a school administrator, which allowed the researcher to understand vaping issues personally and lastly, discussions with other school administrators, who provided feedback to refine the questions based on their experiences, to better capture the data the researcher was seeking.

The initial field test was implemented with a group of three educational administrators to help identify possible conflicts of bias. The results revealed some adjustments to scales within the survey tool, but overall feedback suggested the survey addressed the research questions thoroughly. The following questions were provided for each survey. All participants' information remained anonymous.

Administrator Questions:

1. How many years have you worked as an educator?

2. How many years have you worked as an administrator?

3. How many years have you worked in your current district?

School Demographic Information:

1. How would you describe your school's community type?

2. How large is the district?

3. What region of Arkansas is your district located?

4. What grades are included in your school?

Prevention

Research Question 1: What are school administrators' actions to prevent vaping in Arkansas Public Schools?

1. Do you perceive there is a problem with vaping by the students in your school?

2. If yes, what grade or grades do you perceive have the largest percentage of students vaping?

3. What do you feel are the biggest concerns with student vaping?

4. What security measures are in place on your campus to deter e-cigarettes and vaping? (Check all that apply)

5. How effective do you feel these preventative measures are? 1 being least effective and 10 being most effective.

6. What do you feel is the most effective measure you are implementing?

7. Do you feel this is a disciplinary problem to be dealt with through the student handbook?

8. How do you address the disciplinary issues with vaping in your building?

9. What is the frequency of discipline referrals related to vaping in your school?

10. How do you perceive the problem of vaping? 1 is not a problem and 10 is a huge issue.

Student Education

Research Question 2: What are school administrators' actions to educate students about vape use in Arkansas Public Schools?

1. Does your school offer health education to students?

2. If yes, how is the issue of vaping presented in these classes?

3. Does your school have any ongoing prevention or drug awareness programs for students?

4. If yes, can you describe the program and how effective you feel it is?

5. How do you think vaping affects students' social and emotional health?

6. Do you feel that it is a health issue to be dealt with by counselors or school nurses?

Cessation

Research Question 3: What are school administrators' actions to provide support to students about the cessation of vapes in Arkansas Public Schools?

1. Do you offer any type of cessation programs on your campus? If yes, what are they?

2. How effective do you feel they are? 1 being not effective 10 being most effective.

Student Influences

Research Question 4: What are school administrators' actions to understand what influences and why students are using vapes?

1. How are you personally seeking to understand why students are vaping?

2. Have students expressed to you the reasons why they vape? If so, what are their reasons?

3. What do you perceive to be the root cause of vaping?

Conclusion

1. Is there anything not covered that you feel would be valuable information?

Validity

Validity was established using a field test by surveying three educational administrators using the pre-developed question. The participants filled out the survey related to educational administrators' actions in relation to addressing student use of vapes on school campuses. After the survey data was collected the researcher reviewed the questions and responses to determine if the questions were without bias and valid.

After the initial field test and feedback review, adjustments to the question were made to validate the question for full implementation. The process allowed the researcher to practice and develop the focus of the questions so that the survey was appropriate, and the data collected was directly related to the research questions and study.

Reliability

To establish the reliability of the source of data, the researcher used the same

questions detailed above in all surveys. Participants' responses were recorded using

Google Forms, which placed responses in a Google Sheet for the organization. The

responses were then categorized into themes and analyzed to find common perceptions

that could lead to possible conclusions. The study was a census of the current K-12

educational administrators in Arkansas. Following this process allows the data collection

and analysis to be consistent, repeatable, and reliable.

Data Collection

Data collection was via an online Google Form survey sent to the current K-12

administrators with the help of the Arkansas Association of Educational Administrators

(AAEA) for distribution. The survey was shared with AAEA, who then emailed the

survey to their contact list based on current K-12 school administrators' membership in

the AAEA. A total of 82 administrators filled out the survey, and the data was then

compiled into Google Sheets automatically by each question. After two weeks, a follow-

up email was sent to allow more administrator feedback.

The survey asked participants for consent to document their responses and

participation in the study. It stated that the information obtained would be solely for the

use of the study and that all responses would remain anonymous. Implementation was

done using, Google Forms, Microsoft Excel, and the AAEA email list. During the survey

participants answered pre-developed questions listed in the sources of data. Once the

interview was conducted for a minimum of 30 participants, responses were reviewed and

categorized into recurring themes in an Excel Spreadsheet. Once the themes were

identified and responses categorized, the researcher reviewed the responses to identify any consistencies that could allow the researcher to draw conclusions. All data has been saved in a secure folder on Google Drive to which only the researcher has access. The data will be kept for two years after the finish of the research and destroyed via deletion from Google Drive.

This process was chosen so that the participants who were surveyed are current K-12 administrators in the state of Arkansas, then the same question was asked and documented in the same process so that all aspects of the study were consistent. Surveys were chosen to be done through Google Forms to allow for convenience for participants and due to COVID-19 restrictions.

Chapter IV: Data Analysis and Results

This chapter contains the results of the mixed methods study focused on the actions school administrators are implementing to address vaping on their respective campuses and seeks to answer the following research questions:

Research Question 1: What are school administrators' actions to prevent e-cigarettes and vaping in Arkansas Public Schools, and what are their perceptions about those actions?

Research Question 2: What are school administrators' actions to educate students about e-cigarette and vape use in Arkansas Public Schools and, what are their perceptions about those actions?

Research Question 3: What are school administrators' actions to provide support to students about the cessation of e-cigarettes and vapes in Arkansas Public Schools, and what are their perceptions about those actions?

Research Question 4: What are school administrators' actions to understand what influences and why students are using e-cigarettes and vapes, and what are their perceptions about those actions?

This chapter also includes an analysis of the data collected and how the data is linked to the four research questions. In addition, this chapter includes the sample demographic data and supporting figures to provide a summary of the data. The process used to collect these data was a survey created in Google Forms and emailed to a master list of over 1000 Arkansas administrators provided through the Arkansas Association of Educational Administrators. The survey provided information about demographics for administrators and schools, along with four specific themes related to the research

questions: Prevention, Student Education, Cessation, and Student Influences. Data from each theme was analyzed using both quantitative and qualitative analysis depending on the requested responses to each question. The responses were then analyzed to identify themes revealed in the data. Furthermore, included in this chapter are tables, graphics, and vignettes from survey responses to communicate essential data and focus on key themes related to answering the research questions.

Sample

The survey was delivered via email to approximately 1048, current building-level administrators in Arkansas Public Schools with 82 responses. In Figure 1, all have been in education longer than five years, while 9.8% (8), have 6-10 years of experience, 12.2% (10), have 11-15 years, 23.2% (19), have 16-20 years, 22% (18), having 21-25 years, 14.6% (12), having 26-30, and 18.3% (15), having 30 or more years.

Figure 1

Number of Years Worked as an Educator
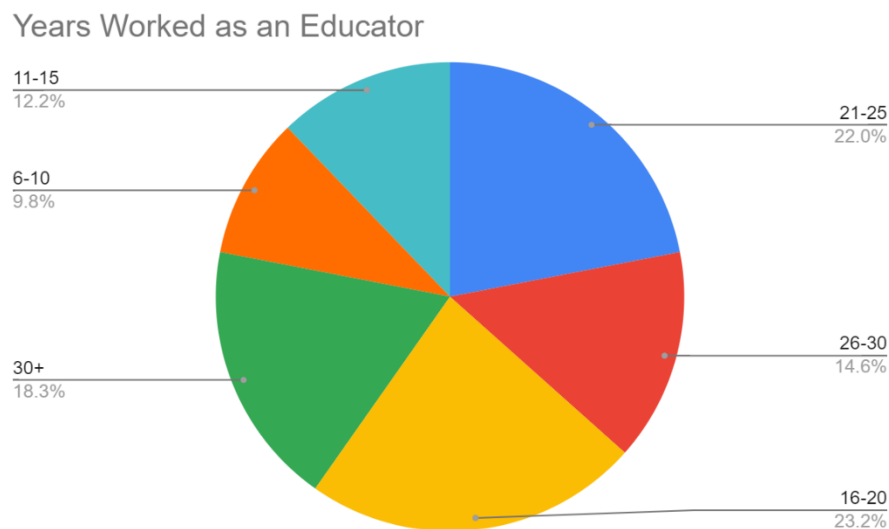
Each administrator also reported how many years he or she has been an administrator and how long they have been in their respective districts. In Figure 2, many administrators reported that 35.4% (29), have been an administrator for 0-5 years, with the next largest sample, 31.7% (26), for 6-10 years, followed by 14.6% (12) for 11-15 years, 8.5% (7), for 16-20 years, 4.9% (4), for 21-25 years, 3.7% (3), for 26-30 years, 1.2% (1), for 30 years or longer.
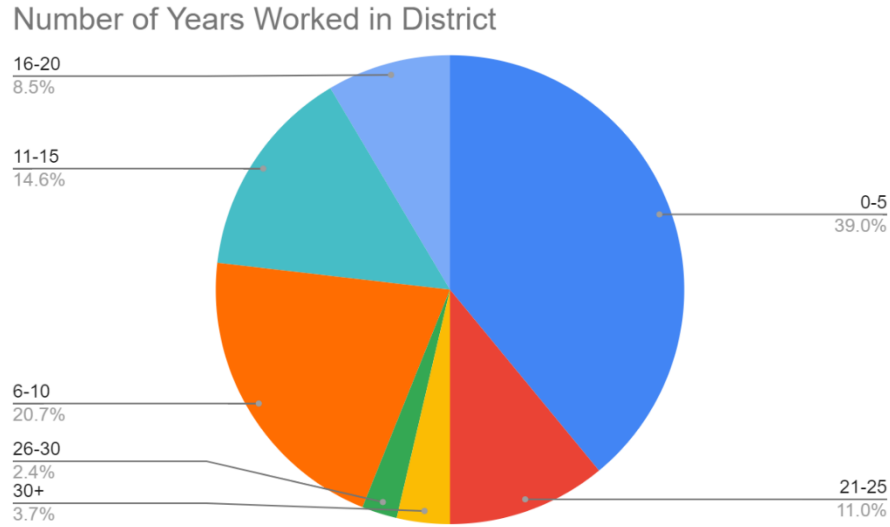
Figure 2

Years Worked as an Administrator
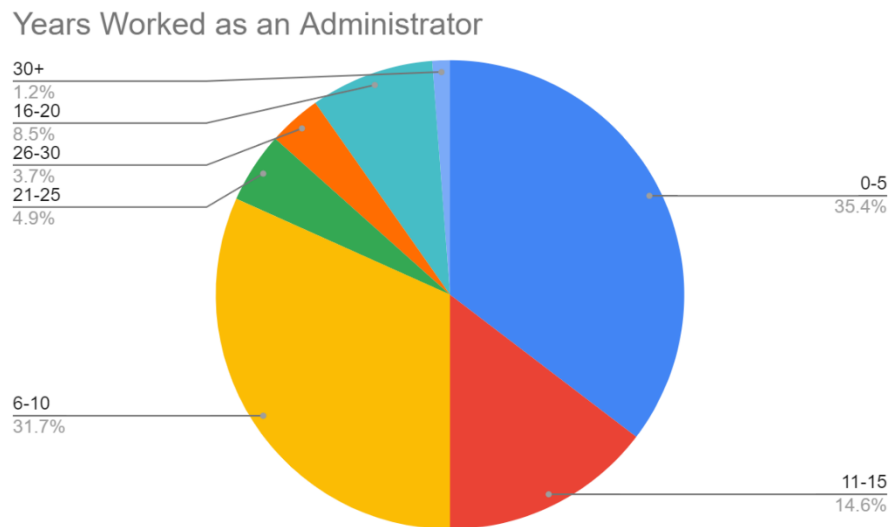
Of the 82 participants, over a third, 32 (39%) have only worked in their district for five years or less, with 6-10 years being the next highest at 17 (20.7%.) The remaining participants include 12 (14.6%), who have been in their current district for 11-15 years, 7 (8.5%) for 16-20 years, 9 (11%) for 21-25 years, 2 (2.4%) for 26-30 years, and 3 (3.7%) for 30 or more years (Figure 3).
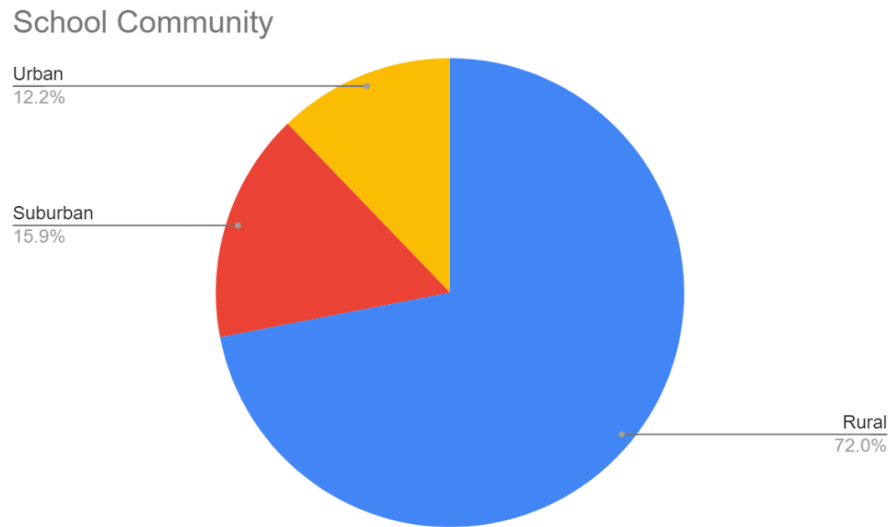
Figure 3

Number of Years Worked in District

School information, in Figure 4, a majority of the participants described their school's community as rural (72%), followed by suburban (15.9%), and urban (12.2%)
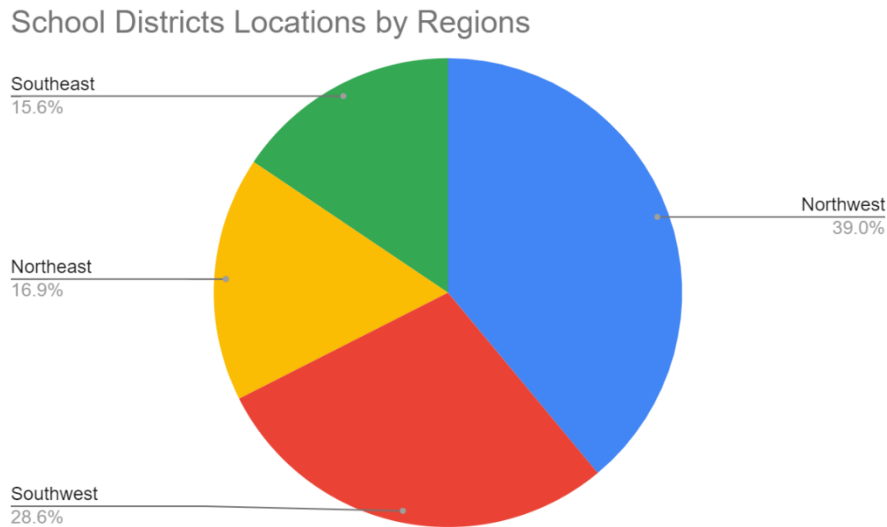
Figure 4

School Community Type

The distribution of these communities across the state (Figure 5*)* includes 39% in the Northwestern part of Arkansas, 28.6% in the Southwestern part, 16.9% in the Northeastern part, and 15.6% in the Southeastern part.

Figure 5

School District Locations by Regions

School Districts Locations by Regions

Southeast 15.6%

Northwest 39.0%

Northeast 16.9%

Southwest 28.6%

As the location and community varied, so does the size of the schools. In Figure 6, each participant provided information about the number of students in their schools. The largest portion of participants worked in districts with 351-700 (22%) students enrolled, followed by much larger districts of 3001-3500+ (19%). The remaining represented, 17.1% for schools with 701-1000 students enrolled, 15.9% for schools with 1001-1500, 9.8% for schools with 1501-2000, 6.1% for schools with either 0-350 and 2001-2500, and 3.7% of schools with 2501-3000 students enrolled.

Figure 6

District Student Population

District Student Population

0-350 6.1%
2001-2500 6.1%
2501-3000 3.7%
1501-2000 9.8%
3001-3500+ 19.5%
351-700 22.0%
1001-1500 15.9%
701-1000 17.1%
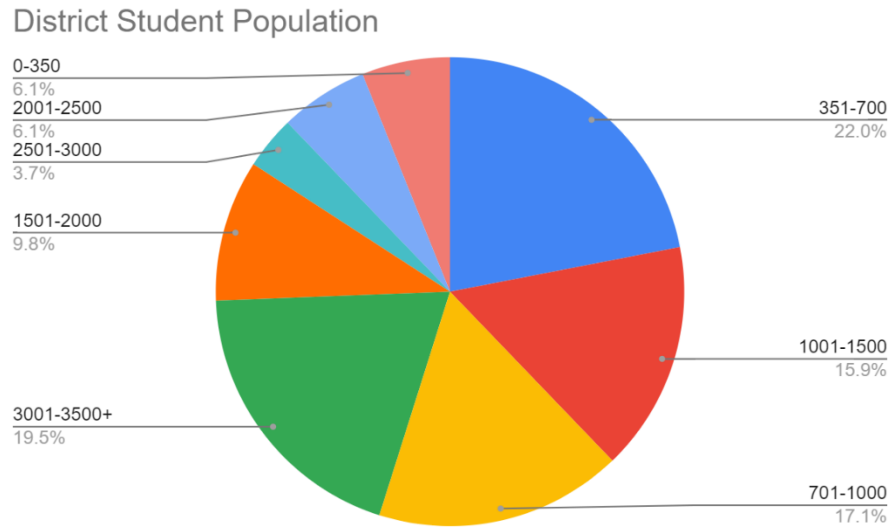
Data Collection

The researcher received 82 responses to the survey delivered to over one thousand building-level administrators in the state of Arkansas, servicing students from kindergarten through twelfth grade. The survey gathered data related to administrator demographics, school location, and size, along with questions themed around the research questions, which include questions focused around: Prevention, Student Education, Cessation, and Student Influences. As participants completed the survey was organized in a Google Form and Google Sheets to allow for analysis of the responses to identify themes using a mixed methods approach.

Data Analysis

The responses from the survey were organized into four themes based on the four research questions: Prevention, Student Education, Cessation, and Student Influences. Prevention focuses on what school administrators are doing to prevent student vaping on

campus, this includes data about their experiences, along with specific actions he or she has taken. The second theme, student education, focuses on how administrators are educating students about vaping on their campus to discourage and prevent future use. The third theme focused on cessation. The survey focused on the third research question to understand and identify what school administrators are doing to help students stop vaping. Lastly, the fourth theme focuses on identifying what administrators are implementing to understand what influences students to use vapes. Each theme's responses were organized based on questions from the survey and allowed for the opportunity to answer the research question, along with providing information about actions school administrators are implementing to address student vaping use on his or her respective campus.

Prevention

Theme one focuses on research question 1: What are school administrators actions to prevent vaping in Arkansas Public Schools, and what are their perceptions about those actions? Understanding how administrators are trying to prevent student vaping allows the researcher to identify potential solutions to help administrators address this issue in the future. To begin to understand what administrators are doing, the researcher must identify if there is a problem. Administrators reported that 76.8% (63) perceived vaping to be a problem in their school, while only 14.6% reported "no" and 8.5% perceived that there might be a problem. This is a large majority reporting vaping to be a problem on their campus.

In Figure 7, when asked what grades one perceives to have the highest percentages of students vaping, 9th graders received the most votes with 48 followed by

12 graders with 47, 10th and 11th grade with 46, and 7th and 8th grade with 45. The lower

grades, 1st through 6th received the least votes with 1st and 4th grade receiving 21 votes,

while 2nd and 3rd grade receiving 22, along with 5th grade receiving 26, and 6th grade 30.

Figure 7

Grades Perceived to have the Highest Percentage of Students Vaping
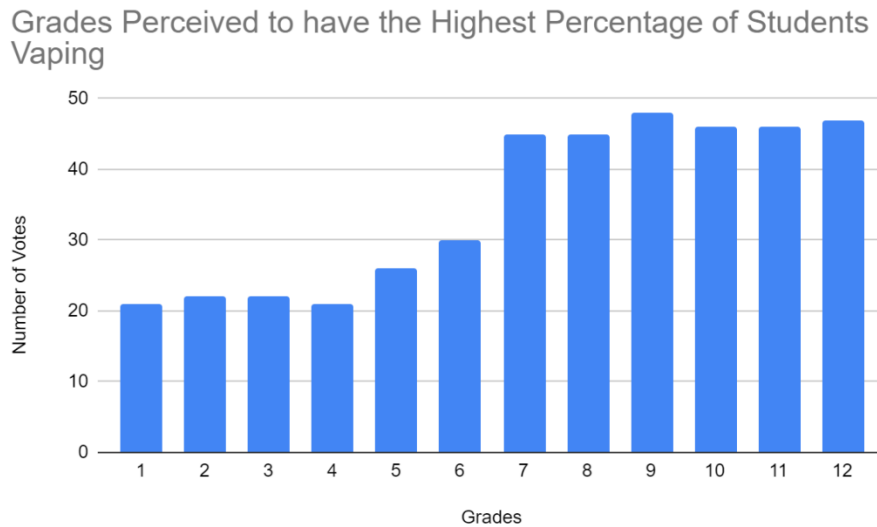
Grades Perceived to have the Highest Percentage of Students Vaping

Administrators expressed that vaping was a larger concern in grades 7th-12th, compared to

the lower grades 1st -6th

    Administrators were also asked to report on what they felt were the biggest

concerns with student vaping (Figure 8). Administrators felt that potential health effects

were the biggest concern with 81.5% of the participants choosing this as a concern, while

they also felt unknown chemicals and addiction are a major concern as well with 77.8%

choosing these concerns. Lack of education about vaping (55.6%), illegal (53.1%), and

concern as a gateway drug (44.4%), were the three least concerns.

Figure 8

Concerns with Vape use Among Students

Concerns with Vape use Among Students
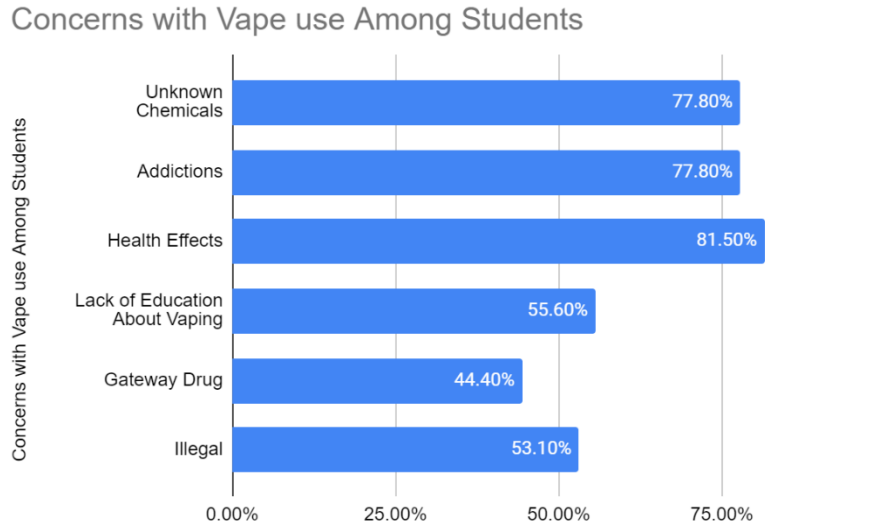
Continuing with the prevention, the researcher gathered data on what security measures administrators have in place to deter vaping on their campuses. In Figure 9, administrators may implement more than one measure. The most reported measure reported was to ensure proper monitoring of students (79.3%), with surveillance cameras in the classrooms and the hallways (69.5%) next. Administrators expressed that setting limits on the number of students in the restroom (57.3%) and limiting time in the restroom (43.9%) are also implemented to deter vaping. The next three most implemented measures include limiting time and access to student vehicles (42.7%), installing vape detectors in bathrooms (40.2%), and assigning teachers to restroom monitoring duty (30.5%). The least reported measures include requiring clear backpacks (6.1%), removing restroom doors (6.1%), installing vape detectors in locker rooms (6.1%), requiring students to walk through metal detectors (3.7%), citations issued by

local police (1.2%), surveillance cameras only in hallways and common areas (1.2%),

student handbooks (1.2%), and installing vape detectors in the classrooms (0.0%).

Figure 9

Security Measures in Place to Deter Student Vaping

Security Measures in Place to Deter Student Vaping
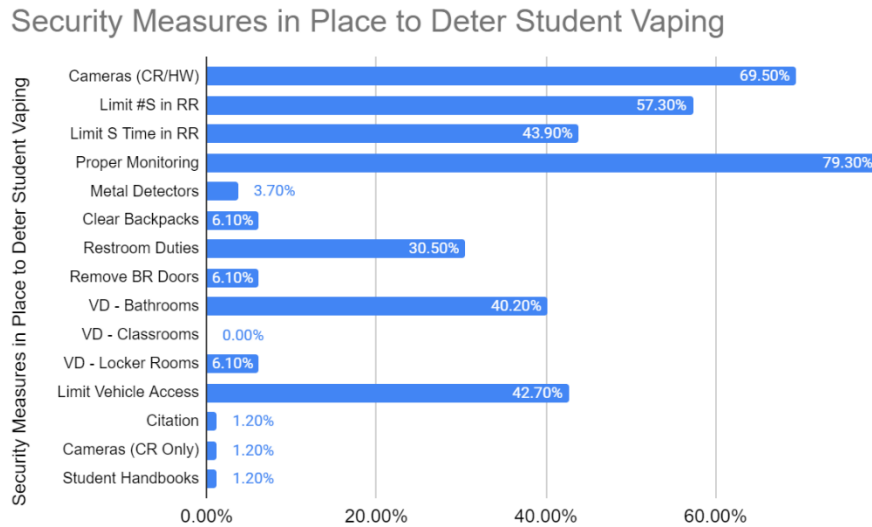
Based on the above measures, administrators rated how effective they felt the

measures are. Administrators rated the measures on a scale of 1 through 7 with 1 being

the least effective and 7 being the most effective.

Administrators were also requested to report on what security measures they felt

were most effective. A variety of responses were received from using vape detectors to

consistent monitoring to building positive relationships with the students. The results

were organized into common responses. A majority of the responses had a common

theme, which was supervision and monitoring of the students. Responses under this

theme include vape detectors (19), supervision/monitoring (37), limiting restroom time

and numbers in the restroom at once (10), and cameras (7). Each of these responses has a

relation to the overall monitoring and supervision of the students. There were several less

51

common responses including citations (1), educating students about vapes (3), providing

consistent consequences (2), metal detectors (2), student reporting (3), and building

relationships (2).

In Figure 10, administrators were asked how one addresses this disciplinary

problem, 91.4% felt that this issue should be handled with the student handbook.

Figure 10

Do You Feel This Disciplinary Problem Should be Addressed with The Student

Handbook?
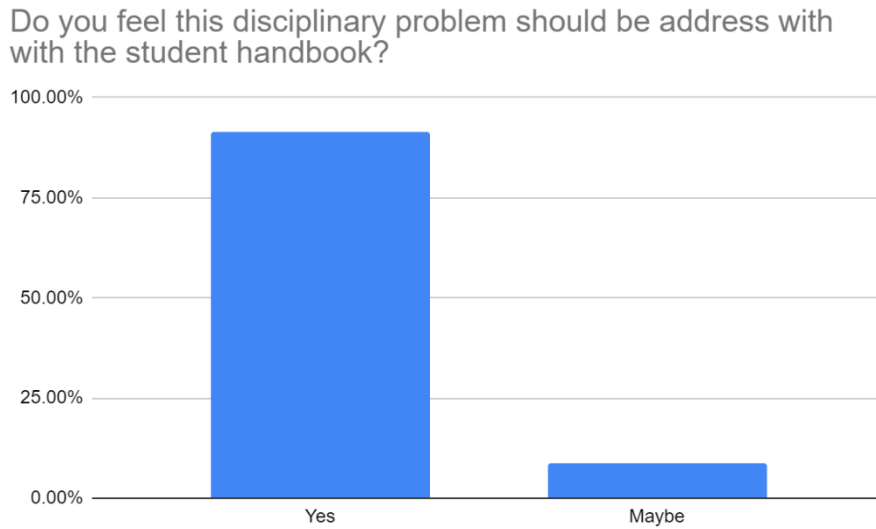
Administrators reported they had a discipline referral related to vapes about once to twice

a week (88.1%), while (9%) reported 3-5 times a week, with 3% reporting 6-10 times a

week. In-school suspension (69.5%) was the most common form of consequence for

students vaping, followed by out-of-school suspension (50%). The next two most

common were involving law enforcement (34.1%) and providing counseling (39%).

Administrators also included several other actions for consequences, including parental

contact, 2nd chance programs, cessation programs, expulsion, citations, Saturday school, and bans from extracurricular.

With the commonality of these issues, 30.5% of administrators rated vaping as a huge problem based on a Likert scale (1 being not a problem and 7 being a huge issue). A majority of the responses rated this issue between a 5 and a 7 (19.5% - 5, 17.1% - 6, and 30.5% - 7).
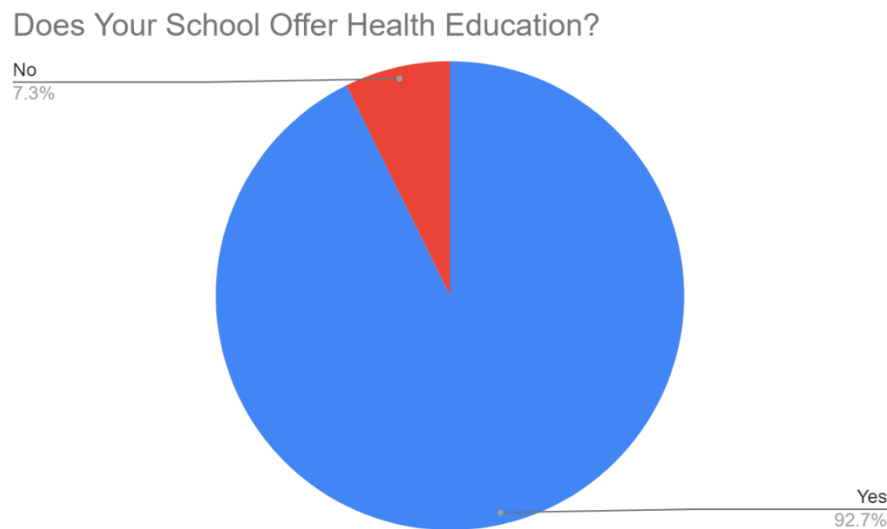
Student Education

The second research question focuses on educating students about vapes. The responses seek to answer the following research question: What are school administrators' actions to educate students about e-cigarette and vape use in Arkansas Public Schools and, what are their perceptions about those actions? The following responses allow us to identify what these actions are and how effective they are perceived to be.

As educators, it is important to educate students about vapes. In Figure 11, administrators were asked if students were offered health education in their building. It was reported that 92.7% of schools offered health education to students, while only 7.3% did not. Those that offer health education do so in many different mediums. The administrators expressed that health education classes are where most of the education about vaping is taught, but their responses also included having guest speakers, partnering with local health organizations, videos, lectures, counseling, assemblies, and Red Ribbon Week. Some of the responses even express that even though it is covered in the curriculum and other opportunities, they felt that was only covered with the minimum implementation or lumped in with other tobacco products.

Figure 11

Does Your School Offer Health Education?

Does Your School Offer Health Education?

No
7.3%

Yes
92.7%

With a majority of schools offering health education for students, which offered minimum education on vaping, administrators were also requested to respond if there was an ongoing prevention or drug awareness program being implemented on their campus. In Figure 12, administrators reported 53.1% did not have a program for prevention or drug awareness, while 46.9% reported they did.

Those that have implemented a program included several different actions. Administrators reported using presentations that reviewed vaping to inform students, while others partnered with hospitals, doctors, school resource officers, Arkansas State Police, Harbor House, health department, or counselors to educate students on vaping. A couple of the popular programs mentioned included participation in Red Ribbon Week, Drug-Free Week, Say No to Drugs, Guide for Life, DARE, Rebels Reach Mentoring Program, or Project Prevent, which was described as a student group program with

activities that make students aware of the consequences of nicotine addiction. The responses did not mention many details about the programs. Other responses suggest implementing their own cessation program and teaching lessons through advisory or health classes.

Administrators were next asked how they feel vaping affects students' social and emotional health. Almost across the board, administrators feel that vaping has a negative effect on students' social and emotional health. Several mentioned they feel students are becoming addicted and the use of vapes leads to certain behaviors including, isolation, dependency, depression, anxiety, decreased self-esteem, self-harm, mood swings, and aggression. They also felt that students are using vapes as a means of escape or because of peer pressure to be cool. One administrator expressed he or she felt it "causes kids to be more fragile", while another mentioned, "The ones who I talk to tell me they are addicted and can't do without." Several were concerned about the health effects of the students, but also the emotional and social behaviors exhibited by students who vape. Another response mentioned students needed to vape or they get headaches, along with students needing to vape because it calms them down and helps them cope with anxiety. With all these different concerns, most administrators were unsure whether a counselor or school nurse could properly address students who vape.

In Figure 13, 50.6% of administrators said they were not sure if vaping was a health issue to be addressed by counselors or school nurses, while 44.4% suggested it was, as well as 4.9% reported that neither should address the issue.

Figure 12

Ongoing Prevention or Drug Awareness Program
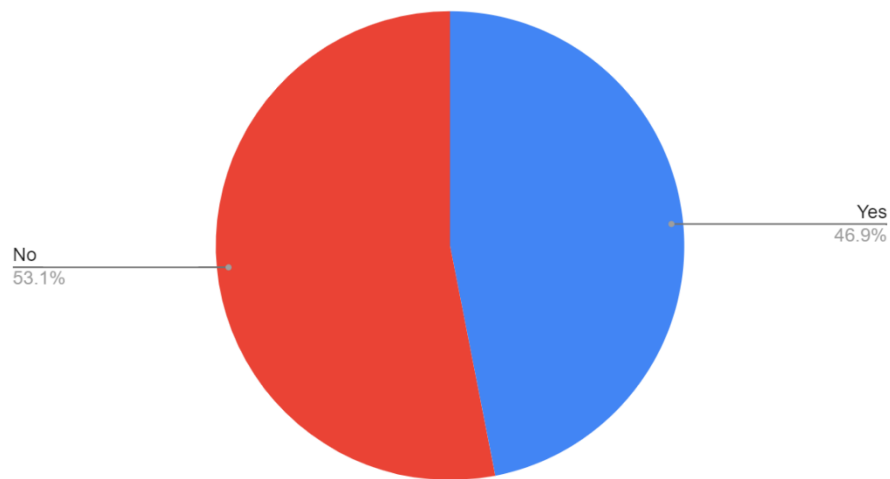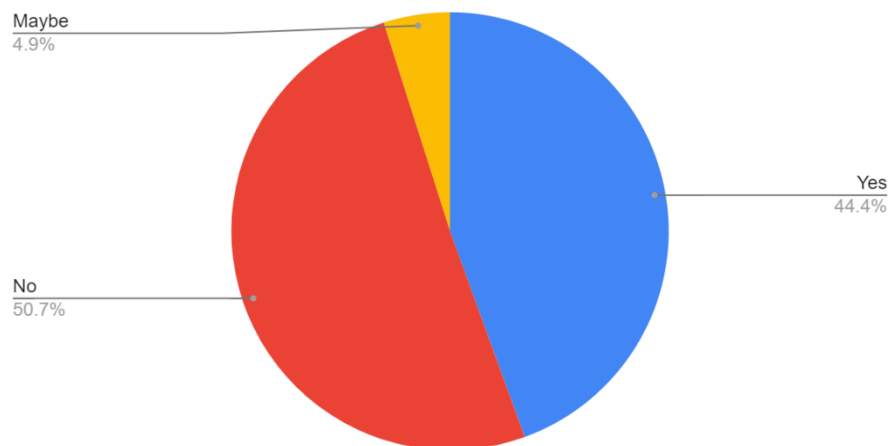
Ongoing Prevention or Drug Awareness Program

No
53.1%

Yes
46.9%

Figure 13

Should Vaping be Addressed by Counselors and/or School Nurses?

Should Vaping be Addressed by Counselors and/or School
Nurses?

Maybe
4.9%

No
50.7%

Yes
44.4%

Cessation

The third research question focused on the cessation of students using vapes. Research question three asks: What are school administrators' actions to provide support to students about the cessation of vapes in Arkansas Public Schools, and what are their perceptions about those actions? In Figure 14, school administrators reported that 75.6% did not offer a cessation program in the schools. Those that offer a program use several different resources. Some administrators reported they were in the process of creating a program, while others used student groups like Beta Club or Project Prevent. Other resources reported include MD Anderson, programs offered through the state, Suite 360 Intervention Program, 3rd Millennium, Vape Educate, Rural Health, The Truth, and American Heart and Lung Association.

As there was a variety of resources administrators are using to provide cessation options for students, there was a variety of perceptions about how effective they felt the programs are. In Figure 15, administrators rated how effective they felt the programs are using a Likert Scale, with "1" being not effective and "7" being the most effective. A majority (58%) of administrators rated their program a "4, 5, or 6", while 42% rated their program either a "1, 2, or 3".

Figure 14

Do You Offer a Cessation Program on Your Campus?

Do You Offer a Cessation Program on Your Campus?

Figure 15
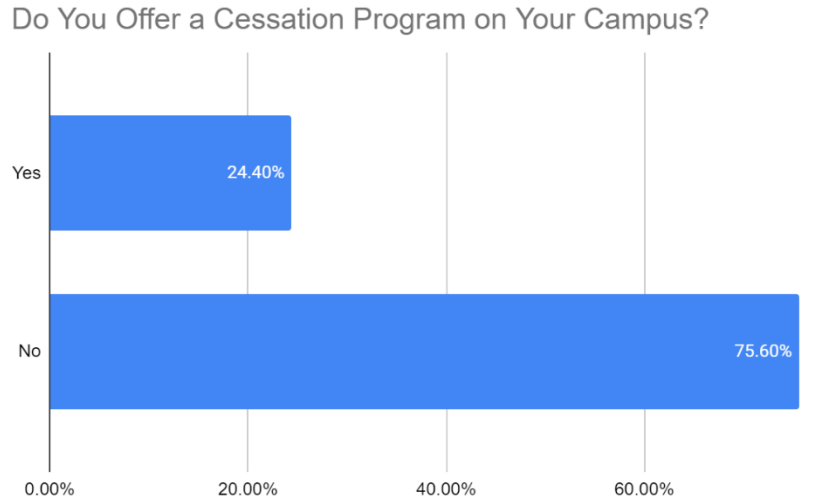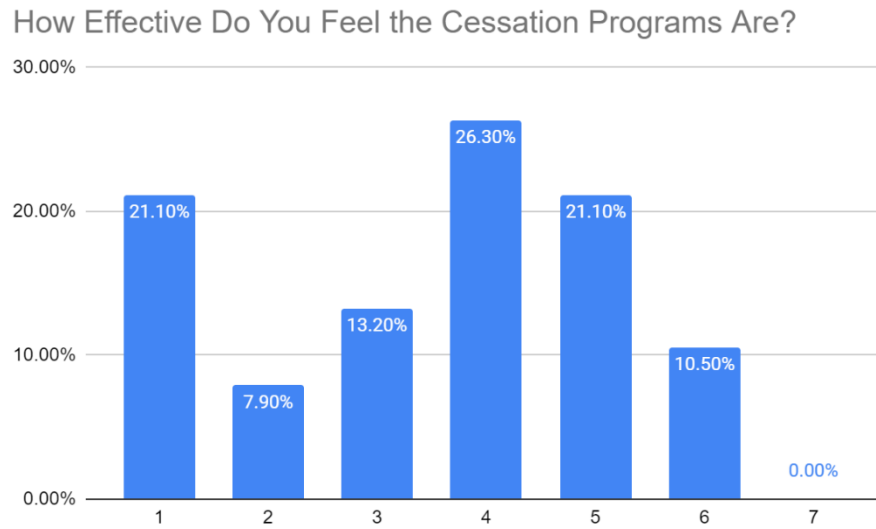
How Effective Do You Feel the Cessation Programs Are?

How Effective Do You Feel the Cessation Programs Are?

Student Influences

Just as important as it is to identify the actions of school administrators when addressing student vaping, it is also necessary to seek to understand what influences

students to begin vaping. Research question 4 asks what are school administrators' actions to understand what influences and why students are using vapes, and what are their perceptions about those actions? This question focuses on how administrators are trying to understand why students are vaping so they can better address the issue on their campuses.

Administrators expressed several means he or she uses to try and understand why students vape. Many are using research, collaboration, and reading any information they can find about the topic. Administrators noted that using any resources they could to better understand was part of their strategy. While others are having individual conversations with students about why they have started. One administrator said, "talking with the students and simply asking them why they choose to vape," is one way to understand and further mentioned that, "most are pretty honest". Another reported a similar response, "I usually get a lot of information from the students that committed the act. They are almost always open with myself as to where they got the vape device and why they felt the need to partake." Others mention having meaningful conversations with students and expressing their true concern for their health and well-being. One administrator even mentioned that "I think students think it's a better solution to smoking."

A couple administrators felt that there the reasons were obvious as to why students are using vapes. One expressed, "I'm not seeking to understand why. We know the "why" already. This is the same social pressure kids went through with smoking cigarettes in the bathroom a generation ago." This response coincided with another administrator's response, "Students have always sought to engage in risky behaviors like

using tobacco. Vapes have made it to easy to conceal and engage in these behaviors. I don't necessarily seek to understand "why" they are doing it, because I feel that it is obvious."

Administrators also reported some of the information they have received when asking students about why they vape. A couple mention, "it's because their parents vape," while another says, "they are easy to obtain." Students even reported to administrators that they steal the vapes from their parents or older siblings. Other student responses mention because it is "accepted and because everyone else is doing it."

The most common reason seems to be centered around peer pressure. Students expressed to administrators they use vapes because they are wanting to fit in, it's "the thing to do", or it is cool, along with their friends or family use and some felt that they don't think it's a big deal. Others say it calms them down, it reduces stress and anxiety, to help deal with family or school issues, depression. With others admitting they are addicted, saying, "They just can't stop," or "It was fun. Something to do. Now, I am addicted." Some say they just like it, or like the flavors.

The responses students expressed to administrators also resemble the root causes administrators feel cause students to vape. Peer pressure was commonly reported, but many felt that the vaping was rooted from the easy access to vapes and the marketing or advertising of vapes. "Just like smoking and drinking, teenagers try things, but I do believe vaping has been marketed to them. It's inexpensive, disposable, with fruity flavors." Another reported, "Tobacco companies have made it "fun" for kids offering different flavors that appeal to kids. A third response mentioned "Access plays a huge factor. Students are able to get vapes without any fear of consequences."

With access and marketing driving the root cause, administrators reported similar root causes as expressed previously. Students are using because peer pressure, stress, anxiety, reporting it calms them down, or they are addicted, Others report it is a fad that turned into a habit from want to "fit in" or be cool. An interesting response expressed, "Peer pressure to do the next thing – vaping, alcohol, sex. This isn't that new of a thing. The ease of disguising it is new and makes it difficult to catch them." There was also expressing that there was a lack of understanding about the negative effects of vaping from not only students, but also parents.

Chapter V: Conclusions, Implications, and Recommendations

This exploratory study sought to gather data to identify actions school administrators are implementing to support the issues of student vaping on school campuses in Arkansas. The study focused on actions to prevent student usage, educate students on the use, what the reasons are for the use, and what is being implemented to provide support for cessation. With the rise of vaping incidents on school campuses among our youth, the researcher's intent was to identify how school administrators are trying to address student vaping. It is an issue that is increasing at an alarming rate and there is minimal information about how schools are addressing the issues positively and effectively for the safety and health of all students within their building. The primary goals of this study are to be able to provide schools with information that could provide the needed support in battling student vaping in Arkansas Schools and even across the country.

The study gave the opportunity to building administrators in Arkansas schools serving students from kindergarten through twelfth grade. The survey was delivered via email with the help of the Arkansas Association of Educational Administrators, with all participants kept anonymous. The survey was broken down into multiple sections. The first section requested demographic data related to the participant's experience as an educator and an administrator, along with identifying the region and size of the school district he or she worked for. Part two centered around the prevention of vaping; part three focused on educating the students on the use of vapes; part four focused on cessation; and part five focused on understanding why students are vaping. The survey consisted of several different types of questions including multiple choice, open response,

and Likert-type questions to provide a variety of options for reporting and gathering data to best understand the experiences of these school administrators.

In the previous chapter (Chapter IV), the researcher reported the findings from the survey, outlining themes based on questions and responses. In this chapter, Chapter V, the researcher analyzes the responses, identifying any additional limitations, along with expressing recommendations on how to help administrators support and address student vaping on their campus to improve overall student safety and health. Lastly, recommend potential future studies to confirm actions building administrators are implementing and gather more current data, as products, habits, and issues around vaping will change as more researchers seek information about the effects of vaping.

Limitations

The limitations of the study are primarily centered on the lack of knowledge of vapes. The researcher targeted building administrators in Arkansas public schools. Eighty-two out of over a thousand requests were returned, which limits the responses. The findings of this study are not exhaustive of the actions school administrators are implementing to address vaping and support students' safety and health nor do they express a statistical analysis of whether actions are effective in addressing the issue. The experience of the administrators with students vaping, including the grade levels they supervise, plays a factor in their responses and how they may address vaping in their building. Also, what grade levels were in a building could provide different responses to student vaping, as administrators servicing the lower grades may have a different approach or resources to addressing vaping, while in the upper grades, vape may be more prevalent, providing data from administrators, who have more experience dealing with

student vaping. While time-limited responses, expanding the survey with a follow-up survey to further specify questions for data could provide more insight, along with increasing the opportunity to gather more responses to further support the data already gathered.

Summary of Findings

RQ1: What are school administrators' actions to prevent e-cigarettes and vaping in Arkansas Public Schools, and what are their perceptions about those actions? Responses varied among schools.

A majority of administrators perceived that vaping was a large problem on their campus. Administrators expressed that vaping was a larger concern in grades 7th-12th, compared to the lower grades 1st -6th. Most administrators reported they were having to address a vaping issue once to twice a week. There was growing concern about how vaping affects their students. Health effects and the unknown chemicals in vapes were the largest concern. Administrators expressed that continuous and consistent monitoring of students was the most common and effective means of preventing students from vaping.

One administrator mentioned that most vaping took place in the bathrooms and others supported this statement as many of the actions focused on monitoring students vaping in restrooms. The most common means of supervision practiced included using vape detectors, cameras (where appropriate), and ensuring staff monitoring at all times were the best ways to deter students from vaping. Less common actions included having discussions with students about vaping and why they vaped, calling parents, or even contacting law enforcement to write citations. Overall, most administrators rated the

preventative measures they implemented a four out of seven on perceived effectiveness, with seven being the most effective.

Again, many felt that consistent monitoring of students was the most effective way to prevent the issue, but the ability of students to hide vapes decreases the likelihood of eradicating vaping altogether on a school campus. It is the opinion of the researcher based on responses that continuous monitoring of students using adult supervision, vape detectors, and cameras are the most effective means of attacking the vaping issue on many campuses.

When students were caught vaping, most administrators relied on in-school suspension (ISS) and out-of-school suspension (OSS) for consequences, based on the handbook. Even those ISS and OSS were the most common consequences, there is no data to support their effectiveness in preventing students from vaping again. This leads the researcher to believe that more research needs to be completed to better understand what consequences or actions could more effectively prevent students from becoming repeat offenders and hopefully stop vaping altogether. A few administrators mentioned contacting parents or law enforcement and providing counselor support to students who are caught vaping as a common means of prevention. One administrator expressed,

> The issue of vaping in schools is a serious concern that needs to be addressed in the court of law. It is clear, that traditional disciplinary measures such as In-School Suspension (ISS) and Out-of-School Suspension (OSS) are not effective solutions to this problem. Instead, fines and punishments for both students and parents should be implemented as a means of addressing the issue. This will

send a clear message that vaping in schools is not acceptable and that there are

consequences for those who engage in this behavior.

These responses were not common, but the researcher feels that these actions

compounded with other actions could increase the effectiveness of the prevention

strategies.

RQ2: What are school administrators' actions to educate students about e-

cigarette and vape use in Arkansas Public Schools and, what are their perceptions about

those actions?

As educators, administrators understand educating students not only for

academics but also for making healthy choices. Almost all reported that they offer health

education to their students, and this is the main means of educating students about

vaping. On one campus it was mentioned that students are educated about vaping, but the

unknowns or long-term impact of vape is still unclear and they fear that the unknown is

not enough to discourage students from starting or stopping the habit.

An interesting response noted that schools need to focus on targeting students in

younger grades. This has the potential to educate students earlier about health risks,

which could potentially discourage students from starting in the future. As this issue

continues to grow and we become more aware of the health risk, it is the researcher's

opinion that providing earlier and more thorough education about vaping could help

administrators battle this mountain of a task. A few felt that we need to be educating the

parents as well to help educate the students. Stating, "Many parents may not be aware

that their children are vaping, and some may even purchase vapes for their children,

believing that it is safer alternative to smoking." They continued to state, "Parents need to

be educated about the dangers of vaping and encourage to search their children's backpacks and belongings to prevent them bring vapes to school." Most responses, even though express that vaping is taught in health education, several responses lean toward the perception that vaping is addressed with minimum expectations at school or at home.

One administrator expressed, "it's part of the curriculum, but nothing special." Another said it's taught, "during health classes or during ISS after caught." Lastly, it was stated, "Currently, most educational programs aimed at addressing this issue are "cheesy" and ineffective." The administrator further stated, "A well-developed awareness campaign that is designed to shock or scare students into understanding the dangers of vaping will be the most effective way to gain ground with this problem." This leads the researcher to believe that some administrators are addressing vaping as an afterthought, rather than being proactive in the education of students about vaping. Some said it is taught in health education, but not explicitly targeted, but more lumped into discussions about tobacco. In addition, as more information is compiled more resources will hopefully become available to educate students about vaping, but in our current reality, administrators have relied on guest speakers, medical professionals, school counselors, parents, and teachers to educate their students about vaping.

Some schools even provide ongoing prevention or drug awareness programs like Project Prevent or Red Ribbon Week to make students aware of the dangers of vaping and build support to educate students so they make healthy decisions. Other programs include DARE, and Rebels Reach Mentoring Program for support, while some provide awareness with support from health professions, Arkansas State Police, and Harbor House. As stated in the previous paragraph parents need need to be part of these

programs, one administrator suggested a state-wide vaping campaign directed at both students and parents. They stated, "Until parents are held accountable for their children's actions, students will always find ways to conceal and vape at school." And "Schools will continue to struggle with this issue until it is dealt with at a state level." Even with these suggestions and though many participated in various programs, the perceived effectiveness of the actions varied in responses. This variation in responses is not specific enough to make recommendations on what would work best in a school district, but the data allows administrators to use the information to guide them in creating a plan that takes into consideration the data to make informed decisions about what is best for their school.

RQ3: What are school administrators' actions to provide support to students about the cessation of e-cigarettes and vapes in Arkansas Public Schools, and what are their perceptions about those actions?

With the increase in vape use among our youth, it was also necessary to understand how administrators supported student cessation of vaping. When asked whom they felt should address this health issue on campuses the school nurses or counselors, and administrators felt that were mostly unsure whose responsibility it was. This could be because it is a new health issue, but also it requires many different supports from many different people in the student's life.

There is almost a universal agreement among administrators who responded that vaping affects students' social and emotional health. Administrators feel that peer pressure, stress, anxiety, depression, and self-esteem play a large role in students vaping.

Concerns included increased health problems, addiction, dependence, aggression, isolation, mood swings, and other unknown long-term effects.

With all these concerns administrators are unsure who or what can help support cessation as the issue is deeply rooted with other issues. Right at a fourth of administrators said they did offer a cessation program on their campus, while three-fourths do not offer a program. Those that offered a program mentioned a variety of resources. Some used medical professionals like Rural Health, American Heart and Lung Association, while others used online programs like MD Anderson, Vape Educate, Suite 360 Intervention, and 3rd Millennium to support student cessation. A few used counselors, education coop support, or resources offered through the State of Arkansas to support cessation.

Overall, ratings varied across the board on how administrators perceived the effectiveness of the programs. It is the opinion of the researcher that administrators will have to continue to seek additional support for student cessation programs and recommend incorporating a vaping focus into school health plans to increase the awareness of vaping and prioritize the need to address the issue on his or her campus. It would also be recommended that more specific research about individual programs would provide a more thorough picture of the effectiveness of the programs, allowing for a direct comparison between programs.

RQ 4: What are school administrators' actions to understand what influences and why students are using e-cigarettes and vapes, and what are their perceptions about those actions?

When exploring how vaping has been addressed, it was also necessary to understand how administrators were seeking information about what was influencing students to use it. There were several means through which administrators sought information about what influences students to use vapes. Several did lots of research and reading about the topic, while others had conversations with counselors or school resource officers. Many just asked the students; stating, "I usually get a lot of information from the students that committed the act. They are almost always open with myself as to where they got the vape device and why they felt the need to partake," or "I have meaningful conversations with the students and express my true concerns for their health and well-being." Others felt that "Students have always sought to engage in risky behaviors like using tobacco. Vapes have made it too easy to conceal and engage in these behaviors. I don't necessarily seek to understand "why" they are doing it, because I feel that it is obvious." Others reported students telling them that it's because their parents vape and they are easy to get. This leads to other concerns as to if they are easy to get, and where are they getting them. Administrators said students report getting them from their parents, or other siblings, and stealing them is common.

As administrators have been seeking an understanding of the influences, they also expressed what students have told them about why they vape. Many students reported to administrators they vape because of peer pressure, stress, and anxiety, expressing it calms them down or that they do it because their friends or parents are using it. Some say it's because it's cool or to fit it. Several have expressed that they don't think it's a big deal, they have become addicted, or they don't do it often. Others say it's a way to disguise from smoking as they are easy to hide, along with liking the flavors and feeling that it's

70

healthier than traditional cigarettes. One administrator reports their students stating they are doing it out of boredom.

Regardless of the reason, it has become an increasingly larger issue in our schools. Administrators reported several of the same causes as students. Administrators perceived the root cause of vaping to be peer pressure, addiction, stress, easy to hide, anxiety, lack of parenting, depression, easy access, or seeking attention as to why they felt students vape. The data does not provide a clear solution to the issue but allows others to better understand why students are vaping, so a plan can be created to combat this issue.

The researcher recommends building a team of stakeholders in the school to discussions and develop a plan to address student vaping as there is not a common theme from the data. It is also recommended that administrators seek support from parents, counselors, health professionals, and other administrators. The issue is common among schools, but how each school addresses this issue varies, requiring schools to develop plans on their individual needs, using common actions others have implemented to address the issue the best they can in their own building.

Recommendations for Education

A recommendation for Arkansas Public Schools and the Arkansas Department of Education is to develop a taskforce team of administrators across the state to develop an educational, prevention, and cessation vaping campaign focused around educating both the student and the parent. The information from this research could guide a focus around the issues and actions administrators are already implementing then using that to develop a campaign that is thoughtful, focused, and purposeful to Arkansas's students and

parents. In this campaign strong resources would need to be developed to go with the campaign as administrator already have minimum resources to address this issue. Providing needed resources provides a consistent message and support to all parties.

It is also recommended that the taskforce develops an assessment for individual administrators and districts to use to assess vaping issues on their campus with a guide to developing their own team focused on educating students on vaping. This would allow districts to develop plans that are more specific to their needs because it can be more flexible but can still use the resources developed from the state level campaign. Currently, there is not a clear, one size fits all solution.

Lastly, it is recommended that schools seek to review school policy and develop policy around the issues of vaping with a strong plan that can be proactive. The responses suggested that administrators and schools are not adequately prepared to address vaping and there was lack of preparation. Responses suggest that addressing vaping is a after thought for administrators and schools, as it is a new issue, but not high on the priority list due to other priorities, but also with the unfamiliarity of the vaping.

Recommendations for Future Research

The researcher recommends the following based on the findings and limitations of this study:

1. This study focused on building administrators K-12. Future researchers could decrease the sample size to narrow down specific experiences to gather a more thorough perspective of how schools are addressing vaping, but also a more personal experience about how effective they feel.

2. Again this study was focused on building administrators K-12. Future researchers could focus on specific grade groups to identify more specific areas of focus for administrators and seek to understand how one method maybe more effective than another depending on the grade level.

3. This study was limited to building administrators K-12. A study interviewing perceptions of students would provide another facet of data, but also allow for a more intimate understanding of the vaping issues in schools, while providing more needed insight on how schools can address vaping in schools, along with providing more focused support to help educate students to prevent and decrease student vaping overall.

4. Future research could seek out data about what current resources are available to support schools in addressing student vaping. This would promote what resources are available to schools, and then maybe identify gaps in resources, so schools and/or the community can better fill those gaps once the needs are identified.

Conclusions

Vaping will continue to be a growing issue in schools and will be on the priority list as it has implications of negatively affecting student safety and health. Parents send their kids to school expecting we keep their children safe and healthy, but it is also the schools' responsibility to provide education and prevention about vaping, so our students not only are growing academically or socially and emotionally, but physically. The intent of this study was to identify the actions of school administrators when addressing vaping on school campuses. More specifically, what they were doing to educate students

about vaping, what they were doing to prevent students from vaping, what they were doing to support students in cessation of vaping, and what they were doing to understand why students were vaping. From this study, it is apparent that vaping is an issue across schools in the state of Arkansas, but it is not apparent what is the most effective way to address these issues. There were several commonalities, but overall, there were no actions that would completely eradicate vaping from school campuses.

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Appendix A. School Administrators Awareness of Vaping and E-Cigarettes Use in their School

Administrator Questions
1. How many years have you worked as an educator?
2. How many years have you worked as an administrator?
3. How many years have you worked in your current district?

School Demographic Information
1. How would you describe your school's community type?
2. How large is the district?
3. What region of Arkansas is your district located?
4. What grades are included in your school?

Prevention
Research Question 1: What are school administrators' actions to prevent e-cigarette and vaping in Arkansas Public Schools?
1. Do you perceive there is a problem with vaping by the students in your school?
2. If yes, what grade or grades do you perceive has the largest percentage of students vaping?
3. What do you feel are the biggest concerns with student vaping?
4. What security measures are in place on your campus to deter e-cigarette and vaping? (Check all that apply)
5. How effective do you feel these preventative measures are? 1 being least effective and 7 being most effective.
6. What do you feel is the most effective measure you are implementing?
7. Do you feel this is a disciplinary problem to be dealt with through the student handbook?
8. How do you address the disciplinary issues with vaping in your building?
9. What is the frequency of discipline referrals related to vaping in your school?
10. How do you perceive the problem of vaping? 1 being not a problem and 7 being a huge issue.

Student Education
Research Question 2: What are school administrators' actions to educate students about e-cigarette and vape use in Arkansas Public Schools?
1. Does your school offer health education to students?
2. If yes, how is the issue of vaping presented in these classes?
3. Does your school have any ongoing prevention or drug awareness programs for students?

4. If yes, can you describe the program and how effective you feel it is?
5. How do you think vaping affects students' social and emotional health?
6. Do you feel that it is a health issue to be dealt with by counselors or school nurses?

Cessation

Research Question 3: What are school administrators' actions to provide support to students about the cessation of e-cigarettes and vapes in Arkansas Public Schools?

1. Do you offer any type of cessation programs on your campus? If yes, what are they?
2. How effective do you feel they are? 1 being not effective 7 being most effective.

Student Influences

Research Question 4: What are school administrators' actions to understand what influences and why students are using e-cigarettes and vapes?

1. How are you personally seeking to understand why students are vaping?
2. Have students expressed to you the reasons why they vape? If so, what are their reasons?
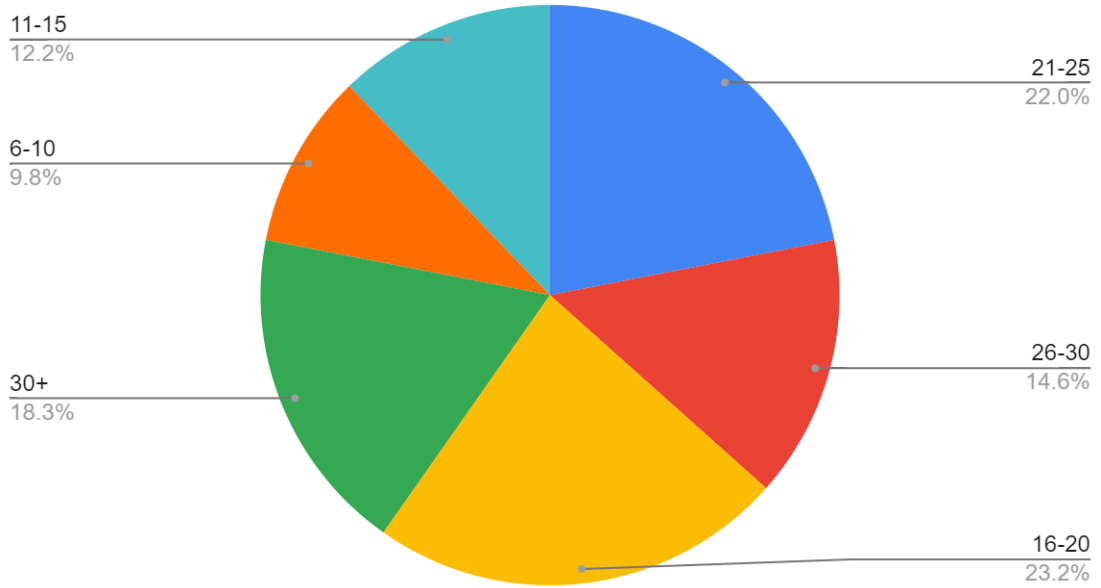3. What do you perceive to be the root cause of vaping?

Conclusion

1. Is there anything not covered that you feel would be valuable information?
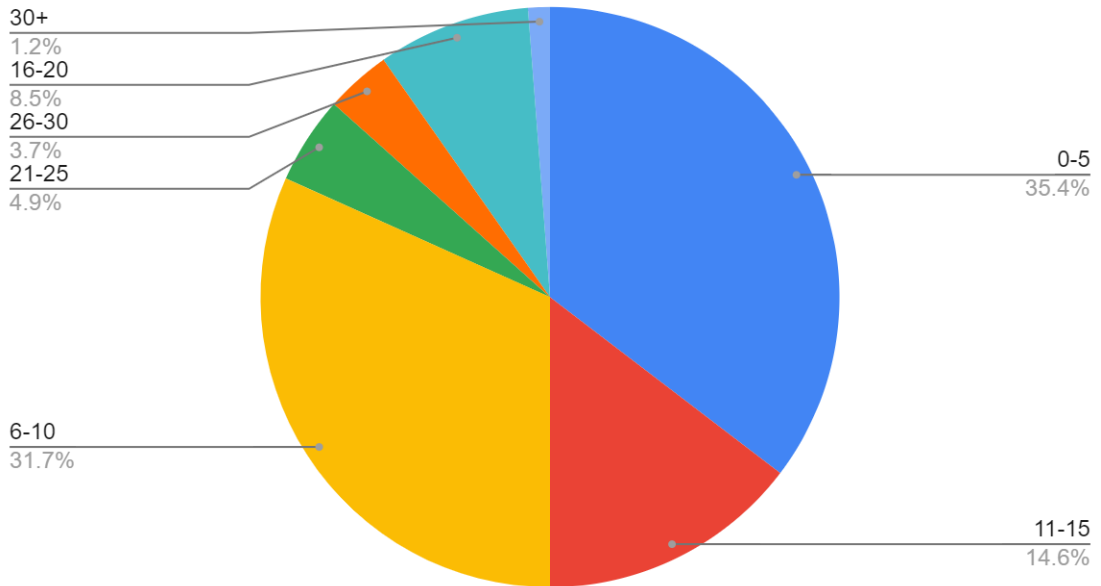
Appendix B. School Administrators Demographics
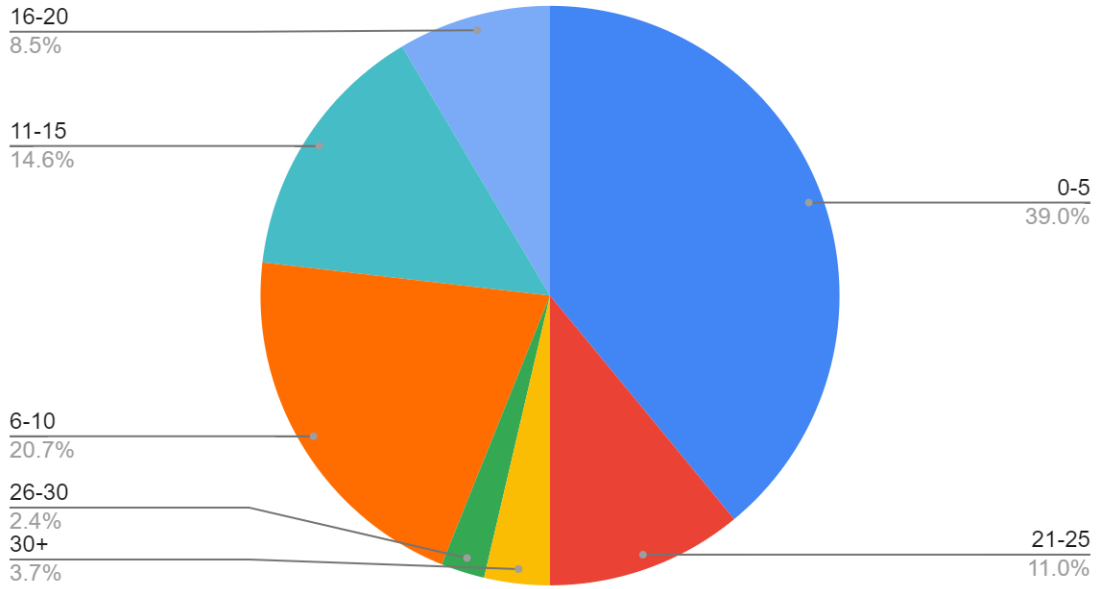
Graphs 1.

How many years have you worked as an educator?

11-15
12.2%

6-10
9.8%

30+
18.3%

21-25
22.0%

26-30
14.6%

16-20
23.2%

Graphs 2.

How many years have you worked as an administrator?

30+
1.2%
16-20
8.5%
26-30
3.7%
21-25
4.9%

6-10
31.7%

0-5
35.4%

11-15
14.6%

Graphs 3.

How many years have you worked in your current district?

16-20
8.5%

11-15
14.6%

0-5
39.0%

6-10
20.7%

26-30
2.4%

30+
3.7%

21-25
11.0%

Appendix C

Graph 1.

How many years have you worked as an educator?

11-15
12.2%

21-25
22.0%

6-10
9.8%

26-30
14.6%

30+
18.3%

16-20
23.2%
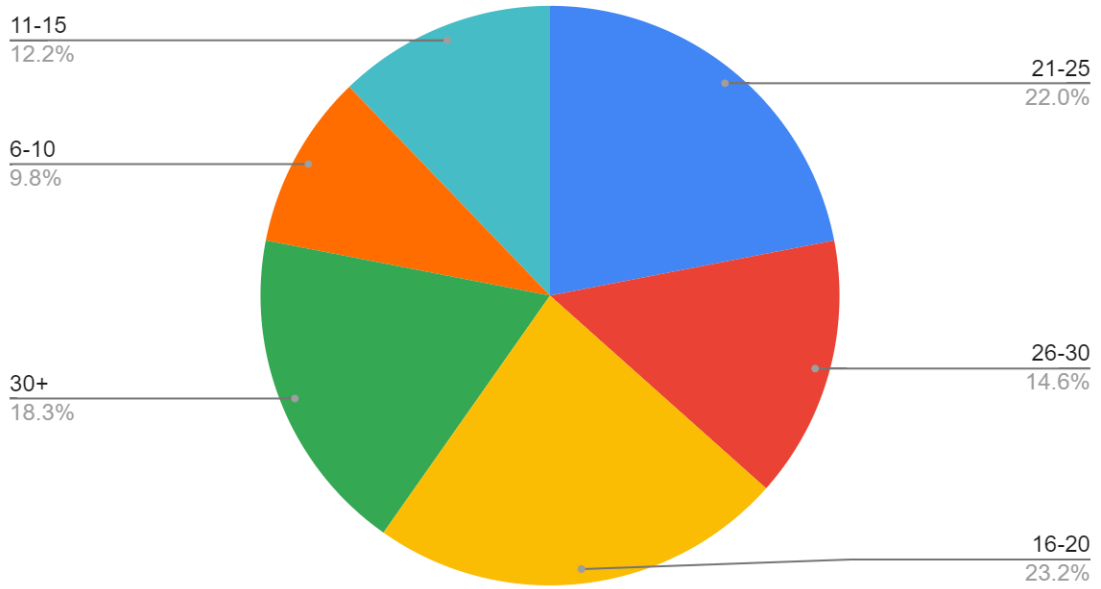
Graph 2.

What region of Arkansas is your district located?

Southeast
15.6%

Northwest
39.0%

Northeast
16.9%

Southwest
28.6%
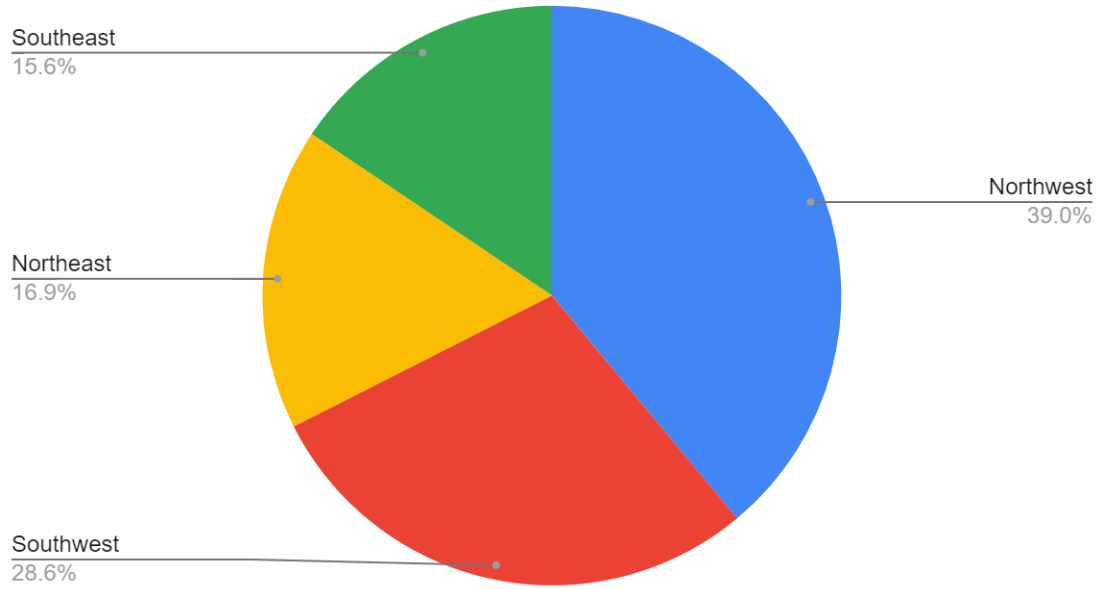
Graph 3.

How large is the district?

0-350
6.1%

2001-2500
6.1%

2501-3000
3.7%

1501-2000
9.8%

3001-3500+
19.5%

351-700
22.0%

1001-1500
15.9%

701-1000
17.1%