THE EFFECTS OF HOMELESSNESS ON STUDENT OUTCOMES

by

Lucinda York

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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APPROVED BY:

Pamela Moore, Ph.D., Committee Chair

Pamela Todd, Ph.D., Committee Member

ABSTRACT

The research was designed to evaluate the effects of homelessness on student outcomes in the area of attendance and academics. Studies showed a higher percentage of families who identify as homeless over the past two decades. As a result, the federal McKinney-Vento Act was formulated to help target those students and families who struggle with adequate housing. However, the premise of the McKinney-Vento Act does not extend beyond providing such services. In the arena of academics and attendance, little educational data has been researched to combat the possible struggles students possess particularly in the areas of reading and math. Notably, homelessness did have a contributing factor to the overall student's academic success, school day attendance, and the self-esteem of individuals who undergo such status. A review of elementary student data derived from various research indicated a need for further exploration in the secondary school-aged setting. This paper evaluated the significance of homelessness on academics and attendance within the secondary setting. Participants were randomly selected within the archival study.

Keywords: McKinney-Vento Act, homeless, Every Student Succeed Act, at-risk, high-risk, Homeless/Highly Mobile

Table of Contents

List of Tables

List of Figures

List of Abbreviations

Adverse Childhood Experiences (ACES)

Attention Deficit/Hyperactivity Disorder (ADHD)

Department of Education (DE)

Education for Homeless Children and Youth (EHCY)

Every Student Succeed Act (ESSA)

Homeless and Highly Mobile (HHM)

Local Education Agency (LEA)

McKinney-Vento (MCV)

McKinney-Vento Act (MVA)

Measure of Academic Progress (MAP)

National Center for Homeless Education (NCHE)

Non-McKinney-Vento (NMCV)

Posttraumatic Stress Disorder (PTSD)

River Nest Eastern (RNE)

Socio-economic Status (SES)

West Hill High School (WHHS)

CHAPTER ONE: INTRODUCTION

Overview

Homelessness has been a growing issue for several years. Even more so, student homelessness began to grow as more families experienced hardships such as lack of affordable housing in which caused unstable living situations. In this paper, homelessness was examined through the lens of secondary students within the River Nest Eastern (RNE) High School community of River School District Two in Cola, Sun Crest. West Hill High School (WHHS) of Golden County Schools in Great Sun Crest were also compared to determine if homelessness status has a significant impact on the areas of grades and attendance as it relates to student outcomes.

Background

The 1987 Stewart B. McKinney Homeless Assistance Act (P. L. 100-77) was the first major federal law introduced to address the welfare of the homeless people of America and remains the only initiative to this day. This law represented a major departure from the generally indifferent federal policy on the matter of homelessness (Gabbard et al., 2006). The purpose of the McKinney-Vento Homeless Assistance Act ([MVA]42 U.S.C. 11431 et seq.) is to provide basic standards of care, assistance, and safety in the United States for homeless students and families and explicitly forbids discrimination while guaranteeing educational rights. Despite McKinney-constitutional Vento's provisions, several challenges exist and prevent the fundamental rights defined by the Act for homeless individuals from being able to fully take advantage of the assistance from MVA. Some relief has been offered by resolving these obstacles in the courts, but given the limitations of MVA, it is inadequate (Bon & Synder, 2015). Unlike Britain's Homeless Persons Act which includes, but not limited to, persons who do not

have a stable living environment but also those who are threatened with homelessness or persons who are in domestic violence situations which may lead to homelessness, the United States has focused more on the persons who lack a regular, adequate living environment (Fitzpatrick & Christian, 2006).

School districts across the nation have adopted the term McKinney Vento (MCV) to identify students who are considered homeless. The term homeless within River School District Two and Golden County Schools is defined as a lack of permanent housing resulting from extreme poverty or, in the case of unaccompanied youth, the lack of a safe and stable living environment. Homeless individuals can be anyone who lives in shelters, motels, vehicles, campgrounds, on the streets, and/or doubled up with relatives and/or friends, according to the National Center for Homeless Education ([NCHE], 2018).

According to the U.S. Census Bureau (2019), River County School District Two is composed of 136,486 people. Of those individuals, 15% of those were students aged 10-19 years, composed of 54% females and 46% males, 17% of children under the age of 18 were identified as living in poverty. However, the Census Bureau does not consider students who are homeless to include alternate living situations, such as families living with families, as a statistical component of living situations. Six hundred students in River School District Two were identified as MCV each year that possess lower academic grades and poorer attendance (U.S. Census Bureau, 2019).

As of July 2019, Golden County School District is composed of 542,528 people (U.S. Census Bureau, 2019). Amongst these individuals, 13% were in the 10-19 age range, with 48% males and 52% females. 11% of the individuals under the age of 18 were considered living in poverty (U.S. Census Bureau. 2019). Like River School District Two's data, the U.S. Census

Bureau did not account for the number of students who are categorized as homeless or MCV. The Greenville Alliance Association estimated as of 2019, there were 1,106 students within the Golden County School system who were homeless.

Historical Setting

During the post-war period, which caused an increase in mental health problems within individuals who were affected, homelessness increased in awareness (Anderson, 1923). During this timeframe, homelessness was portrayed as affecting men, specifically White, who were believed to have poor familial relationships and were transient (Barlow & Caplow, 1973). The interest in policies of those being deinstitutionalized and homeless began to increase due to the rise in mental health issues within the communities (Jencks, 1994). However, in the late 1980s, the United States moved from its individual pathology approach to a more integrative approach like Britain. The integration of individual and structural factors emerged in the 1990s, which increased awareness within the housing market and other structural factors (Burt, 1991).

Studies showed an interestingly higher percentage of families identified as homeless over the past 2 decades (Wenzel, 2014). Of the age groups, children make up the largest group of homeless individuals (Klein, 1990). Students who are homeless are often at a higher risk of exhibiting academic difficulties than students who also possess disadvantaged backgrounds, especially in the areas of reading and math (Wenzel, 2014). Even though the data of general cognitive development is limited, the information thus far has been alarming (Klein, 1990). School attendance has also been a major factor within the homeless community. According to Sheldon (2002), students who were classified as homeless were more than likely to have lower levels of attendance.

In an analysis that used data from the Northern California School System and non-experimental test design to assess how student homelessness influences different school-related outcomes. According to Vacha and Marin (1993), double-up homeless refers to any individual who is living with a family member and/or friend due to due to the individuals not owning their own home. Double-up homeless pupils were even more likely to have issues with truancy (Low et al., 2017). However, in a separate study, analysis looked at academic performance results from third to eighth grades, compared children classified as homeless or extremely mobile with other students in the Government Free Food Programme, discounted price for meals, or neither. As a function of increasing risk status, achievement was lower. Achievement gaps were unchanged or expanded between homeless students and lower risk classes. Math and reading achievement were smaller, and math development was slower in years of homeless detection, indicating extreme effects of residential uncertainty. However, 45% of homeless students ranked within or above the average level, indicating academic resilience (Cutuli et al., 2013).

Students identified as homeless are coded as MCV within River School District Two in Columbia, and Golden County Schools in Great, Sun Crest are not evaluated regarding student data according to the U.S. Census Bureau (2019). Academic data such as grades accessed within the educational system looks at a variety of subgroups to determine intervention services and causal effects of standardized test scores such as the Measure of Academic Progress test (MAP), Benchmark, and other key assessments in which determine academic progress. Subgroups such as race, special education, free/reduced lunch status, ethnicity, and gender were reviewed and determined overall performance. MCV students were not included within these subgroups. Atop of other adverse childhood experiences (ACES), this group is placed outside of their natural environment and expected to perform at the same level as others in school.

The MCV services rendered by the educational system assist with providing shelter, transportation, and meals; however, 37% of the U.S. homeless population are young people who are homeless with adult family members, but mental health in this group has not been well represented yet. Despite this lack of representation, psychiatric disorders have plagued homeless youth consistently at elevated levels(Edidin et al., 2012). Mental health disorders amongst homeless youth include, but not limited to, depression, psychosis, and anxiety. Barnes et al. (2018) aimed to compare family-homeless and non-homeless youth, the risk of suicide, and factors that may protect against it. Barnes et al.'s study used cross-sectional data representing 62,034 eighth- to 12th-graders to estimate the adjusted odds ratio (aOR) of emotional distress, self-injury, suicidal ideation, and suicide attempts in the past 12 months for youths who have encountered family homelessness relative to housed youths in the past 12 months, adjusting for covariates. Developmental assets outcomes were also studied (Barnes et al., 2018). Deighton et al. (2018) examined the link between internalizing (such as symptoms that cause distress) and externalizing difficulties (such as emotional and behavioral self-control) compared to academic performance in middle school and early adolescence. The findings that externalizing problems negatively impacted subsequent academic accomplishments were apparent. Agnafors et al. (2021) concluded that prior research indicated that mental health issues influenced academic achievement from adolescent development through adulthood.

Conceptual/Theoretical Background

Due to the historical data that surround homelessness and its effects on students in grade school, researchers found it fitting to look closer at the impact which homelessness has on student achievement. However, in order to fully address the root causes of homelessness and its effects on students, the basic needs of homeless individuals must be addressed, according to

Maslow (1943). One of the most notable theories surrounding basic needs was developed by

Maslow. The theory of human motivation came from Maslow's research surrounding human

development, which is the core of his research. With this principle, Maslow created the hierarchy

of needs to address such deficiencies.

Maslow's Hierarchy of Needs

Student homelessness, as it relates to academic success, has become a frequent topic with

many disparities. The theoretical framework for this study focused on Maslow's (1943)

hierarchy of needs as a basis for student success. Maslow's hierarchy of needs is composed of

five stages of needs to include psychological, safety and security, love and belonging, self-

esteem, and self-actualization (McLeod, 2007). According to Maslow (1943), individuals have a

keen aspiration to carry out goals which fuel their satisfaction. Catering to the basic needs of

individuals is essential before satisfying the higher-level needs (Burleson & Thoron, 2014). In

the same notion of Maslow's hierarchy of needs, Noltemeyer et al. (2012) tested this assumption

that basic needs must be met for students to be academically successful. Within Noltemeyer et

al.'s study, 390 students were examined across 40 different schools to determine if unmet basic

needs led to poor academic performance. As a result of this regression analysis, safety needs and

love/belonging were the two variables that became significantly evident among four academic

achievement outcomes, which suggested that there was a relationship between deficit needs and

academics (Noltemeyer et al., 2012).

Resiliency Theory

The resilience of youth is comprised of two factors, internal and external. Internal factors

include self-monitoring and compassion, whereas external factors include support groups,

positive role models, and parent guidance and monitoring (Evans, 2017). In a study by Bleuer

(1972), which consisted of longitudinal research of homeless individuals who were diagnosed with schizophrenia with their families, found that the individuals who were diagnosed with schizophrenia led healthy lives after facing such challenges (Zolloski & Bollock, 2012). Researchers focused on the development of the child and how these children coped despite the circumstances that surround them, such as poverty, mental illness, and family stability (Evans, 2017).

Summary of the Background

As homelessness rose over the last decade partially due to the postwar effects and the recession, researchers have found a need to study its effects. Unfortunately, due to the disparities, studies do not have a clear attribution to homeless students' academic success or the lack thereof. While the MVA (1973) seeks to combat such disparities within the homeless community and schools, more research must be done in order to compare the effectiveness of the program. Such factors as Maslow's hierarchy of need and the resilience theory play a significant role in the overall achievement of student outcomes.

High school student absence rates and the consequences from such absences are one of the most serious problems of public high school systems. The budget, truancy, and crime, as well as daily lunchroom planning, are among the few that are all affected by absenteeism (Strickland, 1998). Several research on the impact of absence on student success in public high schools have found substantial negative connections amongst absences and grades. Lower-grade pupils and second-year high schoolers had the highest connections (Strickland, 1998). In a longitudinal study on attendance, especially those students residing in an urban area with high poverty-levels, high absentee rates were customary (Schoeneberger, 2012). Due to this negative connection

between attendance and grades, schools must look closer at how this affects students who are considered homeless.

Problem Statement

The Kanyongo (2012) study analysts strived to explain student attendance–mobility in a broad urban district in terms that are descriptive and beneficial to schools and the community. First, the prevalence of movement and non-participation in Grades 1–12 among all students and by gender, ethnicity, and socio-economic subgroups was presented. Notably, there was no differential effect across racial groups. Black and White subgroups have common rates of success across enrollment and mobility levels (Kanyongo, 2012).

Provided that the experiences of homeless students are not discrete from the living conditions of healthy low-income students, there is a significant intersection between discussions about the program and the results of the two classes. For example, acknowledging that there is a variance in and between them, all types of students have lower rates of enrollment, achievement, and graduation than students who are neither low-income nor homeless (Miller, 2011a).

Nolan et al. (2013) research explored recent results from students in 21 schools in a large Midwestern school district. Survival analysis was used to quantitatively determine the risk factors for truancy. Findings showed that students of lower socio-economic status are at increased risk of truancy. Age and special education status also influenced the likelihood of truancy. Students who traveled to another school, also within the same district, often had an increased chance of truancy. The consequences of these risk factors were explored, and recommendations for avenues for future studies were given (Nolan et al., 2013).

For an entire cohort of students in Philadelphia, Fantuzzo et al. (2012) explored the unique and integrated associations of homelessness and school mobility with educational well-

being measures, as well as the mediating influence of absenteeism. The findings found that homelessness had a particular correlation with classroom engagement issues, school mobility was uniquely connected to both academic achievement and classroom engagement issues, and it was the most negative for both types of educational well-being to experience both homelessness and school mobility (Fantuzzo et al., 2012).

Cutuli et al. (2013) analyzed academic performance results from third to eighth grade, compared children classified as homeless or extremely mobile with other students in the Government Free Food Program, discounted price for meals, or neither (General). As a function of increasing risk status, achievement was lower. Achievement gaps were unchanged or expanded between homeless/highly mobile (HHM) students and lower risk classes. Math and reading achievement were smaller, and math development was slower in years HHM detection, indicating extreme effects of residential uncertainty. However, 45% of HHM students ranked within or above the average level, indicating academic resilience (Cutuli et al., 2013). The problem is that much research regarding homelessness and student outcomes, such as academics and attendance, is focused on primary grade levels; however, homelessness affects secondary students and their academic performance and attendance as well. Further research within this population is just as vital as the primary levels as this provided insight into the effects within this population.

<center>**Purpose of Statement**</center>

The purpose of this study was to examine homelessness students within a high school setting and their academic and attendance variables to determine if homelessness played a significant role in the positive or negative outcomes compared to students who are not identified as homeless. Academic and attendance data were gathered from both the MCV and non-MCV

(NMCV) students. Such data were gathered from the South Carolina universal system, PowerSchool, as well as historical databases, such as BrightBytes and/or Enrich/Frontline.

Significance of the Study

The significance of this study is vital due to a plethora of reasons. From the post-war era to now, the population of homelessness has grown extensively (NC HE, 2016). The growth in homelessness can be attributed to many factors; however, research within education and the impact on academia and overall attendance has been quite misguided, particularly in the area of secondary education. As research became prevalent within society, most of the focus centered on young children, Grades 1 through 5, regarding homelessness and how it affects students' academic performance. The main research within this subgroup centered on reading and math achievements. However, as students progress through the public education system, the research regarding homelessness status becomes obsolete in its findings. The significance of understanding the secondary population, in my opinion, is just as vital. With the understanding of how homelessness affects secondary students and their academic performance, this allows educators to fully grasp the connection that it may have on daily student performance.

Mixed studies regarding the effects of student homelessness and student outcomes, such as academics and attendance, have left society with assorted views regarding if homelessness plays a significant role in these areas. For example, some studies showed that homeless children and teenagers performed lower than the selection of housed students within the complete collection of important student success indicators. Homelessness is also often linked to being left behind in grade (Murphy & Tobin, 2011). An analysis used data from the Northern California School System and non-experimental test design to assess how student homelessness influences

different school-related outcomes. Double-up homeless pupils were even more likely to have issues with truancy (Low et al., 2017).

A comprehensive analysis of studies investigating the effect of homelessness on young children's school abilities has been assessed. Fourteen studies were reported, which included data investigating the relationship between school-aged students. Findings showed that children with homelessness had poorer educational abilities and academic performance relative to the overall population of children. However, it was not definitive if children with homelessness performed worse than those with socio-demographically matched sheltered children (Manfra, 2019).

Tobin (2016) presented the findings of a study in a large urban area and showed that there is no substantial gap in performance between homeless and poor socio-economic status (SES) amongst school-aged students. In addition, we found that attendance was a mediator of decreased performance and that the generally suspected school-level features did not predict the success of homeless pupils (Tobin, 2016).

There are few longitudinal studies of student achievement among homeless children. Only two studies have looked at the influence of homelessness on student achievement over time, and the outcomes have been inconsistent. In the year after a shelter stay, Rafferty et al. (1991) discovered that homeless children had poorer levels of math and reading proficiency than low-income, homeschooled pupils. After the homeless cohort was resettled, the disparity vanished after 5 years (Cutuli et al., 2013).

Due to such disparities within research regarding homelessness and its' effects on student attendance and academics within the secondary school, this study added to the research by focusing on the specific population in two urban areas within South Carolina to examine their population of homeless students. With similar populations in mind, this study compared the two

areas, which provided a view on the MVA functionalities and how students compared to each other. Identified homeless groups from both areas were compared to similar groups who are not identified as MCV to determine if there was a significant difference in the areas of academics and attendance. Academic data collection within the educational system considers a number of subgroups in order to identify intervention services and the causative impacts of standardized test results such as MAP, Benchmark, and other critical assessments that define academic achievement. Race, special education, free/reduced lunch status, ethnicity, and gender are all considered when determining overall performance. However, what is not considered is MCV students. The need for such research led to the development of research questions for this study.

Research Questions

Research Questions

 RQ1: Does home status in secondary students affect student academics?

 RQ2: Does home status in secondary students affect student attendance?

 RQ3: Does home status in secondary students' gender have a significant effect on attendance and academics?

Definitions

1. *Homeless/Highly Mobile (HHM) Students* – Beyond stable housing, low-income children, pupils are viewed as being on the upper end of a risk continuum (Culuti et al., 2013).

2. *McKinney-Vento Act (MVA)* - The first major federal law introduced to address the welfare of the homeless people of America and remains the only such initiative to this day (Gabbard et al., 2006).

3. *Grade Point Average (GPA)* - Based on the grading scale, culmination of final points given towards final course grades (Shah et al., 2017).

4. *Adverse Childhood Experiences (ACES)* - The links between childhood abuse and family conflict which leads to poor quality outcomes later in life (Radcliff et al., 2019).

5. Doubled Up - Doubled-up is when individuals temporarily house others due to the lack of stable living arrangements (Wright et al., 1998).

6. *Socio-economic Status (SES)* - Socio-economic status is precursor to homelessness, which categorizes the groups' place within society (Pluck et al., 2020).

7. *School Attendance* - The number of days students actively attend school (Strickland, 1998).

Summary

According to Nolan et al. (2013), the correlation between low socio-economic status or homelessness is a direct indicator for school attendance issues such as truancy. However, regarding academics, the comparison between homelessness and academics is quite widespread. Researchers found it fitting to look closer at the impact which homelessness has on student achievement within the primary levels of education. Some research indicated a correlation between homelessness, while others suggested there is no direct connection between the two. The difficulty is that while academics cannot conclusively state that homelessness is the major cause of pupils' low academic achievement, it can be a significant predictor of irregular attendance. The goal of this study was to look at homeless students in the high school environment, as well as their academic and attendance characteristics, to see if homelessness has a substantial impact on good or bad results when compared to children who are not homeless. Numerous studies have focused mainly on primary grade levels in grades to academic and attendance characteristics; however, limited research in the area of secondary students have been conducted, which is why this study is imperative to the educational field.

CHAPTER TWO: LITERATURE REVIEW

Overview

As an educational system, students identified as MCV are not evaluated regarding student data. Academic data determination within the educational system looks at a variety of subgroups to determine intervention services and causal effects of standardized test scores such as the MAP, Benchmark, and other key assessment in which determine academic progress. Subgroups such as race, special education, free/reduced lunch status, ethnicity, and gender were reviewed and determined overall performance. MCV students were not included within these subgroups. Atop of other ACES, this group is placed outside of their natural environment and expected to perform at the same level as others in school. Previous studies focused on the primary levels of education regarding how homelessness affects students' academic performance and daily school attendance; however, the need for a more expansive study is needed in the area of secondary education and how grades and attendance are affected by those students who are homeless as they get older.

Theoretical Framework

Childhood/Adolescent Development

Understanding natural development from early childhood is essential to the overall outlook on appropriate behaviors within the various stages of the lifespan. To determine appropriate development, we must define the term. According to Keenan et al. (2016), development is the ability to move from one stage to another throughout the life span. As development is discussed, the different stages, such as social, emotional, biological, and cognitive, are major components of one's progression. Regarding early childhood, previous studies have shown the significance of chronological age as a key indicator for development. The reason for this significance is the fact that studies have shown children in the early years performed at a higher level than older children (Keenan et al., 2016). Freud and Erikson also contributed to the notion of early childhood being a pivotal time in one's life by emphasizing the way one reacts to certain circumstances determines their later reactivations to similar circumstances in their adult life (Keenan et al., 2016). Like the

effects of homelessness, a study of children who lived in extreme unstable and poor conditions resulted in the children having a host of intellectual abilities and other growth deficiencies (Keenan et al., 2016). While global attention has been paid to early childhood development by inclusion in the United Nations Sustainable Development goals, 250 million children (43%) younger than 5 years old in low-and middle-income countries are at risk of not meeting their growth outcomes (Bhutta, 2017).

Maslow's Hierarchy of Need

Noted for coining *a self-actualizing person*, Maslow strongly emphasized the need for individuals to strive for the ultimate psychological goal (Boatwright, 2013). With psychological needs being the lowest but strongest goal, Maslow examined such basic needs as essential to the overall functioning of human beings. Within psychological needs, oxygen, water, food, shelter, and sleep are among the essentials for survival, according to Maslow. In terms of homeless students, the bare minimum is deprived as, in most cases, adequate housing/shelter and food are the top areas of need. All children have needs, and if these needs are not met by the overarching society, human development into the psychological stage is compromised, resulting in areas of difficulty such as grades, attendance, and self-confidence/self-esteem (Boatwright, 2013).

Individuals need a few items to achieve Maslow's greatest level of growth. This achievement includes continuing caring relationships; physical health, welfare, and regulation; expertise adapted to human differences; developmentally relevant experience; limitation of environment, arrangement, and expectations; healthy, inclusive communities; and cultural consistency (Boatwright, 2013). If children do not progress through the stages of psychological safety, belonging and love, esteem, and ultimately self-actualization, they become stagnant within their overall development. However, Maslow emphasized the role in which educators play regarding such progression. The importance of educators addressing the missing need of children is essential to the students' personal development (Boatwright, 2013).

Understanding Homelessness

McKinney – Vento Act

The 1987 Stewart B. McKinney Homeless Assistance Act was the first major federal law introduced to address the welfare of the homeless people of America and remains the only such initiative to this day. This law represented a major departure from the generally indifferent federal policy on the matter (Gabbard et al., 2006). The growing number of homeless youths in the United States raises many questions about social justice, including issues of access to education, stigma, and self-advocacy. When homelessness and educational attainment converge, these concerns become even more apparent (Ausikaitis et al., 2015).

The MVA provides basic ethics of care, assistance, and safety in the United States for homeless students and families and overtly forbids judgment while ensuring educational rights. Despite McKinney-constitutional Vento's provisions, several trials exist and prevent the fundamental rights defined by the Act from being completely enjoyed. Some reprieve has been offered by undertaking these hindrances in the courts, but given the restrictions of MVA, it has been insufficient (Bon & Synder, 2015). Although the original passage and updates to MVA were identified as having a variety of advantages for students who are homeless, a number of intra-and inter-organizational leadership problems at academic, neighborhood, and state levels have delayed the complete adoption of MVA. After reviewing some of the prevalent obstacles to full adoption of MVA, a variety of guidelines and consequences for practice have been identified (Miller, 2011b).

At unparalleled rates, the number of children facing homelessness continues to surge (Bouldin, 2016). To meet the educational and psychosocial needs of these children, schools are on the front lines of service delivery and face many obstacles. Noteworthy variations were observed between rural and urban geographical densities in the apparent application of federal legislation in a three-state analysis. The major breaks relate to support within the group and correlate with the lack of services available to the family experiencing homelessness in rural areas (Bouldin, 2016). Federally selected liaisons used by educational organizations to implement the MVA's provisions.

Given the role of homeless liaisons in enabling the policy, limited studies have explored how liaisons view the answer to homelessness in their service area. Results from a 32% completed survey showed substantial differences in perceived implementation in the degree of support with teachers and school administrators, employment titles of liaisons, receipt of federal education for homeless children and youth (EHCY) funding from schools, and understanding of homelessness in terms of awareness, policy, and need. Findings suggested that teamwork and understanding are crucial factors affecting implementation expectations. In addition, the findings suggested that in order to enforce the MVA, liaisons must take action to maintain a supportive environment (Canfield, 2016).

School social workers around the country are at the forefront of resolving the rising issue and deleterious effect of homelessness among children and young people of school age. There are currently between 920,000 and 1.2 million children and young people in the United States experiencing homelessness. The policy itself is the overall federal homelessness policy, which includes concrete legislation intended to protect the right of homeless children and young people to equal educational opportunities (Canfield & Teasley, 2015). The MVA and how legislation applied this program within a school district in Central Texas were examined by this important ethnography policy. Data came from interactions with educators who play key positions in the school district organizational bureaucracy of MVA and the perspective of the researcher as an educator and volunteer at a homeless shelter. In a concerted attempt to bring a human face to some of those policy effects, the results were summarized. Significant findings and recommendations included the need for improved knowledge and enforcement, policy monitoring, and the expenditure of additional resources to respond effectively within the district to MVA problems (Cunningham, 2014).

While most of the press around Every Student Succeeds Act (ESSA) has concentrated on how it signals an end to No Child Left Behind, it has largely ignored the implications of ESSA for homeless students. Not only did the original policy act to transform homelessness politics, but key

figures, incidents, and circumstances influenced history and enabled stakeholders involved in the day-to-day work to play an important role in setting the political trajectory (Duffield, 2017). The McKinney-Vento's EHCY allows schools to recognize children who are homeless and, after doing so, assess the "best interest" of the child. The result of such a decision may include either continuing to serve the student in the school of origin or arranging for immediate enrollment in a new school to help promote a stable school environment (Losinski et al., 2013).

Effects of Homelessness on Students

Combating Homelessness and Grades

Children are the most disadvantaged group of Americans, and homeless children being among those most impacted by poverty (Biggar, 2001). Many issues contribute to children's homelessness, including grades; homeless children seem to do poorly in school, repeat grades at a higher rate, and drop out more often than others (Biggar, 2001). Students who are homeless are often at a higher risk of exhibiting academic difficulties, especially in the areas of reading and math (Wenzel, 2014). EHCY, according to the United States Achievement Audit data: 2010-2011, 2011-2012, and 2012-2013 academic years were evaluated to determine the effects of homelessness on grades. Seventy-five percent of the estimated number of homeless students studying in Grades 3 to 8 took the state mathematics exam in SY 2011-12 (383,568 out of 513,766). Of all homeless students studying in Grades 3 to 8 in all local education agencies (LEAs) taking the state mathematics exam, 48% (185,851) met or exceeded the mathematics literacy requirements in SY 2011-12 (National Center of Homeless Education, 2014b).

Analyses looked at academic performance results from third to eighth grades, compared children classified as homeless or extremely mobile with other students in the Government Free Food Program, discounted price for meals, or neither (General). As a function of increasing risk status, achievement was lower. Achievement gaps were unchanged or expanded between HHM students and lower risk classes. Math and reading achievement were smaller, and math development was slower in years of HHM detection, indicating extreme effects of residential

uncertainty. However, 45% of HHM students ranked within or above the average level, indicating academic resilience (Cutuli et al., 2013).

The risk of family deprivation to school operation and experimental data on the impact of multiple housing strategies over time. A matched community of low-income, sheltered students acted as an additional guide for enrollment, school mobility, and reading and math results over 4 years. Findings endorsed, in part, the chronic-risk theory that family homelessness interferes with success by its connection to deep poverty. Children randomly assigned to daily treatment did as well or better than children assigned to housing interventions in this municipality (Cutuli et al., 2019). For an entire cohort of third-grade students in Philadelphia, a study explored the unique and integrated associations of homelessness and school mobility with educational well-being measures, as well as the mediating influence of absenteeism. Findings found that homelessness had a particular correlation with classroom engagement issues, school mobility uniquely connected to both academic achievement and classroom engagement issues, and it was the most negative for both types of educational well-being to experience both homelessness and school mobility (Fantuzzo et al., 2012).

This investigation tested the significance of early academic achievement in the later achievement of pathways among 18,011 students classified by socio-economic risk. Students found to be at the greatest risk were those who encountered homelessness or high mobility. Socioeconomic risk and oral reading ability in the first-grade projected increases in reading and math success in Grades 3 through 8. Danger status forecasted accomplishment outside the impact of early reading scores and moderated the estimation of later reading achievement development from early oral reading. Results underscored the early occurrence and prevalence of poverty-related disparities in performance, the high and accumulating vulnerability for HHM pupils, and the importance of first-grade oral reading as both an early risk predictor and a possible protective factor (Herbers et al., 2012). Achievement projections of HHM students contrasted to low-income but non-mobile students and all other students tested in the district, monitoring four well-established

covariates of achievement: sex, race, enrollment, and English language skills. Both deprived groups displayed slightly lower initial achievement than their more advantaged counterparts, and HHM students exhibited a greater risk, consistent with the predicted risk gradient. In comparison, in some Golden County Schools, all vulnerable groups displayed slower development than their comparatively advantaged counterparts. Closer analysis of HHM student trajectories in relation to national test benchmarks showed striking heterogeneity, including cases of academic resilience as well as difficulties (Obradović et al., 2009).

The analysis used data from the Northern California School System and non-experimental test design to assess how student homelessness influences different school-related outcomes. Double-up homeless pupils were even more likely to have issues with truancy (Low et al., 2017). Another article presented the findings of a study in a large urban area and showed that there was no substantial gap in performance between homeless and poor socio-economic status (SES) elementary school students. In addition, we found that attendance was a mediator of decreased performance and that the generally suspected school-level features do not predict the success of homeless pupils (Tobin, 2016).

A comprehensive analysis of studies investigating the effect of homelessness on young children's pre-school and early elementary school abilities is discussed. Fourteen studies were reported, which included data investigating this relationship in preschool through Grade 3. Findings showed that children with homelessness had poorer educational abilities and academic performance relative to the overall population of children. However, it was not definitive if children with homelessness performed worse than those with socio-demographically matched sheltered children (Manfra, 2019).

An article outlined a translational research initiative focused on academic risk and resilience for HHM children. They found that, while these children shared certain risk factors with other vulnerable children, they were higher on the underlying risk spectrum (Masten et al., 2014). Studies confirmed that homeless children and teenagers performed lower than the entire selection of housed

students on the entire collection of important student success indicators. Homelessness is often linked to being left behind in grade (Murphy & Tobin, 2011).

A pooled study of primary, middle, and high school children classified as homeless under criteria set out in McKinney–Vento legislation in California's broad urban district to estimate the degree to which school factors correlated to student enrollment, suspensions, test activities, and success of state standardized performance tests. Multi-level model findings showed that school variables, including school truancy and average school reading and mathematics proficiency, led to individual student outcomes. Students classified as English-language learners or seeking special education assistance performed relatively less than peers in the spectrum of results considered (Stone & Uretsky, 2016).

The Need for School

Student attendance data provide a visible predictor of avoiding uncomfortable situations resulting from feelings of inadequacy. In order to avoid losing valuable federal and state education funding allocated based on attendance patterns, better understanding of student attendance patterns may not only shed light on the process of disengagement from school but may also inform the development of programs or policies designed to deter absenteeism (Schoeneberger, 2012). According to Sheldon (2002), homeless students are more than likely to have lower levels of attendance. Research considered the risk of family deprivation to school operation and experimental data on the impact of multiple housing strategies over time. Randomized students of homeless households to housing programs that concentrate on acute risks (community-based accelerated re-housing), persistent risks (permanent subsidization), or regular treatment. Findings endorsed, in part, the chronic-risk theory that family homelessness interferes with success by its connection to deep poverty. Children randomly assigned to usual care do equally or more than children assigned to housing initiatives in this area (Cutuli & Herbers, 2019).

Using the person-centered method, a quantile study was used to compare the number of absences among homeless students and their home peers. Using school administrative data

gathered over a school year for the entire school system, findings concluded that homeless children do not miss substantially more school days than their poorest peers. However, homelessness and hardship significantly increase the number of absences for children in the upper percentile of absences, suggesting that homelessness has a greater effect on those who skip school days more in total than on frequent attendees. The results from this study suggested that homelessness can worsen problems rather than cause them (Elliott, 2016). On the contrary, a recent study showed that routine attendance at school could be a major protective factor for children in the prevention of street migration. Statistical research found that those young people who had dropped out of school had about eight times more chances to end up on the streets forever than those who attended school every day (Henley et al., 2010).

The analysts strived to explain student attendance–mobility in a broad urban district in terms that are descriptive and beneficial to schools and the community. First, the prevalence of movement and non-participation in Grades 1–12 among all students and by gender, ethnicity, and socio-economic subgroups is present. Notably, there was no differential effect across racial groups. Black and White subgroups had common rates of success across enrollment and mobility levels (Kanyongo, 2012). If the experiences of homeless students were not discrete from the living conditions of healthy low-income students, there was a significant intersection between discussions about the program and the results of the two classes. For example, acknowledging that there is a variance in and between them, all types of students appear to have lower rates of enrollment, achievement, and graduation than students who are neither low-income nor homeless (Miller, 2011a).

In the 13th year of education in the United States, the Department of Education has received annual evaluation reports from all states of the EHCY initiative. The percentage of registered students who reported experiencing homelessness at a certain point in the last three school years rose by 7%, from 1,263,323 students in SY 2014-15 to 1,355,821 students in SY 2016-17. Twenty states saw a 10% or more rise in their homeless student population during the 3-year period

covered by this study (National Center for Homeless Education, 2019). In another research, results from students in 21 schools in a large Midwestern school district. Survival analysis was used to quantitatively determine the risk factors for truancy. Findings showed that students of lower socio-economic status are at increased risk of truancy. Age and special education status also influence the likelihood of truancy. Students who travel to another school, also within the same district, often have an increased chance of truancy. The consequences of these risk factors are explored, and recommendations for avenues for future studies are given (Nolan et al., 2013).

Self-Esteem Effects

Relationships play an instrumental role in the overall resilience of children and adolescents who are homeless. According to Dang (2014), social connectivity and self-esteem as predictors of resistance in homeless youth with a history of ill-treatment. Connectivity factors included family connectivity, school connectivity, and association with prosocial peers. Therefore, having relationships with students can be an altering factor in their feeling of comfort and, thus, promote enhanced school attendance, grades, and overall mental health of the homeless student. Within a study conducted by Dang (2014) of 150 adolescent students, where the majority were minorities, a significant amount of the participants indicated higher levels of connectedness and self-esteem based on the results of an audio-CASI survey. The findings also found lower psychological distress amongst those participants.

Addressing Educational Needs

Seven laws are involved in taking care of homeless children in school: raising consciousness of homelessness and homeless children and youths; addressing basic needs; designing an efficient training program; building a safe and inclusive environment; providing additional support; partnering with other organizations and agencies; and encouraging the participation of parents (Murphy & Tobin, 2011).

Mental Health Effects on Homelessness Youth

Thirty-seven percent of the United States homeless population are young people who are homeless with adult family members, but mental health in this group has not been well represented yet. This study aimed to compare family-homeless and non-homeless youth, the risk of suicide, and factors that may protect against it. The study used cross-sectional data representing 62,034 eighth- to 12th-graders to estimate the adjusted odds ratio (aOR) of emotional distress, self-injury, suicidal ideation, and suicide attempts in the past 12 months for youths who have encountered family homelessness relative to housed youths in the past 12 months, adjusting for covariates. Developmental assets outcomes were also studied (Barnes et al., 2018).

According to Bassuk et al. (2015), 12 studies were examined in order to determine the prevalence of homelessness within the United States of America. Ultimately, 10% to 26% of homeless preschoolers had mental health conditions needing psychiatric assessment. Among homeless school-age children, this proportion increased to 24% to 40%, a rate 2 to 4 times higher than disadvantaged children aged 6 to 11 years in the National Survey of America's Families. Although the difference between homeless students and housed school-aged preschoolers was not as significant, school-age homeless children were substantially more likely to have a mental health issue compared to housed children as identified by the subscale Child Behavior Check List Total Problems.

Homeless young people, a secret and high-risk demographic, have medical and psychosocial needs that lead to or are a consequence of their homelessness. In homeless young people, the lifetime prevalence of mental illnesses was almost double that of their homeless peers. As many as one-third of homeless youths fulfill posttraumatic stress disorder (PTSD) requirements. In addition, one survey of 95 homeless young people using a mobile medical unit showed that approximately 41% met bipolar disorder criteria; 27.5% for PTSD; 41% for major depressive disorder; and 29% for attention-deficit/hyperactivity disorder ([ADHD], Beharry, 2012). In 25- 33% of homeless young people reported PTSD and mood disorders (e.g., depression, bipolar

disorder) have been diagnosed in almost half of these same young people in other studies (Busen &

Engerbretson, 2008).

A broad and heterogeneous sample of 364 homeless teenagers was interviewed about

residential and family backgrounds and their homeless experiences. Study findings showed that

homeless young people came from typically troubled families and had elevated mental illness rates.

For boys, physical violence during adolescence, physical attacks on the street, and high rates of

externalizing disorders were usually included in their records. For children, tales characterized

more frequently by childhood sexual abuse, street sexual victimization, and elevated rates of

internalizing disorders (Cauce et al., 2000).

Owing to adverse health effects associated with street life, homeless people are more likely

to be admitted to the hospital and have increased hospitalization durations than those of non-

homeless people. Despite their high burden of disease, homeless people have fewer experiences

with outpatient treatment than non-homeless people. There is no daily source of health care for

nearly half of all homeless young people (Hudson et al., 2010).

A mental health assessment of 60 homeless youths has been stated in this document. Our

research analyzed the mental health needs of young people visiting a youth shelter overnight

(maximum stay 8 weeks). Using one demographic type and one of two structured questionnaires,

participants completed an interview (Youth Self Report, Adult Self Report). Questions analyzed

symptoms of youth mental wellbeing, explored different contacts made by youths with mainstream

society (services, family), and identified possible motivating factors (hope, satisfaction with

service) that may play a role in promoting street survival during adolescence (Hughes et al., 2010).

Homelessness during puberty has a negative effect on the physical and mental health of

young people. To be successful, interventions aimed at addressing the health needs of this

demographic must provide awareness of the acute and chronic issues that characterize this high-risk

youth community, both posing and underlying them. Nine studies investigated diagnoses of mental

health, including depression, PTSD, anxiety, and disorders of substance abuse. The remaining 12 findings were all linked to sexually transmitted diseases, with one exception (Medlow et al., 2014).

A report showed that more than half (53%) of homeless people young people follow disruptive behavior disorder requirements (e.g., conduct disorder, oppositional defiant disorder), 32% for ADD, 32% for ADHD, 21% for mood disorders (e.g., depression, bipolar disorder), 12% for PTSD, and 10% for schizophrenia (Michael, 2014). In return, these behaviors can lead to more attendance and academic issues within the school, such as suspensions and academic failure.

While social integration appears to have positive impacts on the mental health of housed teenagers, the position of the social networks of homeless teenagers is more unclear. To investigate how network connections are correlated with symptoms of anxiety and depression, social network data were obtained from 136 homeless adolescents in Hollywood, California. Face-to-face relationships with street-based peers were a risk factor for both anxiety and depression, although it was found that it was protective for depression to contact home-based friends via social networking technology. Community-based and public organizations supporting homeless youths should consider promoting preservation by providing internet access to these protective relationships (Rice et al., 2012).

Homeless Trends in River School District Two

According to the U.S. Census Bureau (2019), River County School District Two composed 136,486 people. Of those individuals, 15% of students aged 10-19 were 54% females and 46% males. Seventeen percent of children under the age of 18 identify as living in poverty. However, the Census Bureau does not consider of students who live in instable living environments to include alternate living situations, such as families living with families as a statistical component of living situations. Approximately 600 students in River School District Two identify as MCV each year that possess lower academic grades and poorer attendance.

Homeless Trends in Golden County Schools

Golden County Schools is made up of 542,528 people, according to the U.S. Census Bureau (2020). Within that population, there are 13% who are between the ages of 10 to19 years old. The average ratio between gender consists of 52% female and 48% male. Individuals that are considered below the line of poverty make up 11.1% of the total school population. Also, within that poverty line, 17% are children under the age of 18 (U.S. Census Bureau, 2020). Similar to the River County School District Two's data derived from the U.S. Census Bureau, the lack of data regarding the living conditions of those living in poverty is nonexistent.

Studies showed an interestingly higher percentage of families who identified as homeless over the past two decades (Wenzel, 2014). Of the age groups, children make up the largest group of homeless individuals (Klein, 1990). Students who are homeless are often at a higher risk of exhibiting academic difficulties than students who also possess disadvantaged backgrounds, especially in the areas of reading and math (Wenzel, 2014). Even though the data of general cognitive development are limited, the information thus far is alarming (Klein, 1990). School attendance has also been a major factor within the homeless community. According to Sheldon (2002), students who classify as homeless are more than likely to have lower levels of attendance.

Summary

The research regarding homelessness and student outcomes is few, which results in differential studies regarding if homelessness truly has a significant impact on students in the areas of grades and attendance. Gaps within this study are significant due to the high mobility of students who are homeless. The study was limited as data were derived from one of the fastest-growing districts within South Carolina. Due to high mobility within River School District Two, homeless students tend to be very transient, where accounts for many gaps. Other potential gaps within literature included the effectiveness of teachers, mental health status, trauma exposure, and cognitive functioning of participants.

Studies, however, provide insight into the fact that homelessness, although may not be the specific cause of negatively affected grades and attendance but does serve as a factor in which attributes to the number of homeless students who struggle academically. More research is needed to inclusively determine that being homeless is the key factor that affects students while in school. Other notable mentions include mental health issues, which can also account for academic and attendance issues amongst homeless students. More research is also needed within this area as well.

CHAPTER THREE: METHODS

Overview

The study examined MCV secondary students from two respective school districts in South Carolina. The variables compared with these students are attendance, academics, and whether gender plays a significant factor amongst those students classified as MCV. The methodology for the study was presented in this chapter. Following the presentation of the study design, the research questions and hypotheses were given, followed by descriptions and discussions of the participants, setting, apparatus, and methods. The chapter concluded with a description of the data analysis and its reasoning.

Design

This study was an archival research design based on pre-existing groups. Unlike traditional laboratory research, archival research provides a different viewpoint of research to help resolve limitations within laboratory research methods. Archival research includes examining data that has been maintained for reasons besides academic studies. True experiments, natural experiments, quasi-experiments, and correlational studies are all examples of archival research. These data are more likely to arise in realistic social situations, allowing social psychologists to investigate real-world phenomena which have been frequently unnaturally replicated in laboratory environments (Heng et al., 2018). Based on this, the choice of using archival research was necessary as it provides the historical data needed to answer the research questions. In this regard, MCV students were selected based on qualifications of services performed by the LEA. The qualifications for MCV are based on the definition of MVA, which include the lack of fixed or regular nighttime residence to include shared housing, shelters, parks, motels, shelters, hospitals, public or private places not designed for normal living, cars,

abandoned buildings, trains or similar settings (NCHE, 2018). The compared secondary students were based on the same criteria, however, were not classified as MCV.

Research Questions

RQ1: Does home status in secondary students affect student academics?

RQ2: Does home status in secondary students affect student attendance?

RQ3: Does home status in secondary students' gender have a significant effect on attendance and academics?

Hypotheses

The null and alternate hypotheses for this study are:

$H_0 1$: There was no differences in academic performance across secondary students who are homeless or not homeless.

$H_a 1$: Secondary students who are considered homeless are at a greater risk of performing lower academically.

$H_0 2$: There was no differences in attendance across secondary students who are homeless or not homeless.

$H_a 2$: Secondary students who are considered homeless are at a greater risk of having attendance issues.

$H_0 3$: Homeless status according to gender had no differences in attendance or academics.

$H_a 3$: Homeless status of females had a greater effect on attendance and academics as compared to male homeless students.

Participants and Setting

The study examined MCV secondary students and if attendance and academics are affected due to this status. Two schools within different school districts within South Carolina

were examined to compare data regarding attendance and grades. Due to the similarities within demographics, the schools provided a more comprehensive comparison.

The participants within this study were all secondary students in the RNE and WHHS in the fall 2019 and fall 2021 school terms. Compared groups included participants identified as MCV students as well as NMCV students attending RNE High School of River County School District Two in Cola, Sun Crest, and WHHS of Golden County Schools in Great, Sun Crest. Data for both groups were derived from the student management systems.

Everyone within the two archives who were classified as MCV from the fall 2019 and fall 2021 semesters were collected and researched. The collection of data ended December 2021 for this study. Due to the academics scheduling of both schools, the data collection for this study ended at the conclusion of the semester term due to the block scheduling format. This reasoning for the selection of the noted terms was due to Covid-19. Due to the widespread effect of altered attendance procedures and academic adjustments, the fall 2019 and fall 2021 school terms are appropriate based on the sense of normal school functioning within both school districts. All participants for this study were selected based on the convenience sampling method. The convenience sampling method is a nonrandom sampling method in which participants who are accessible are included within the study (Etikan et al., 2016). Participants' data were gathered based on the inclusion criteria, which are students in Grades 9 to 12 for the fall 2019 and fall 2021 school terms. The data collected based on this grade level covered students' gender, grades, and attendance.

Instrumentation

The archival data was collected using the School Management System, such as PowerSchool. PowerSchool is a digital-based student information system that allows instructors

to make fast judgments about student outcomes. PowerSchool serves as a gateway to families,

learners, and educators, as well as academics, attendance, and demographic details for each

student (Pearson, n.d.). Within the PowerSchool data collection, the following fields were

retrieved to include homeless students' status for the two academic school years, gender,

attendance, and academics. Demographic information was gathered by retrieving archival data

from PowerSchool within both River County School District Two in Cola, Sun Crest and WHHS

in Great, Sun Crest for the anonymous participants. School-based permission was received to

gather this information from the respective schools/districts in order to compare the secondary

students at both locations.

<p style="text-align:center">Procedures</p>

The Liberty University Institutional Review Board granted permission to collect data and

later permission to make adjustments (see Appendix A). Following institutional permission, a

letter of request was addressed to the administrators of RNE High School and WHHS to acquire

local consent. Because the data were archived, no permission or approval documents were

required from any research participants. Following local approval was obtained from the

principals, the principals of RNE High School and WHHS approved and provided permission to

receive data from the student information system known as PowerSchool as an instrument in the

study.

Since the archival data are easily obtainable based on the primary researcher's position as

school counselor at WHHS, a request was sent to the data entry clerk to gather the following

information for all ninth through 12th-grade students: gender, grades, home status, and attendance

to ensure the integrity of the data collected. The third-party data entry clerk supplied an Excel

document with the necessary data, having matched the records per student to identifiers she

designed to describe every student that did not include personal identities recognized to the researcher. According to Davis (2013), conflict of interest is defined as a circumstance where a person (individual or a business organization) has a specific relationship to one or more choices. Due to the involvement of the third-party data entry clerk, conflict of interest has been escaped due to the personal identities being unidentifiable. The information was securely transmitted to the researcher then recorded on a flash drive, which was safely stored in the site's vault until the research analysis was completed. Data from the research will be destroyed via paper shredding and the destroying of flash drives 3 years after the research has concluded. Digital files will be destroyed using WinPure, software that allows the deletion of digital records (WinPure, 2021).

Data Analysis

For the hypotheses to be examined, the use of the multivariate analysis of variance (MANOVA) was used by the researcher to test the stated hypotheses. MANOVA is known as a mathematical method that is widely utilized in disciplines such as education and psychology (Huang, 2020). Due to its wide use, MANOVA is one of the most common statistical methods. The researcher for this study used the MANOVA method as the primary statistical method due to its ability to measure multiple variables and their strengths (Warne, 2014). In this study, secondary homeless students were examined to determine if attendance and grades were significantly impacted by their homeless status. Also, within the secondary homeless group, gender was compared to determine if there was a significant impact on males versus females. The software used for the MANOVA analysis was BM® SPSS® Statistics which allows for a combination of outcomes in a variety of ways by using the general linear model (Warner, 2013).

Sample Size

   The sample size for this research included data from respective schools of RNE High School and WHHS. Students' data were collected using PowerSchool from both respective high schools. The three independent variables assessed were home status, gender, and school, along with two dependent variables of attendance and grades. In order to compare the data, a G*Power analysis was run to determine the significance, power, and alpha (Figure 1). G*Power analysis is a free software used to calculate sample sizes of various statistical methods, which is helpful in determining sample sizes of research as well as power analysis (Kang, 2021).

Figure 1

*G*Power Analysis*
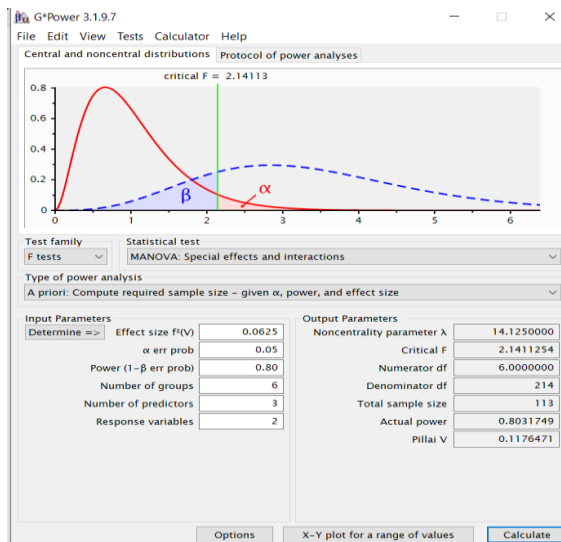
Based on the G*Power analysis with a sample size of 113, the confidence level resulted in an 80% interval with a .05 significance level.

Summary

   Due to the post-war period, homelessness has become one of the most prominent issues within society. As a result, the need for services increased. One of those services came in the form of the MVA for families and their school-aged children. The problem is that much research

regarding homelessness and student outcomes, such as grades and attendance, is focused on primary grade levels, however, homelessness affects secondary students and their academic performance and attendance as well. The purpose of this study was to examine homelessness students within a high school setting and their academic and attendance variables to determine if homelessness plays a significant role in the positive or negative outcomes compared to students who are not identified as homeless. This study also examined gender to determine significance within the male versus female homeless population.

This study examined the notion of secondary homeless students as compared to non-homeless students through the lenses of the MVA and its criteria for public education. Data derived from an administrative report from River School District Two and Golden County Schools, specifically reviewing data from River Nest Eastern High School and WHHS via PowerSchool were evaluated using a MANOVA analysis to examine dependent variables such as academic performance and attendance amongst independent variables, such as homeless students' status and gender. There were no criteria for the selection of secondary students other than MCV coding and NMCV coding. The archival data retrieved was compared from the fall 2019 semester compared to the fall 2021 semester due to COVID-19.

The third chapter examined the study's design, the issues it addressed and the null hypotheses it explored, the tools, the participants and settings, the techniques for collecting variable data, and the data analysis. The findings of the study are discussed in depth in Chapter 4, and the conclusions are discussed in Chapter 5.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this study was to look at homeless students in a high school setting, as well as their academic and attendance factors, to see if homelessness has a major influence in positive or negative results when compared to students who are not homeless. This study also examines gender to determine significance within the male versus female homeless population. The preceding three chapters offered context, examined relevant literature, proposed research questions, and outlined the methodology for this study. The goal of Chapter 4 was to provide the findings of the hypothesis testing.

Descriptive Statistics

The sample of this study consisted of 226 students from Golden County Schools and River School District Two ranging from Grades 9 through 12. Since both schools are on a block schedule which means students take four classes per academic semester, the following terms of fall 2019 and fall 2021 were used. The purpose of these terms was to identify students around the COVID-19 pandemic, which caused a shift in school scheduling in South Carolina. Students were randomly selected from Grades 9 through 12 from the two respective schools and from the fall 2019 and fall 2021 school terms. Almost half (50.44%) of the students were classified as nineth-graders, 37.17% were 10th-graders, and 12.39% were 11th-graders in the fall 2019 school term. In the fall 2021 school term, 10.18% of students were ninth-graders, 15.04% were 10th-graders, 36.73% were 11th-graders, and 38/05% were 12th-graders. Of the students who were randomly selected, 122 students were females, and 104 students were males. Between both schools, 108 students were considered NMCV, and 118 met the criteria for MCV services within the school districts (see Table 1).

Table 1

Sample Descriptive Statistics

Variables		*n*	Percent
School			
GCS		113	50.00
RSD2		113	50.00
	Grade Level		
2019			
	9th	114	50.44
	10th	84	37.17
	11th	28	12.39
2021			
	9th	23	10.18
	10th	34	15.04
	11th	83	36.73
	12th	86	38.05
Gender			
	Female	122	53.98
	Male	104	46.02
Home Status			
	NMCV	108	47.79
	MCV	118	52.21

Note. Total population $N = 226$. Denoted by *N,* is the number of observations in a sample size

(Warner, 2013). GCS – Golden County Schools; RSD2 – River School District Two; MCV –

McKinney-Vento; NMCV – NonMcKinney-Vento

Results

Data Screening

2019 Absences Outlier Removal

Boxplots were examined to identify any univariate outliers within the fall 2019 data term.

Outliers were removed ($n = 14$) from the data before conducting the analyses. For the following

information, see Figure 2.

Figure 2

Boxplot for 2019 Absences Data
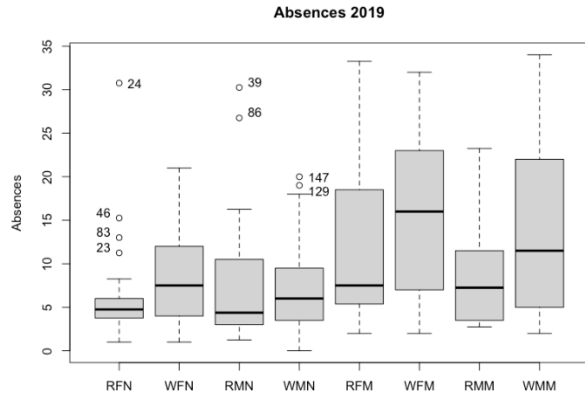
Note. R = River Nest (RNE) or W = West Hill High School (WHHS), the second letter is F =

Female and M = Male, and the third letter is N = NMCV and M = MCV

2019 Grades Outlier Removal

Boxplots were examined to identify any univariate outliers within fall 2019 grades data.

Outliers were removed ($n = 1$) from the data before conducting the analyses. One outlier was

removed from the RNE data for the variable of grades (Figure 3).

Figure 3

Boxplot for 2019 Grades Data
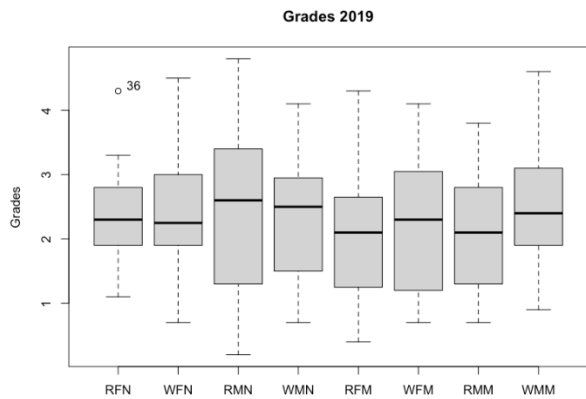
Note. R = River Nest (RNE) or W = West Hill High School (WHHS), the second letter is F = Female and M = Male, and the third letter is N = NMCV and M = MCV

2021 Absences Outlier Removal

Boxplots were examined to identify any univariate outliers from the fall 2021 absences data. Outliers were removed (*n* = 8) from the data before conducting the analyses. Seven outliers were removed from the RNE data for the variable of absences. One outlier was removed from the WHHS data for the variable of absences (Figure 4).

Figure 4

Boxplot for 2021 Absences Data
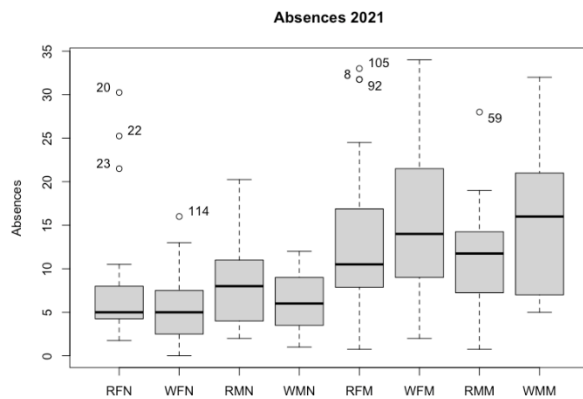
Note. R = River Nest (RNE) or W = West Hill High School (WHHS), the second letter is F = Female and M = Male, and the third letter is N = NMCV and M = MCV

2021 Grades Outlier Removal

Boxplots were examined to identify any univariate outliers from the fall 2021 grades data. Outliers were removed (*n* = 2) from the data before conducting the analyses. After removing the first round of outliers (*n* = 2), boxplots were re-examined, and there were no new outliers. Two outliers were removed from the RNE data for the variable of grades (Figure 5).

Figure 5

Boxplot for 2021 Grades Data
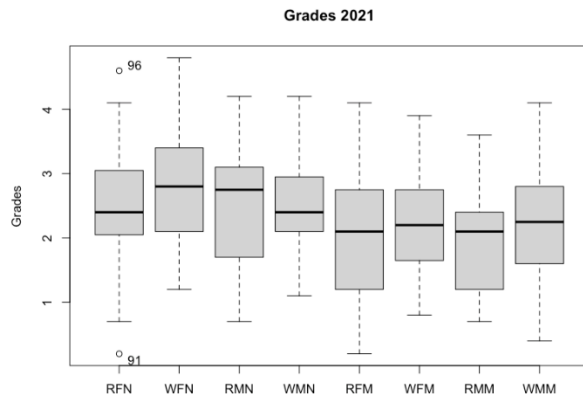
Mahalanobis Distance Fall 2019

Mahalanobis Distance (or Mahalanobis *d*) is used to data screen for multivariate analyses. Multivariate outliers are unexpected pairings of at least two variables (Warner, 2013). For the fall 2019 data, no multivariate outliers were present in the data, which was assessed by Mahalanobis distance ($p > . 001$). The Mahalanobis distances were evaluated by comparing the value of the Mahalanobis distance against a chi-square distribution using a *p* value of .001 (Tabachnick & Fidell, 2014). In this case, none of the *p* values were less than .001, which indicated that there were no multivariate outliers (see Appendix B).

Mahalanobis Distance Fall 2021

For the fall 2021, Mahalanobis Distance was repeated to evaluate the data for the school term. As a result, there were no multivariate outliers present in the data as assessed by Mahalanobis distance ($p > .001$). For a more detailed view of the data for the Mahalanobis distance fall 2019 and fall 2021 data, Appendix B illustrates the values per student per school.

Assumption Testing

Univariate Normality Testing Assumption

It is common to assume that the observations are normal. The entire statistical framework

was based on this assumption, and if it is violated, the inference fails (Das & Imon, 2016). As a

result, before conducting any statistical analysis of data, it was critical to check or test this

assumption. Histograms show the frequency analysis in which noted values are plotted against

frequency, indicating whether the distribution is bell shaped or not. At the same time, it provides

information about data gaps and outliers. It also conveys an idea of skewness or homogeneity

(Das & Imon, 2016). For assumption one, normalities were assessed using the univariate

normality test.

2019 Univariate Histograms of the Absences and Grades Variables

To test for assumptions, histograms of the dependent variables (absences and grades)

were examined to assess whether they were normally distributed. The absences variable was

positively skewed and did not follow a normal distribution. The grades variable appeared to be

approximately normally distributed.

Figure 6

Univariate Histogram Data for Absences in the 2019 Term
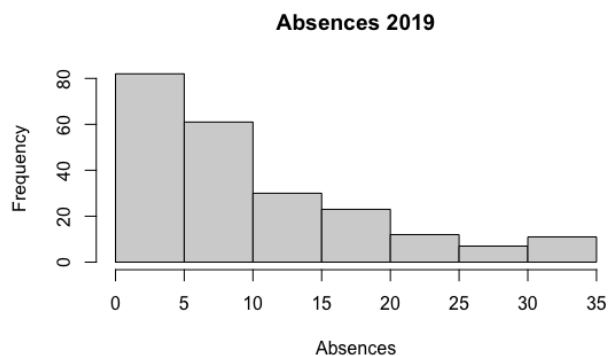
Figure 7

Univariate Histogram Data for Grades in the 2019 Term

Grades 2019
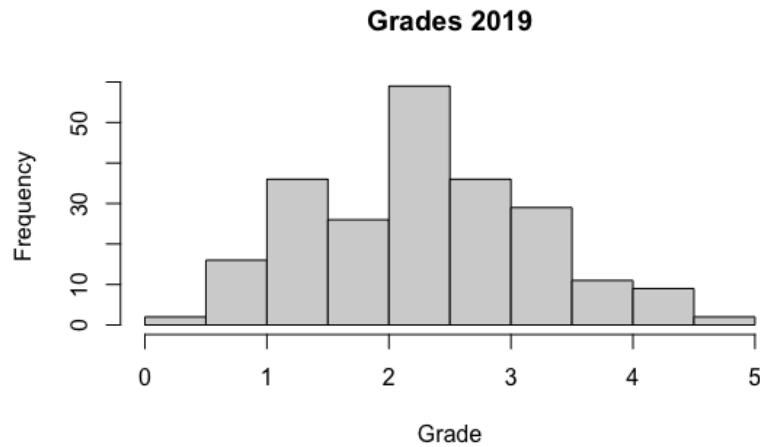
Fall 2019 Kolmogrov-Smirnov Normality Tests

A significance value of $p < .05$ indicated that the assumption of normality was violated. Tabachnick and Fidell (2007) suggested if a moderate violation of normality results from skewness rather than outliers, MANOVA is robust to it. The Kolmogorov-Smirnov test is used to determine whether the general shape of the empirical frequency distribution varies considerably from normal (Warner, 2013). According to Figure 8, the assumption of normality for the variable of absences and grades was not violated as the value of p was not less than .05.

Figure 8

Kolmogrov-Smirnov Normality Graph for the RNE Female NMCV Data in the 2019 Term

Tests of Normality[a]

	Kolmogorov-Smirnov[b]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Fall 2019 Grades Outliers Removed	.133	22	.200[*]	.933	22	.141
Fall 2019 Absences Outliers Removed	.181	22	.060	.963	22	.543

[*]. This is a lower bound of the true significance.

a. School = RNE, Sex = Female, Fall 2019 MCV = NMCV

b. Lilliefors Significance Correction

After examining the NMCV females at RNE, a closer look at the MCV females was also considered. The assumption of normality for the variable of absences for females who were MCV at RNE was violated ($p < .05$). For these results, see Figure 9.

Figure 9

Kolmogrov-Smirnov Normality Graph for the RNE Female MCV Data in the 2019 Term

Tests of Normality[a]

	Kolmogorov-Smirnov[b]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Fall 2019 Grades Outliers Removed	.138	39	.058	.972	39	.424
Fall 2019 Absences Outliers Removed	.234	39	<.001	.846	39	<.001

a. School = RNE, Sex = Female, Fall 2019 MCV = MCV

b. Lilliefors Significance Correction

Males were also considered when examining the normality assumption. The assumption of normality for the variable of absences for males who were NMCV at RNE was violated ($p < .05$). For the violated results, Figure 10.

Figure 10

Kolmogrov-Smirnov Normality Graph for the RNE Male NMCV Data in the 2019 Term

Tests of Normality[a]

	Kolmogorov-Smirnov[b]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Fall 2019 Grades Outliers Removed	.131	19	.200[*]	.970	19	.772
Fall 2019 Absences Outliers Removed	.215	19	.021	.935	19	.210

*. This is a lower bound of the true significance.

a. School = RNE, Sex = Male, Fall 2019 MCV = NMCV

b. Lilliefors Significance Correction

On the other hand, the RNE Male MCV students' data for the fall 2019 term did not violate the assumption of normality. The significance illustrated was more than $p < .05$, indicating the data were not violated. For these results, Figure 11.

Figure 11

Kolmogrov-Smirnov Normality Graph for the RNE Male MCV Data in the 2019 Term

Tests of Normality[a]

	Kolmogorov-Smirnov[b]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Fall 2019 Grades Outliers Removed	.163	21	.150	.956	21	.441
Fall 2019 Absences Outliers Removed	.172	21	.106	.846	21	.004

a. School = RNE, Sex = Male, Fall 2019 MCV = MCV

b. Lilliefors Significance Correction

The Kolmogrov-Smirnov normality test for WHHS was also evaluated. The assumption of normality for WHHS female NMCV students for the fall 2019 term was not violated due to the p value being more than .05. For these findings, see Figure 12.

Figure 12

Kolmogrov-Smirnov Normality Graph for the WHHS Female NMCV Data in the 2019 Term

Tests of Normality[a]

	Kolmogorov-Smirnov[b]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Fall 2019 Grades Outliers Removed	.138	28	.184	.954	28	.250
Fall 2019 Absences Outliers Removed	.146	28	.130	.913	28	.023

a. School = WHHS, Sex = Female, Fall 2019 MCV = NMCV

b. Lilliefors Significance Correction

Like the WHHS female NMCV normality test, the WHHS female MCV data had the same outcome. The assumption for normality test resulted in the data not being violated. See Figure 13 for these results.

Figure 13

Kolmogrov-Smirnov Normality Graph for the WHHS Female MCV Data in the 2019 Term

Tests of Normality[a]

	Kolmogorov-Smirnov[b]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Fall 2019 Grades Outliers Removed	.137	28	.192	.948	28	.172
Fall 2019 Absences Outliers Removed	.160	28	.065	.919	28	.032

a. School = WHHS, Sex = Female, Fall 2019 MCV = MCV
b. Lilliefors Significance Correction

The WHHS male NMCV students were examined. The assumption for normality test results concluded that the data were not violated for grades and absences for the fall 2019. See Figure 14 for the following results.

Figure 14

Kolmogrov-Smirnov Normality Graph for the WHHS Male NMCV Data in the 2019 Term

Tests of Normality[a]

	Kolmogorov-Smirnov[b]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Fall 2019 Grades Outliers Removed	.121	24	.200[*]	.963	24	.501
Fall 2019 Absences Outliers Removed	.121	24	.200[*]	.955	24	.353

*. This is a lower bound of the true significance.
a. School = WHHS, Sex = Male, Fall 2019 MCV = NMCV
b. Lilliefors Significance Correction

Similar to the WHHS male NMCV results, the WHHS male MCV also concluded the

same notion of grades and absences not being violated. Since the *p* value was more than .05, the

allowed for grades and absences to not be violated. See Figure 15 for these findings.

Figure 15

Kolmogrov-Smirnov Normality Graph for the WHHS Male MCV Data in the 2019 Term

Tests of Normality[a]

	Kolmogorov-Smirnov[b]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Fall 2019 Grades Outliers Removed	.145	30	.109	.969	30	.506
Fall 2019 Absences Outliers Removed	.144	30	.115	.909	30	.014

a. School = WHHS, Sex = Male, Fall 2019 MCV = MCV

b. Lilliefors Significance Correction

Normality Testing

A histogram is a type of normality test in the form of a graph that offers information

about the number of proportions of individuals based on a specific score on a numerical value of

(*X*). (Warner, 2013). Histograms of the dependent variables (absences and grades) were

examined to assess whether they were normally distributed. The absences variable was positively

skewed and did not follow a normal distribution (Figure 16). The grades variable appeared to be

approximately normally distributed (Figure 17).

Figure 16

Univariate Histogram Data for Absences in the 2021 Term
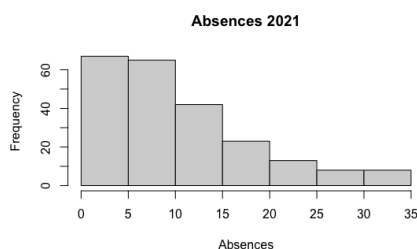
Figure 17

Univariate Histogram Data for Grades in the 2021 Term

Grades 2021
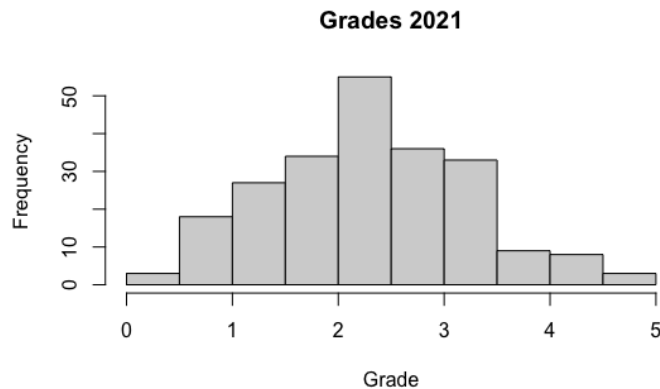
Fall 2021 Kolmogrov-Smirnov Normality Tests

Due to absences not being normally distributed, a second method of univariate normality testing was conducted using the Kolmogrov-Smirnov normality test. For the fall 2021 data, the Kolmogrov-Smirnov test was used to determine the normality of distribution. A significance value of $p < 0.05$ indicated that the assumption of normality was violated (Warner, 2013). The assumption of normality for the variable of absences for females who were NMCV at RNE was violated ($p < .05$; Figure 18).

Figure 18

Kolmogrov-Smirnov Normality Graph for the Female NMCV Data in the 2021 Term

Tests of Normality[a]

	Kolmogorov-Smirnov[b]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Fall 2021 Grades Outliers Removed	.120	22	.200[*]	.969	22	.685
Fall 2021 Absences Outliers Removed	.190	22	.038	.943	22	.227

[*]. This is a lower bound of the true significance.

a. School = RNE, Sex = Female, Fall 2021 MCV = NMCV

b. Lilliefors Significance Correction

The same instrument was used within the fall 2021 data, which examined grades and absences of females at RNE who were classified as MCV. The assumption of normality for the variable of absences for females who were MCV at RNE was violated ($p < .05$). See Figure 19 for this assumption.

Figure 19

Kolmogrov-Smirnov Normality Graph for the Female MCV Data in the 2021 Term

Tests of Normality[a]

	Kolmogorov-Smirnov[b]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Fall 2021 Grades Outliers Removed	.128	36	.144	.975	36	.568
Fall 2021 Absences Outliers Removed	.151	36	.038	.948	36	.091

a. School = RNE, Sex = Female, Fall 2021 MCV = MCV

b. Lilliefors Significance Correction

Males were also examined using the Kolmogrov-Smirnov normality test. The assumption of normality for the variable of absences for males who were NMCV at RNE was violated ($p < .05$). See Figure 20 for such the results of NMCV males at RNE.

Figure 20

Kolmogrov-Smirnov Normality Graph for the Male NMCV Data in the 2021 Term

Tests of Normality[a]

	Kolmogorov-Smirnov[b]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Fall 2021 Grades Outliers Removed	.165	26	.065	.931	26	.083
Fall 2021 Absences Outliers Removed	.196	26	.011	.897	26	.014

a. School = RNE, Sex = Male, Fall 2021 MCV = NMCV

b. Lilliefors Significance Correction

Figure 21 illustrates the use of the Kolmogrov-Smirnov normality test as it relates to males who are classified as MCV at RNE. The assumption of normality for the variable of absence and grades was not violated as the *p* value was more than .05.

Figure 21

Kolmogrov-Smirnov Normality Graph for the Male MCV Data in the 2021 Term

Tests of Normality[a]

	Kolmogorov-Smirnov[b]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Fall 2021 Grades Outliers Removed	.103	20	.200[x]	.972	20	.800
Fall 2021 Absences Outliers Removed	.108	20	.200[x]	.961	20	.556

[x]. This is a lower bound of the true significance.
a. School = RNE, Sex = Male, Fall 2021 MCV = MCV
b. Lilliefors Significance Correction

The Kolmogrov-Smirnov normality test examined students at WHHS as well. The assumption of normality for the variable of absences for females who were NMCV at WHHS was violated (*p* < .05). See Figure 22 for the results of these findings.

Figure 22

Kolmogrov-Smirnov Normality Graph for the WHHS Female NMCV Data in the 2021 Term

Tests of Normality[a]

	Kolmogorov-Smirnov[b]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Fall 2021 Grades Outliers Removed	.145	27	.154	.950	27	.217
Fall 2021 Absences Outliers Removed	.170	27	.045	.905	27	.017

a. School = WHHS, Sex = Female, Fall 2021 MCV = NMCV
b. Lilliefors Significance Correction

Female students at WHHS who were classified as MCV were examined next. The

assumption of normality for the variable of absences and grades was not violated as the p value

was more than .05. See Figure 23 for the results of these findings.

Figure 23

Kolmogrov-Smirnov Normality Graph for the WHHS Female MCV Data in the 2021 Term

Tests of Normality[a]

	Kolmogorov-Smirnov[b]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Fall 2021 Grades Outliers Removed	.082	28	.200[x]	.979	28	.822
Fall 2021 Absences Outliers Removed	.096	28	.200[x]	.962	28	.396

[x]. This is a lower bound of the true significance.

a. School = WHHS, Sex = Female, Fall 2021 MCV = MCV

b. Lilliefors Significance Correction

Male students at WHHS who were classified as MCV were examined. The assumption of

normality for the variable of absences and grades was not violated as the p value was more than

.05. See Figure 24 for the results of these findings.

Figure 24

Kolmogrov-Smirnov Normality Graph for the WHHS Male MCV Data in the 2021 Term

Tests of Normality[a]

	Kolmogorov-Smirnov[b]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Fall 2021 Grades Outliers Removed	.082	30	.200[x]	.984	30	.926
Fall 2021 Absences Outliers Removed	.128	30	.200[x]	.922	30	.031

[x]. This is a lower bound of the true significance.

a. School = WHHS, Sex = Male, Fall 2021 MCV = MCV

b. Lilliefors Significance Correction

Multivariate Normality Testing

        The multivariate normality test examines whether or not the provided group of variables fits into the normal distribution. A group of variables can be tested to see if they follow a multivariate normal distribution by using the multivariate normality test (Warner, 2013). A probability plot is among the quickest approaches in SPSS to examine multivariate normality. Understanding how your sample data differ from a perfectly normal distribution can be done with the use of plot (Warner, 2013). Figure 25 shows the relationship between grades and absences for the fall 2019 school term as well as Figure 26 for the 2021 school term for the current study. The assumption was true and was met according to the rectangular image shown in Figures 25 and 26.

Figure 25

Bivariate Scatterplot of Grades and Absences 2019
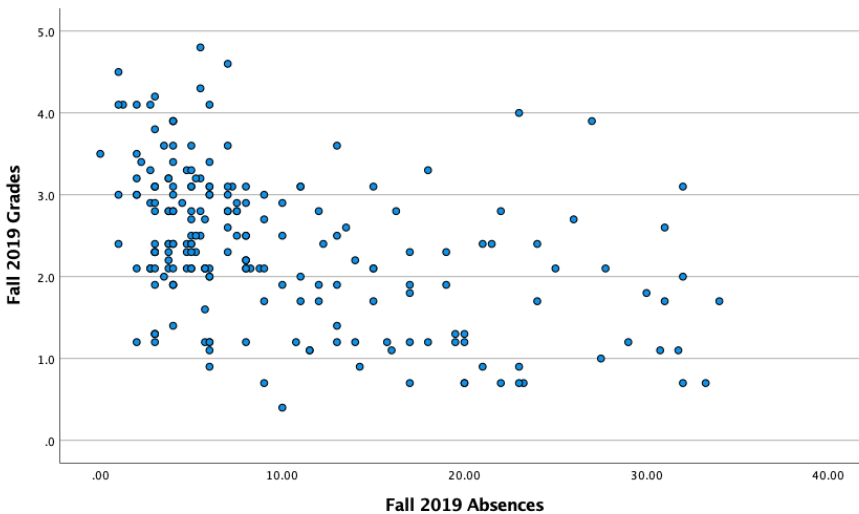
Figure 26

Bivariate Scatterplot of Grades and Absences 2021
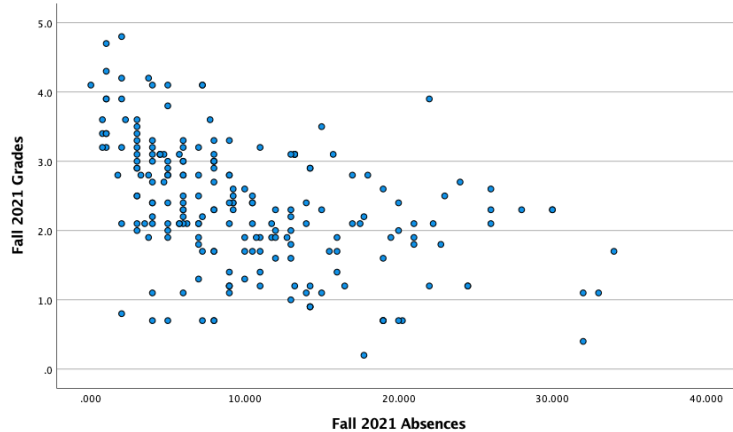
Homogeneity of the Covariance Assumption Testing

The second assumption focused on the homogeneity of the covariance matrices in this data. The Box *M* test was used for this purpose because it determines whether the homogeneity of covariance assumption is significantly violated (Warner, 2013). The following section evaluated the 2019 and 2021 data for each term to determine whether homogeneity was significant according to the dataset.

The Box's *M* test revealed that the assumption of equality of covariance matrices was violated ($p < .001$) for the fall 2019 term (see Figure 27).

Figure 27

Box's M Test for Data in the 2019 Term

Box's Test of Equality of Covariance Matrices[a]	
Box's M	138.181
F	6.357
df1	21
df2	99682.226
Sig.	<.001

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

The same procedure was performed for the fall 2021 data term, which resulted in the

Box's *M* test revealing that the assumption of equality of covariance matrices was not met ($p <$

.001).

Figure 28

Box's M Test for Data in the 2021 Term

Box's Test of Equality of Covariance Matrices[a]

Box's M	88.621
F	4.083
df1	21
df2	118501.006
Sig.	<.001

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

Since the assumptions were not met, the Pillai's Trace test was used with the MANOVA

test. A MANOVA's test statistic is known as Pillai's Trace. It has a value between 0 and 1. The

indication that the explanatory variable has a statistically meaningful impact on the values of the

response variables is stronger the closer Pillai's Trace is to 1 (Warner, 2013). These findings can

be found in Table 3 and Table 5, which illustrate the MANOVA 2019 and 2021 combined data

results.

Linearity Assumption Testing

Bivariate scatterplots were used to evaluate the dataset from the fall 2019 and fall 2021

terms for the linearity of outcome variables assumption. Bivariate scatterplot illustrates the

relationships between two variables (Warner, 2013). The normal distribution shape, as well as

the linear relation, can be evaluated by using scatterplots. If the linearity of outcome variables is

met, the shape of the bivariate scatterplot would be elliptical (Warner, 2013). Based on this, the bivariate scatterplots were considered elliptical, which means the assumptions were met for the dataset (Figures 25 and 26).

Independence of Observations Assumption

Schools were asked to provide the data for the fall 2019 and fall 2021 terms regarding students' home status (i.e., MCV and NMCV status). Schools were also asked to provide data on students' grades and attendance. The data were gathered via the student information system, PowerSchool, where the archival data were housed. The assumption of independence of observations states no two observations within a set of data are associated to or influence one another in any way (Warner, 2013). The assumption of independence of observations is that every student's records are independent of one another.

Hypotheses

Research Question 1

H_01: There was no differences in academic performance across secondary students who are homeless or not homeless.

H_a1: Secondary students who are considered homeless are at a greater risk of performing lower academically.

Fall 2019 Data for Both Schools

The relationship between the two dependent variables (grades and absences) and the three independent factors (gender, school, and home status) was investigated using a three-way MANOVA. As a measure of effect size, partial eta squared (partial η^2) was reported. It calculates the proportion of variance in the dependent variable that is accounted for by the independent variable while excluding the effects of all other variables in the model (Richardson, 2011). There

are conventions regarding the size of the effect, specifically small (partial η^2 =.0099), medium

(partial η^2 =.0588), and large (partial η^2 =.1379; Richardson, 2011). The three-way MANOVA

revealed there was a significant main effect of home status on the combined dependent variables

of grades and absences, $F(2, 202) = 22.04$, $p < .001$, Pillai's Trace = .18, partial $\eta^2 = .18$.

According to Richardson (2011), partial $\eta^2 = .18$ indicated a large effect size (see Table 2).

Table 2

MANOVA for 2019 Combined Dataset for Both Schools

Variables	Pillai's Trace	F	df Hypothesis	df Error	p	Partial η^2
Intercept	.93	1430.82	2	202	.000***	.93
School	.07	8.01	2	202	.000***	.07
Gender	.03	3.54	2	202	.031*	.03
Home Status	.18	22.04	2	202	.000***	.18
School × Gender	.00	0.41	2	202	.664	.00
School × Home Status	.03	3.58	2	202	.030*	.03
Gender × Home Status	.01	1.32	2	202	.270	.01
School × Gender × Home Status	.02	2.04	2	202	.133	.02

*$p < .05$, ** $p < .01$, *** $p < .001$

A follow-up univariate ANOVA showed that there was a statistically significant main

effect of home status on grades $F(1, 203) = 7.02$, $p < .05$, partial $\eta^2 = .03$ (see Table 3). This was

a small effect size and indicated that home status accounted for 3% of the variance in grades.

Also, the school predictor did not affect the grades outcome variable. The estimated marginal

means showed that students whose home status was NMCV had higher grades ($M = 2.57$, $SE =$

0.09) than students whose home status was MCV ($M = 2.24$, $SE = 0.08$; Figure 29).

Table 3

Univariate ANOVA for Fall 2019 Combined Dataset for Both Schools

Independent Variables	Dependent Variables	Type III Sum of Squares	df	Mean Square	F	p	Partial η^2
Corrected Model	Grades	14.03	7	2.01	2.54	.016*	.08
	Absences	3391.16	7	484.45	9.28	.000***	.24
Intercept	Grades	1161.51	1	1161.51	1472.79	.000***	.88
	Absences	16837.24	1	16837.24	322.66	.000***	.61
School	Grades	0.05	1	0.05	0.06	.804	.00
	Absences	651.54	1	651.54	12.49	.000***	.06
Gender	Grades	3.52	1	3.52	4.47	.036*	.02
	Absences	290.61	1	290.61	5.57	.019*	.03
Home Status	Grades	5.53	1	5.53	7.02	.009*	.03
	Absences	2310.56	1	2310.56	44.28	.000***	.18
School × Gender	Grades	0.30	1	0.30	0.38	.540	.00
	Absences	6.40	1	6.40	0.12	.727	.00
School × Home Status	Grades	3.61	1	3.61	4.58	.033*	.02
	Absences	16.94	1	16.94	0.33	.570	.00
Gender × Home Status	Grades	0.49	1	0.49	0.62	.431	.00
	Absences	48.34	1	48.34	0.93	.337	.01
School × Gender × Home Status	Grades	1.41	1	1.41	1.79	.182	.01
	Absences	35.03	1	35.03	0.67	.414	.00
Error	Grades	160.10	203	0.79			
	Absences	10593.15	203	52.18			
Total	Grades	1356.12	211				
	Absences	34169.44	211				
Corrected Total	Grades	174.13	210				
	Absences	13984.30	210				

Note. Home Status coded as NMCV = 0, MCV = 1. Gender coded as female = 0, male = 1.

School coded as RNE = 0, WHHS = 1

* *p* < .05, ** *p* < .01, *** *p* < .001 * *p* < .05, ** *p* < .01, *** *p* < .001

Figure 29

Estimated Marginal Means for Home Status in Fall 2019

Fall 2019 Home Status

Dependent Variable	Fall 2019 MCV Status	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Fall 2019 Grades	NMCV	2.567	.093	2.384	2.751
	MCV	2.236	.084	2.071	2.401
Fall 2019 Absences	NMCV	5.756	.756	4.265	7.248
	MCV	12.530	.681	11.187	13.874

Fall 2021 Data for Both Schools

The MANOVA revealed a significant main effect of home status on the combined dependent variables of grades and absences $F(2, 207) = 36.87$, $p < .001$, Pillai's Trace = .26, partial $\eta^2 = .26$. According to Richardson (2011), this is a large effect size. Due to this large effect size, home status accounted for 26% of the variance in the dependent variable (see Table 4).

Table 4

MANOVA for 2021 Combined Dataset for Both Schools

Variables	Pillai's Trace	*F*	*df* Hypothesis	*df* Error	*p*	Partial η^2
Intercept	.94	1712.84	2	207	.000***	.94
School	.04	4.71	2	207	.010*	.04
Gender	.01	0.91	2	207	.403	.01
Home Status	.26	36.87	2	207	.000***	.26
School × Gender	.00	0.26	2	207	.774	.00
School × Home Status	.07	7.14	2	207	.001**	.07
Gender × Home Status	.01	0.63	2	207	.534	.01
School × Gender × Home Status	.01	1.24	2	207	.291	.01

Note. Home Status coded as NMCV = 0, MCV = 1. Gender coded as female = 0, male = 1.

School coded as RNE = 0, WHHS = 1

$* p < .05, ** p < .01, *** p < .001$

The univariate ANOVA revealed there was a statistically significant main effect of home status on grades $F(1, 208) = 14.00$, $p < .001$, partial $\eta^2 = .06$ (Table 5). According to Richardson (2011), this is a medium effect size and indicated that home status accounted for 26% of the variance in grades. Students of MCV home status had lower grades ($M = 2.14$, $SE = 0.09$) than students of NMCV status ($M = 2.59$, $SE = 0.09$; Figure 30).**Table 5**

Univariate ANOVA for Fall 2021 Combined Dataset for Both Schools

Independent Variables	Dependent Variables	Type III Sum of Squares	df	Mean Square	F	p	Partial η^2
Corrected Model	Grades	15.24	7	2.18	2.77	.009**	.09
	Absences	3594.14	7	513.45	13.97	.000***	.32
Intercept	Grades	1173.81	1	1173.81	1491.28	.000***	.88
	Absences	20566.15	1	20566.15	559.41	.000***	.73
School	Grades	1.29	1	1.29	1.64	.202	.01
	Absences	145.80	1	145.80	3.97	.048*	.02
Gender	Grades	1.26	1	1.26	1.60	.207	.01
	Absences	34.78	1	34.78	0.95	.332	.01
Home Status	Grades	11.02	1	11.02	14.00	.000***	.06
	Absences	2723.73	1	2723.73	74.09	.000***	.26
School × Gender	Grades	0.31	1	0.31	0.39	.532	.00
	Absences	0.11	1	0.11	0.00	.957	.00
School × Home Status	Grades	0.02	1	0.02	0.02	.877	.00
	Absences	448.76	1	448.76	12.21	.000***	.06
Gender × Home	Grades	0.75	1	0.75	0.95	.331	.01

Status							
	Absences	31.11	1	31.11	0.85	.359	.00
School × Gender × Home Status	Grades	0.21	1	0.21	0.27	.604	.00
	Absences	46.99	1	46.99	1.28	.260	.01
Error	Grades	163.72	208	0.79			
	Absences	7646.96	208	36.76			
Total	Grades	1376.05	216				
	Absences	33541.69	216				
Corrected Total	Grades	178.96	215				
	Absences	11241.10	215				

Note. Home Status coded as NMCV = 0, MCV = 1. Gender coded as female = 0, male = 1.

School coded as RNE = 0, WHHS = 1

Figure 30

Estimated Marginal Means for Home Status in Fall 2021

Fall 2021 Home Status

Dependent Variable	Fall 2021 MCV	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Fall 2021 Grades	NMCV	2.594	.088	2.420	2.767
	MCV	2.135	.085	1.968	2.303
Fall 2021 Absences	NMCV	6.295	.603	5.107	7.483
	MCV	13.499	.581	12.354	14.644

A comparison was assessed to determine whether there was a significant effect based on the two datasets. Due to the MANOVA tests completed for the dataset from the fall 2019 and fall 2021 terms, there was a statistically significant effect on home status. The univariate ANOVA tests for both terms also suggested there was a significant main effect in grades which illustrated a significant difference in MCV and NMCV students. As a result, the null hypothesis, which states that there was no difference between MCV and NMCV secondary students' academic performance was rejected. Therefore, the alternative hypothesis was accepted.

Research Question 2

H$_0$2: There was no differences in attendance across secondary students who are

homeless or not homeless.

H$_a$2: Secondary students who are considered homeless are at a greater risk of having

attendance issues such as truancy.

Fall 2019 Test Results for Research Question 2

The MANOVA revealed a main effect of home status on the combined dependent

variable of grades and absences, $F(2, 202) = 22.04$ $p < .001$, Pillai's Trace $= .18$, partial $\eta^2 = .18$.

See Table 2 regarding the significance of absences and grades. According to Richardson (2011),

this was a large effect size, indicating that home status explained 18% of the variation in

absences and grades. Regarding schools, the three-way MANOVA revealed a significant main

effect of school on the combined dependent variable of grades and absences $F(2, 202) = 8.01$, p

$< .001$, Pillai's Trace $= .07$, partial $\eta2 = .07$ (Table 2).

The subsequent univariate ANOVA revealed a statistically significant main effect of

home status on absences, $F(1, 203) = 44.28$, $p < .001$, partial $\eta^2 = .18$, indicating a large effect

size (Table 3). Due to this, home status contributed to 18% of the variance in absences.

According to the estimated marginal means, students with NMCV home status had fewer

absences (M $= 5.76$, SE $= 0.76$) than students with MCV home status ($M = 12.53$, $SE = 0.68$;

Figure 29). The combined effect of school and home status did have a significant effect on

absences, $F(1, 203) = .033$, $p > .05$, partial $\eta^2 = .00$ (Table 3).

Fall 2021 Test Results for Research Question 2

According to the MANOVA test, it revealed a significant main effect of home status on

the combined dependent variables of grades and absences $F(2, 207) = 36.87$, $p < .001$, Pillai's

Trace $=.26$, and partial $\eta^2 = .26$. See Table 4 regarding the results of the MANOVA test on the combined variables. According to Richardson (2011), the $\eta^2 = .26$ indicated a large effect size which accounts for 26% of the variance in the dependent variable (see Table 5).

A univariate ANOVA revealed that the home status had a statistically significant main effect on absences, $F(1, 208) = 74.09$, $p < .001$, partial $\eta^2 = 0.26$. According to Richardson (2011), this indicated a large effect size. See Table 5 for the statistical significance of such results.

The estimated marginal means for home status were assessed to determine the mean of the groups. MCV home status students had on average more absences ($M = 13.50$, $SE = 0.58$) than NMCV status students ($M = 6.30$, $SE = 0.60$). The results are according to the estimated marginal means (Figure 32).

Based on the two datasets, a comparison was made to see if there was a significant effect. There was a statistically significant effect on home status as it relates to absences based on the MANOVA tests completed for the dataset from the fall 2019 and fall 2021 terms. The univariate ANOVA tests for both terms indicated a significant main effect in absences, demonstrating that MCV students had fewer absences than NMCV students. Due to these findings, the null hypothesis was rejected, and the alternative hypothesis was accepted.

Research Question 3

H_03: Homeless status according to gender was no differences in attendance or academics.

H_a3: Homeless status of females had a greater effect on attendance and academics as compared to male homeless students.

Fall 2019 Test Results for Research Question 3

The MANOVA revealed there was no significant interaction between gender and home status. However, there was a significant main effect of gender on the combined dependent variables of grades and absences $F(2, 202) = 3.54$, $p < .05$, Pillai's Trace = .03, partial $\eta^2 = .03$ (see Table 2). This was a small effect size and indicated that gender accounted for 3% of the variance in the dependent variables.

The univariate ANOVA showed that there was a statistically significant main effect of gender on grades, $F(1, 203) = 4.47$, $p < .05$, partial $\eta^2 = .02$. This was a small effect size and indicated that gender accounted for 2% of the variance in grades (see Table 3). The univariate ANOVA also showed there was a statistically significant main effect of gender on absences $F(1, 203) = 5.57$, $p < .019$, partial $\eta^2 = .03$, which was a small effect size (Table 3).

Fall 2021 Test Results for Research Question 3

According to research question 3, female and male students were examined. As a result, on the combined dependent variables or in the main effects, female homeless students did not differ from male homeless students. There was no significant main effect of gender on the combined dependent variable of grades and absences (see Table 4).

A comparison of the two datasets was performed to see whether a substantial influence existed. There was no statistically significant interaction between gender and home status, according to the fall 2019 and fall 2021 MANOVA results. These results led to the acceptance of the null hypothesis and the rejection of the alternative hypothesis.

Summary

This chapter offered the study's analytic process, which covers all of the methods required to analyze the data obtained, as well as the statistical analysis findings, including demographic data.

The purpose of this study was to look at homeless students in a high school setting, as well as their academic and attendance factors, to see if homelessness has a major influence in positive or negative results when compared to students who are not homeless. This study also examined gender to determine significance within the male versus female homeless population. The problem is that much research regarding homelessness and student outcomes, such as academics and attendance, is focused on primary grade levels, however, homelessness affects secondary students and their academic performance and attendance as well (Herbers et al., 2012).

Research question 1 posed the question of whether home status has an effect on homeless students' academics. The hypothesis was that students who are considered homeless had a greater risk of performing lower academically. According to the findings from the current study revealed a significant effect regarding MCV students who were associated with lower academics compared to those students who were not classified as MCV students.

Research question 2 posed the same question regarding home status; however, it looked at attendance as a factor. The hypothesis for this question was that students who are considered homeless would pose a greater risk of having attendance issues. According to the results of the study, MCV students were associated with greater attendance issues than students who were not classified as MCV students.

Lastly, the third research question focused on whether gender was a factor as it relates to home status of students and their academics and attendance. The hypothesis was that female

students would have a greater effect than males. The study revealed that there was no significant

interaction between home status on the combined variable of grades and attendance. However,

there was a main effect of gender on the combined and separate variables of grades and

absences, indicating that males and females differed on grades and absences.

CHAPTER FIVE: CONCLUSIONS

Overview

This chapter examined whether homelessness had an impact on students' academic and attendance outcomes. The MANOVA results and following post hoc tests were explored alongside published literature and the guiding empirical model. Within this chapter, findings from the study were addressed as well as the implications, limitations, and recommendations for future research were shared because of the findings amongst MCV and NMCV secondary students in the areas of grades and attendance.

Discussion

The purpose of this archival study was to examine students in a secondary school setting, as well as their academic and attendance factors, to determine if homelessness has a major influence in positive or negative results when compared to students who are not homeless. The study evaluated whether gender has a significant factor amongst those secondary students within two comparable schools.

Research Question 1

Research question 1 posed the question of whether home status among secondary students affects student academics. A three-way MANOVA was run to examine the association between the three independent variables (gender, school, and home status) and the two dependent variables (grades and absences). According to the MANOVA tables for the fall 2019 and fall 2021 dataset, there was a significance on the combined. To provide a separate analysis, an ANOVA was used to determine separate data.

The univariate ANOVA tables provided a clearer picture of the variables sought. As a result of the univariate ANOVA for the fall 2019 (Table 3), there was a significant interaction

between home status and grades. However, in the fall 2021 univariate ANOVA data (Table 5), there was no significant interaction between home status and grade. Students who were classified as MCV and NMCV did not differ significantly within this variable.

Research Question 2

Research question 2 posed the question of whether home status in secondary students affects student attendance. Like research question 1, the MANOVA was run to evaluate the variables within the study. The findings from this analysis were that there was a significance between home status and attendance for the fall 2019 (Table 2) and fall 2021 (Table 4) terms. As a follow-up analysis, the univariate ANOVA was conducted to examine the variables separately. The findings from this analysis concluded that there was a significant interaction between home status and attendance for both fall 2019 (Table 3) and fall 2021 (Table 5) terms. The indication of such results was consistent with the value of $p < .001$.

Research Question 3

Research question 3 focused on whether home status in secondary students' gender has a significant effect on attendance and academics. Comparing the combined variables of attendance and academics on a large scale, the MANOVA from the fall 2019 and fall 2021 terms indicated there was no significance between home status and gender (Tables 2 and 4). Male and female secondary students who were classified as MCV had no difference among secondary students classified as NMCV students.

A closer look at secondary students' home status and gender was examined. The univariate ANOVA was sought to determine the relationship between secondary students' gender and whether there was an effect on attendance and grades. According to the univariate ANOVA analysis, there was also no significant interaction between MCV and NMCV secondary

students' academics and attendance. However, there was an effect on female and male secondary students not related to home status.

Home Status and Student Academics

Children are the most vulnerable group of Americans, with homeless children among those most affected by poverty (Biggar, 2001). Homelessness can affect factors such as academic performance and drop-out rates (Biggar, 2001). Students who are homeless were shown as more likely to experience academic difficulties, particularly in reading and math (Wenzel, 2014). The achievement gap between HHM students and lower risk classes remained or widened. In years of HHM detection, math and reading achievement were lower, and math development was slower, indicating the extreme effects of residential uncertainty. However, 45% of HHM students scored at or above the average, demonstrating academic resilience (Cutuli et al., 2013).

An article described a translational research project focused on academic risk and resilience in homeless and mobile children. They discovered that, while these children shared some risk factors with other vulnerable children, they were higher on the risk spectrum overall (Masten et al., 2014). According to studies, homeless children and teenagers outperformed the entire population of housed students on a wide range of important student success indicators. Homelessness has been frequently associated with falling behind in school (Murphy & Tobin, 2011).

The results of this study provided new insight on the population of secondary students. As mentioned previously, most research focused on elementary-aged students and lacked in secondary level students. MCV identified secondary students compared to NMCV secondary students in regard to academics was significant in relation to academics. These findings provided

new insight into the specific population; however, confirmed that home status plays a significant role in secondary students.

Home Status and Student Attendance

Homeless students, according to Sheldon (2002), were more likely to have lower levels of attendance. The study took into account the risk of family deprivation to school operations as well as experimental data on the impact of various housing strategies over time. Students from homeless households were randomly assigned to housing programs that focused on acute risks (community-based accelerated re-housing), persistent risks (permanent subsidization), or regular treatment. The findings supported, in part, the chronic-risk theory that family homelessness impedes success due to its link to deep poverty. Children assigned at random to usual care performed equally or better than children assigned to housing initiatives in this area (Cutuli & Herbers, 2019).

The number of absences among homeless students and their home peers was compared using a quantile study. Using school administrative data collected over the course of a school year for the entire school system, researchers concluded that homeless children do not miss significantly more school days than their poorest peers. Homelessness and hardship, on the other hand, significantly increase the number of absences for children in the upper percentile of absences, implying that homelessness has a greater impact on those who miss more school days in total than on frequent attendees. According to the findings of this study, homelessness can exacerbate rather than cause problems (Elliott, 2016). On the contrary, a recent study suggests that regular school attendance may be a major protective factor for children in the prevention of street migration. According to statistical research, young people who dropped out of school had

approximately eight times the chance of ending up on the streets for good than those who attended school every day (Henley et al., 2010).

The current study evaluated secondary students within two respective schools regarding attendance to determine if there was a significant correlation between home status and chronic absenteeism. Like most of the research surrounding home status and attendance amongst elementary school students, secondary students also showed a significant correlation. Findings from this study suggested home status contributes to the number of missed days from school. This information gives way to new insight for secondary school students where research was quite limited.

Gender on Student Outcomes

Due to limited research on homeless students' gender and the effects on grades and attendance, the comparison of gender and student outcomes is limited. Based on known research and studies surrounding homeless students, gender was not a variable assessed. Research is needed in this area to achieve a basis for whether gender has a significant impact on homeless students' outcomes.

<div align="center">Implications</div>

The study of student homelessness is essential to the overall field of counseling as it provides a major factor in the lives of not only the student but the family. Previous research and studies centered around student homelessness focused on grade-level students. Unfortunately, secondary students and their home status was not widely researched (Herbers et al., 2012). Oftentimes secondary students who are considered homeless were often tasked with fending for themselves due to their age (Schmitz & Tyler, 2016). The results from the study suggested a major gap within student outcomes as it relates to secondary homeless students and their

educational experiences. According to the study, homeless or MCV students' grades correlated with their home status. The same was found for homeless or MCV students, who were absent more frequently than NMCV students.

Christian Worldview

Even though the Bible does not specifically note the relationship between students' homelessness and their educational outcomes, such as grades and attendance; however, the Bible does give us insight on homelessness. As Christians and brothers and sisters in Christ, the Bible teaches of helping one another as Jesus did. Deuteronomy 15:11 (ESV) states, "For there will never cease to be poor in the land. Therefore, I command you, 'You shall open wide your hand to your brother, to the needy and to the poor, in your land." As a duty, we are encouraged to help those less fortunate. As counselors and educators within the educational system, the need to help students is essential to their overall development, which is not limited to academics. Proverbs 31:8-9 (NIV) states, "Speak up for those who cannot speak for themselves, for the rights of all who are destitute. Speak up and judge fairly; defend the rights of the poor and needy."

<div align="center">

Limitations

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Internal validity within the research of secondary homeless students and their peers was derived from the archives, which contain valid information concerning homeless status, academic records, and demographic information. Internal validity tests if the way in which the analysis was conceived, performed, and examined allows reliable responses to research questions in the study. On the other hand, external validity investigates whether the results of the analysis can be applied in other circumstances (Andrade, 2018). Other factors may contribute to the overall level of confidence with this study based on internal and external factors.

When examining the internal validity of how homelessness affects student outcomes, particular variables may make the study's confidence level decline, such as selection bias. Selection bias can be defined as the result of nonrandomized sampling, which causes an error within research (Kenton, 2021). Due to the demographic population of River School District Two, the participants who receive MVA services are majority of African American descent which may be different from the controlled group of students who meet the same criteria of 3.0 grade point average and less than two unexcused days of attendance. Another possible notable variable may be the statistical significance of the participants. Since MCV students can be transient, the actual effect size may differ from the beginning of the study to the end, which should be accounted for.

External validity should also be noted regarding the status of homelessness and student outcomes. Some major threats to the external validity of the study included the timing of the study and setting. Since external validity generalizes findings that should reflect other populations and settings, the demographics of participants derived for the student may not mimic the general population. For instance, within the study, African Americans are noted at a higher rate for MCV. Not only does the setting play a crucial part in the external validity, but also the timing of the study. Due to the pandemic of COVID-19, more students who would be classified as MCV are not due to the option of eLearning. With this, the number of coded MCV students would be less than average for the district.

Recommendations for Future Research

Recommendations for future research are vital in this study as there are many variables to take into consideration. After conducting this study, many questions arose regarding the nature of the MCV Program. For example, why are the MCV students not considered a subgroup to

monitor as others as it relates to standardized testing and other data retrieval methods? Why is there not enough research and support for secondary students? With the number of questions that arose, the need to examine the constraints surrounding this study was evident.

One of the notable recommendations for future research is to determine if high mobility plays a significant factor in the overall participation of MCV students within the secondary grade level. Since oftentimes MCV families do not regularly have a stable living environment, then students often are relocated to various schools within an academic year. More attention in this area is needed for the purpose of determining if MCV is indeed a significant factor.

Also, COVID-19 began in the fall of the 2019 school term. Due to this, school began to be affected within the 2019 to 2020 school year. Data from the fall 2019 included students that were attending school according to their normal bell schedule and format. During the fall 2021 school term, respective schools returned to normal bell schedule and format; therefore, COVID-19 did not affect operation in this study. However, one must take into account the available options of virtual learning, which increased as a result of COVID-19. Since more virtual options are offered, one must account for those students who are MCV and if those students took advantage of such program, which would limit the number of participants in this study.

Future research regarding this study should address such gaps within the classified MCV population surrounding secondary students within River School District Two and Golden County Schools as a need for additional services and support. Future research could also investigate or examine the number of students who were considered MCV within the virtual learning environment and whether those subgroups of students were significantly affected in the areas of attendance and academics.

Summary

The problem with research on homelessness and student outcomes, such as academics and attendance, is that it focuses on primary grade levels; however, homelessness affects secondary students as well as their academic performance and attendance. Further research on this population is just as important as primary research as it provided insight into the effects on this population. Therefore, the purpose of this study was to examine homelessness students within a high school setting and their academic and attendance variables to determine if homelessness plays a significant role in the positive or negative outcomes compared to students who are not identified as homeless.

The results of this study illustrated a significant impact of student homelessness, and it relates to grades and attendance within secondary education. The three-way MANOVA used with this dataset revealed a significant main effect of gender on the combined dependent variables of grades and absences. Also, there was a significant main effect of home status on the combined dependent variables of grades and absences, which showed that MCV students had more absences and scored lower than their NMCV counterparts. To close this gap amongst the secondary population, more research is needed to provide further interventions and support to those students who may be identified as such.

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APPENDIX A

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

January 27, 2022

Lucinda York
Pamela Moore

Re: IRB Exemption - IRB-FY21-22-584 The Effects of Homelessness on Student Outcomes

Dear Lucinda York, Pamela Moore,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

(4) Secondary research for which consent is not required: Secondary research uses of identifiable private information or identifiable biospecimens, if at least one of the following criteria is met:

(ii) Information, which may include information about biospecimens, is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained directly or through identifiers linked to the subjects, the investigator does not contact the subjects, and the investigator will not re-identify subjects;

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,
G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

APPENDIX B

StudentID	Mahalanobis Distance 2019	*p* value Mahalanobis Distance 2019	Mahalanobis Distance 2021	*p* value Mahalanobis Distance 2021
RNE0041	0.575298389	0.750024659	0.001621237	0.99918971
WHHS0109	0.822759295	0.662735278	0.008568812	0.995724759
WHHS0038	10.05043739	0.006570149	0.025429992	0.987365498
RNE0040	0.322111984	0.851244407	0.040705894	0.979852776
RNE0010	1.238203901	0.538427755	0.045195631	0.977655603
RNE0019	1.517138731	0.468335966	0.047407704	0.976574878
WHHS0110	1.811201799	0.404298869	0.053332335	0.973686236
WHHS0064	3.063250059	0.216184076	0.059574263	0.970652133
WHHS0056	2.176161389	0.336862416	0.060797513	0.970058639
WHHS0013	1.096933578	0.577835075	0.067456517	0.966834198
WHHS0046			0.067456517	0.966834198
RNE0047	0.273952338	0.871991006	0.069132237	0.966024466
RNE0090	5.552136906	0.062282895	0.114720993	0.944253608
RNE0046			0.114720993	0.944253608
RNE0057	6.401536858	0.040730893	0.122583943	0.940548586
WHHS0100	0.771884287	0.679809856	0.127275905	0.938344663
WHHS0044	2.570284953	0.27661117	0.171460252	0.917841899
RNE0078	1.485661727	0.475765181	0.178865358	0.914449825
WHHS0094	5.039104176	0.080495654	0.183105714	0.912513082
RNE0030	0.337962567	0.84452471	0.198082893	0.905705169
RNE0061	0.942526654	0.624213185	0.216407281	0.897444822
WHHS0008	0.075391006	0.963006129	0.222462982	0.894731603
WHHS0002	1.965363769	0.374305906	0.225772758	0.893252147
RNE0031	3.795978897	0.149869637	0.24378577	0.885243186
WHHS0045	0.385392579	0.824732416	0.259035792	0.878518866
RNE0009	1.599111396	0.449528646	0.281358456	0.868767943
WHHS0047	0.275047079	0.871513835	0.285013381	0.867181752
WHHS0103	1.198165999	0.549315128	0.297333749	0.861856173
RNE0053	0.664721493	0.717228539	0.303541528	0.859185214
RNE0029	4.141333703	0.126101663	0.329307293	0.848187426
WHHS0041	1.839610017	0.398596756	0.339920106	0.843698519
RNE0064	0.533308193	0.765937966	0.340657836	0.843387366
RNE0033	0.077319466	0.962078017	0.340657836	0.843387366
RNE0016	5.147706051	0.076241219	0.348302456	0.840169831

RNE0013	0.830894276	0.660045084	0.349492745	0.839669957
RNE0074	0.374787135	0.829117359	0.383356137	0.825572604
WHHS0065	3.491535534	0.174510954	0.388676772	0.823379237
WHHS0092	0.123395792	0.940166872	0.390989609	0.822427616
RNE0095	0.66408307	0.717457523	0.408691289	0.81518056
WHHS0007	0.799120738	0.670614804	0.410097535	0.814607589
WHHS0098	0.050844782	0.974898037	0.422606143	0.809528685
RNE0003	0.65456301	0.720880783	0.433487181	0.805136388
RNE0055	0.084873476	0.958451097	0.457812301	0.795403178
WHHS0077	1.728426178	0.421383013	0.464130039	0.792894568
WHHS0036	0.937771291	0.625699131	0.477418754	0.787643757
RNE0081	1.102409423	0.576255171	0.496435555	0.780190017
RNE0093	0.573882735	0.750555735	0.513833219	0.773432708
RNE0024			0.532792734	0.766135396
RNE0073	5.869087698	0.05315496	0.540994637	0.762999946
WHHS0108	0.431612179	0.805891558	0.551399448	0.759040818
RNE0058	2.285202567	0.318988163	0.554168744	0.757990541
RNE0102	1.581461871	0.453513185	0.554168744	0.757990541
RNE0039			0.585378257	0.746254094
WHHS0101	0.110287152	0.946349265	0.603270858	0.739607655
WHHS0010	0.645224593	0.724254596	0.624040055	0.731966868
WHHS0037	2.660871373	0.264362057	0.625552387	0.731413589
WHHS0078	1.095031058	0.578385008	0.635380077	0.727828352
RNE0004			0.636053338	0.727583384
WHHS0027	1.617931326	0.445318437	0.646190894	0.723904756
WHHS0107	1.801694711	0.406225297	0.662536327	0.718012598
RNE0088	2.329365412	0.312021649	0.662749271	0.717936154
WHHS0028	1.218830463	0.543668696	0.75812847	0.684501642
WHHS0086	0.648606678	0.723030885	0.771635515	0.67989442
RNE0062	1.259253618	0.532790597	0.778509826	0.677561529
RNE0045	1.053536193	0.590510361	0.805821435	0.668371771
WHHS0048	0.542945224	0.76225616	0.812608076	0.666107615
WHHS0105	3.897517176	0.142450802	0.812634443	0.666098833
WHHS0052	3.438798905	0.179173718	0.819134581	0.66393748
WHHS0050	2.272618877	0.321001514	0.829447635	0.66052268
WHHS0006	0.435849986	0.804185759	0.834240504	0.658941676
RNE0111	0.151452592	0.927069915	0.8692435	0.647509541
WHHS0071	1.415785717	0.492681254	0.925575515	0.62952623
RNE0043	1.227870258	0.541216915	0.950892804	0.621607508
RNE0103	1.736377119	0.419711143	0.978034481	0.613228755

RNE0068	0.700278305	0.704590037	1.039784548	0.594584597
WHHS0014	0.156461763	0.924750894	1.07141907	0.585253885
RNE0094	4.133533136	0.126594455	1.073054182	0.584775602
RNE0086			1.097536594	0.577660879
RNE0044	3.336176417	0.188607299	1.107758016	0.574716153
RNE0084	2.005002986	0.366960343	1.10808879	0.57462111
WHHS0029	1.488181047	0.475166256	1.139269735	0.565731968
WHHS0030	6.641585069	0.036124191	1.148063231	0.563250048
WHHS0060	0.947151795	0.622771316	1.155072807	0.561279431
WHHS0058	0.62766109	0.730642829	1.156262754	0.560945584
WHHS0025	0.121174483	0.941211653	1.173219099	0.556209894
WHHS0090	6.949369599	0.030971595	1.211344402	0.545707478
RNE0085	0.885290396	0.642335068	1.218765247	0.543686425
WHHS0096	4.595226074	0.100498444	1.219539165	0.543476081
WHHS0106	1.659690125	0.436116852	1.223030969	0.542528053
RNE0067	0.236723195	0.888374761	1.241694084	0.537488969
WHHS0020	1.176755267	0.555227337	1.262332253	0.531971094
WHHS0095	3.752124446	0.153192156	1.280767123	0.527090214
RNE0060	3.840616674	0.146561765	1.288189047	0.525137827
RNE0048			1.302911647	0.521286323
WHHS0053	1.332097486	0.51373447	1.310713489	0.519256787
RNE0106	0.001537374	0.999231609	1.310730279	0.519252428
RNE0011	1.070352704	0.585566015	1.378389382	0.501980155
RNE0028	1.074461681	0.584364212	1.383679079	0.500654248
RNE0083			1.424047471	0.490650246
WHHS0054	0.937771291	0.625699131	1.43870017	0.487068706
WHHS0031	0.731770657	0.693582331	1.43870017	0.487068706
RNE0100	1.319044085	0.517098427	1.442167301	0.486225072
RNE0063	1.727195179	0.421642454	1.450971156	0.484089449
RNE0080	0.714370738	0.699642794	1.452973769	0.483604969
RNE0097	0.222552168	0.894691705	1.474146044	0.478512463
WHHS0012	4.343900517	0.113955158	1.488142933	0.475175311
WHHS0113	1.39991567	0.496606243	1.493670976	0.47386373
WHHS0073	0.969828533	0.615749985	1.52713023	0.466002111
RNE0018	0.666564188	0.716568026	1.542730998	0.462381256
RNE0056	3.225709018	0.199317847	1.552472291	0.460134636
RNE0005	2.94287619	0.229595068	1.557343614	0.459015268
RNE0089	0.621781328	0.732793992	1.557343614	0.459015268
RNE0107	0.621781328	0.732793992	1.557343614	0.459015268
WHHS0111	3.895285077	0.142609873	1.597686768	0.449848966

WHHS0079	1.334970331	0.51299706	1.622482029	0.444306333
RNE0006	0.382881595	0.825768511	1.659229144	0.436217384
RNE0079	0.728763038	0.694626131	1.659500273	0.436158253
RNE0087	4.970827538	0.083291084	1.713857094	0.424463803
WHHS0082	1.361277146	0.506293584	1.735074457	0.419984603
WHHS0059	0.557731011	0.756641661	1.776998953	0.411272414
WHHS0063	2.757696895	0.251868426	1.801168828	0.406332124
RNE0051	0.124897814	0.939461061	1.808713937	0.404802102
RNE0109	4.885048338	0.08694112	1.820211656	0.402481628
RNE0027			1.824202388	0.40167933
WHHS0055	0.214069345	0.89849452	1.83432463	0.399651519
WHHS0081	1.4683461	0.47990215	1.930297293	0.380926572
WHHS0089	1.590678571	0.451428046	1.93412152	0.380198893
WHHS0021	2.635451363	0.267743544	1.942742156	0.378563642
WHHS0072	1.066969869	0.58655729	1.970632333	0.373321177
WHHS0057	4.207666331	0.121987931	1.978025201	0.371943767
WHHS0080	1.209572608	0.546191133	1.999649425	0.367943931
WHHS0004	1.174516795	0.555849115	1.999665012	0.367941064
RNE0070	1.741641892	0.418607754	2.025821242	0.363160417
RNE0054	4.466482478	0.107180469	2.031733717	0.362088414
WHHS0093	1.098536759	0.577372073	2.062789808	0.356509317
RNE0101	0.054365024	0.973183607	2.108807979	0.348400016
WHHS0023	4.941354636	0.084527588	2.122236639	0.346068579
WHHS0088	2.442820496	0.294814113	2.162175553	0.339226322
WHHS0022	0.994131731	0.608312916	2.192993557	0.33403925
WHHS0087	2.427318668	0.29710807	2.224976084	0.328740024
WHHS0051	0.494150314	0.781081987	2.310791453	0.314932885
WHHS0074	1.651786614	0.437843689	2.344126751	0.309727198
RNE0049	1.564185734	0.457447632	2.352404861	0.30844787
WHHS0016			2.357991402	0.307587493
WHHS0005	4.504808661	0.105146114	2.375695755	0.304876691
WHHS0042	1.589117708	0.451780492	2.401785397	0.300925456
WHHS0026	0.470597794	0.790334586	2.401785397	0.300925456
RNE0034	0.816977846	0.664653835	2.463791982	0.291738919
RNE0052	0.816977846	0.664653835	2.463791982	0.291738919
RNE0104	0.816977846	0.664653835	2.463791982	0.291738919
RNE0076	0.157622493	0.924214357	2.51213215	0.284772098
RNE0112	4.524926873	0.10409374	2.5198646	0.283673231
WHHS0102	0.216122254	0.897572729	2.530597974	0.282154923
WHHS0011	0.385392579	0.824732416	2.546781806	0.279880962

RNE0042	2.071305838	0.354994522	2.57906484	0.275399524
WHHS0076	1.678833524	0.431962387	2.626991746	0.268878447
RNE0035	3.804163827	0.149257554	2.644531486	0.266530727
WHHS0075	1.617939884	0.445316532	2.64807425	0.266059017
WHHS0085	1.649792158	0.438280537	2.669599813	0.263210837
WHHS0083	2.561682589	0.277803488	2.755254667	0.252176174
RNE0025	6.951871041	0.030932882	2.771546298	0.250130337
WHHS0112	3.40053636	0.182634539	2.785985157	0.248331041
WHHS0032	0.362825781	0.834090899	2.803362361	0.246182738
RNE0075	3.413186717	0.181482988	2.832145645	0.242665137
WHHS0069	1.100797613	0.576719765	2.942248689	0.229667115
WHHS0070	1.424895291	0.490442298	2.952321342	0.228513344
WHHS0039	2.437767384	0.295559919	2.970298063	0.226468587
RNE0021	1.742012625	0.418530165	2.975343188	0.225898026
RNE0026	1.529342765	0.465486873	3.02808753	0.220018474
RNE0113	1.529342765	0.465486873	3.02808753	0.220018474
WHHS0049	0.190976025	0.908929257	3.130497664	0.209035992
RNE0050	0.814482181	0.665483729	3.21265706	0.200622844
WHHS0061	1.288225283	0.525128313	3.32492692	0.189671157
RNE0002	1.55787031	0.458894403	3.373054807	0.1851614
WHHS0034			3.374105466	0.185064154
WHHS0066	0.103364856	0.949630395	3.384377718	0.184116078
WHHS0068	1.433058893	0.48844449	3.418109725	0.181036816
WHHS0097	0.614108679	0.735610627	3.418109725	0.181036816
RNE0017	0.742047979	0.690027388	3.419787689	0.180884994
WHHS0033	4.759978851	0.092551556	3.502499375	0.173556916
RNE0071	3.725890241	0.15521483	3.576018436	0.167292882
RNE0099	0.717242108	0.698639048	3.60408763	0.164961393
WHHS0040	0.672557896	0.714423791	3.629507212	0.162878036
RNE0072	0.521863646	0.770333437	3.721642729	0.155544819
WHHS0035	0.577576078	0.749170984	3.728782052	0.154990566
RNE0065	2.674680109	0.262543091	3.732296817	0.154718428
WHHS0018	3.697832491	0.157407665	3.842566291	0.146418965
WHHS0019	6.257571054	0.043770924	3.843157747	0.146375671
WHHS0024	0.270462451	0.87351391	3.896411287	0.142529591
RNE0007	5.581032301	0.061389519	3.93547735	0.13977257
RNE0110	1.051847091	0.591009288	3.968003245	0.13751784
RNE0077	1.165331546	0.558407792	4.141019583	0.12612147
RNE0015	1.099333308	0.577142166	4.15350242	0.125336744
WHHS0003	0.362825781	0.834090899	4.229109275	0.120687027

RNE0012	3.586579945	0.166411778	4.356420224	0.113244043
RNE0108	3.045042121	0.218161195	4.372915457	0.112313891
RNE0098	0.832678926	0.659456371	4.378017171	0.11202776
RNE0014	0.642113428	0.725382111	4.378017171	0.11202776
WHHS0104	5.474620426	0.064744261	4.393662121	0.111154844
WHHS0017	3.881521676	0.143594656	4.449171788	0.108112179
RNE0032	1.74438433	0.418034144	4.600710916	0.100223212
WHHS0084	0.014648354	0.99270258	4.627009649	0.098913967
WHHS0043	3.527043894	0.171439997	4.676832086	0.096480338
WHHS0009	1.124334983	0.569972314	4.678784618	0.096386193
WHHS0067	1.855072773	0.395526937	4.723447336	0.094257614
RNE0001	3.959736801	0.138087408	4.8558997	0.088217506
RNE0037			5.028557584	0.080921252
WHHS0091	2.233725104	0.327305088	5.212479792	0.073811562
RNE0082	3.762764941	0.1523793	5.213259576	0.073782789
WHHS0099	4.605017117	0.100007654	5.882121426	0.052809683
RNE0038			5.935105645	0.051429012
RNE0066	4.025908559	0.133593419	5.952778589	0.050976563
WHHS0015	4.543919251	0.103109925	6.786694174	0.03359604
RNE0069	4.506366699	0.105064235	6.816974447	0.033091222
WHHS0062	3.078671072	0.214523597	6.878835484	0.032083361
RNE0036			7.596041947	0.022415088
RNE0059	3.273501235	0.194611383		
RNE0096	3.024300823	0.220435441		
RNE0091	2.811287338	0.245209172		
RNE0105	2.351652491	0.308563925		
RNE0092	2.295249702	0.317389723		
RNE0008	0.880115621	0.64399919		
RNE0022	0.596869791	0.741978586		
RNE0020	0.185067698	0.911618353		
WHHS0001	0.171094747	0.918009653		
RNE0023				