2023

The Role of Parental Military Status and Educational Attainment on Mental Health Service Usage Among Children and Adolescents

Cierra Jones Williams
Walden University

Walden University

College of Health Sciences & Public Policy

This is to certify that the doctoral study by

Cierra Jones Williams

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Harrison Ndetan, Committee Chairperson, Public Health Faculty
Dr. Sanggon Nam, Committee Member, Public Health Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2023

Abstract

The Role of Parental Military Status and Educational Attainment on Mental Health Service Usage Among Children and Adolescents

by

Cierra Jones Williams

MPH, Southern New Hampshire University, 2019

BS, Indiana University-Purdue University, 2016

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Public Health

Walden University

August 2023

Abstract

A lack of mental health services for children and adolescents has been linked to significant health problems in adulthood. Researchers have investigated factors that influence usage of mental health services among children and adolescence, but significant gaps persist regarding use of mental health service among military-connected youth. This quantitative study was conducted to examine if parental military status and parental education affected the usage of mental health services among children and adolescents ages 3–17 in the United States. Multivariable logistic regression was used to analyze secondary data from the combined 2019–2020 National Survey of Children's Health. After adjusting for income, family structure, parental mental health status, and health insurance coverage, no statistically significant relationship was found between parental military status, parental education, and use of mental health services for youth ages 3–17. The study failed to reject the null hypothesis (OR=.52, 95% CI [.07, 3.95], p = .60). Parental education was associated with a higher likelihood of usage of mental health services (OR=.77, 95% CI [0.00, -], p = .002). Use of mental health services was highest among those with a high school diploma and less, lower among those with a college degree or higher, and lowest among those with some college or an associate degree. The findings of this study have potential implications for positive social change that include targeting military-connected youth and creating better mental health programs for service members and their families. Timely use of mental health services can promote better outcomes and improve quality of life for this population.

The Role of Parental Military Status and Educational Attainment on Mental Health Service Usage Among Children and Adolescents

by

Cierra Jones Williams

MPH, Southern New Hampshire University, 2019

BS, Indiana University-Purdue University, 2016

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Public Health

Walden University

August 2023

Dedication

To Brion: Remember to aim high. The sky is not the limit. No matter how hard it gets, remember to keep going. Chase your dreams. It does not matter how long it takes—the time will pass regardless. Take one step at a time if that is all you can do—but keep going! You are your ancestors' wildest dreams. Cierra, I am proud of you. The hard work paid off, and you did it!

Acknowledgments

First, I want to acknowledge and thank Dr. Harrison Ndetan: You were a lighthouse in the dark. Thank you for your patience, help, and guidance. Lastly, thank you to my sister Kierra and my best friend Princess for holding me accountable and rooting for me. You are appreciated.

Table of Contents

List of Tables

List of Figures

Section 1: Foundation of the Study and Literature Review

Introduction

Significant gaps exist in using mental health services and care for military-connected children and adolescents (MCCAs). According to Moore et al. (2017), military-connected youth are more likely to experience trauma, family separation, and frequent relocations. This likelihood suggests a need for mental health services among this population. Known factors that influence use of mental health services includes age, genetics, physical environment, stress, gender, race, and health insurance coverage. Nevertheless, little is known about how the social factors of parental military connection and parental education for MCCAs may be related to the use or uptake of mental health services in the United States. Regular and timely mental health services use has shown to have long-term effects on behavioral health, physical health, and increased healthy behaviors in adulthood. As such, public health leaders must understand the role of parental military status and parental education in use of mental health services among children and adolescents in the United States.

The population of military-connected children is growing. Studies have shown that more than two million youth annually have at least one parent serving in the U.S. armed forces. Military-connected youth face unique circumstances that their civilian counterparts do not. MCCAs experience an average of four relocations and school changes when a parent serves for at least 10 years (Sullivan et al., 2021). Due to the frequent relocations, MCCAs are more likely to experience hardship in making friends,

loss of peers, and social and emotional issues. Sullivan et al. (2021) found that nearly 30% of MCCAs experience at least one mental health issue during their parent's military careers.

Furthermore, MCCAs who experience a parent diagnosed with mental health issues or injuries because of time served are more likely to experience more severe symptoms. A military connection has been associated with adverse outcomes for MCCAs, yet they are not receiving mental health care or treatment at the same rates as their peers. Few studies have been conducted to examine the impact of parental military connection and parental education on use of mental health services.

Identifying the role and risk of parental military status in the uptake of mental health services and treatment for MCCAs is necessary. Military-connected youth are often overlooked in research, and their needs go unnoticed by policymakers. The results of this study will aid public health leaders in advocating for comprehensive training for military parents, early childhood mental health intervention, and school-based training in response to parental deployment, military culture, and frequent relocations.

Background

Childhood mental health has become a significant issue worldwide. According to the World Health Organization (WHO, 2022), mental disorders account for more than 14% of the global disease burden in children and adolescents. Children and adolescents with mental health conditions are more vulnerable to social exclusion, physical ill health, discrimination, educational difficulties and delays, risky behaviors, and stigmas that

affect their readiness to seek help or use services (WHO, 2022). Mentally healthy children reach developmental, emotional, and social milestones. Additionally, they demonstrate healthy coping skills and report higher rates of resiliency. Overall, children diagnosed as mentally healthy have higher rates of productivity and well-being (Lucier-Greer et al., 2016).

Nonetheless, an estimated two thirds of children and adolescents experience a mental health issue before adulthood. Using mental health services has been shown to prevent the onset of mental health issues, severity, and prognosis (Assari et al, 2020). Previously known factors influencing childhood mental health care and service usage include health insurance, physical environment, provider availability, and income. It remains unknown if parental military status and education are protective or risk factors for mental health services use among children and adolescents.

Problem Statement

There is little evidence of the role of parental military status and education in the uptake of mental health services among children and adolescents in the United States for 2019–2020. According to Moore et al. (2017), military-connected youth are more likely to experience trauma due to frequent family separations and relocations. Nevertheless, military-connected youth are not receiving the same care rates as their civilian counterparts. Sullivan et al. (2021) estimated that approximately 31% of military children and adolescents receive mental health care annually. Significant gaps persist in care and outcomes for military children and adolescents who experience mental health symptoms

and illnesses. Regular and timely mental health services use has long-term effects on behavioral and physical health and increases healthy behaviors in adulthood. As such, public health leaders must understand the impacts of parental military status and parental education on U.S. children and adolescents' use of mental health services.

Purpose of the Study

This study was conducted to assess whether parental military status and education affect use of mental health services among children and adolescents ages 3–17 in the United States, after controlling for parental mental health status, health insurance status, race/ethnicity, household income, and family structure.

Research Questions and Hypotheses

RQ1: Is there an association between parental military status and use of mental health services among children and adolescents ages 3–17 in the United States, after controlling for parental mental health status, health insurance status, race/ethnicity, household income, and family structure?

$H_0$1: There is no association between parental military status and use of mental health services among children and adolescents ages 3–17 in the United States, after controlling for parental mental health status, health insurance status, race/ethnicity, household income, and family structure.

H_A1: There is an association between parental military status and use of mental health services among children and adolescents ages 3–17 in the United States,

after controlling for parental mental health status, health insurance status, race/ethnicity, household income, and family structure.

RQ2: Is there an association between parental educational attainment and use of mental health services among children and adolescents ages 3–17 in the United States, after controlling for household adults' military status, parental mental health status, health insurance status, household income, and family structure?

$H_0$2: There is no association between parental educational attainment and use of mental health services among children and adolescents ages 3–17 in the United States, after controlling for household adult's military status, parental mental health status, health insurance status, household income, and family structure.

H_A2: There is an association between parental educational attainment and use of mental health services among children and adolescents ages 3–17 in the United States, after controlling for household adults' military status, parental mental health status, health insurance status, household income, and family structure.

Theoretical Framework

American psychologist Urie Bronfenbrenner developed the social–ecological model (SEM) in the late 1970s to identify how individuals interact and are affected by various social, cultural, interpersonal, and environmental factors. Bronfenbrenner created the model to explain that several factors, including environment, influence child development. Bronfenbrenner observed youth in school, social, and home environments to study their actions and behaviors. The SEM model is used to describe how each

environment a child engages in influences their development, growth, and health behaviors. Bronfenbrenner divided the model into five core levels: (a) intrapersonal, (b) interpersonal, (c) organizational, (d) environmental, and (e) policy. Since its creation, however, the model has been consolidated down to four levels: (a) individual, (b) relationship, (c) community, and (d) policy. SEM is used to describe the relationship between individual factors, community-level factors, and environmental factors that influence mental health service usage by children and adolescents. SEM can help explain how children and adolescents' health services usage can be controlled by their parents' military status and education at the individual, relationship, cultural and societal levels (see Hess et al., 2008).

Nature of the Study

Regular and early mental health services use in childhood has long-term effects on behavioral and physical health and can increase healthy behaviors in adulthood. This study was conducted to assess the impacts of parental military status and parental educational attainment on the use of mental health services among American children or adolescents ages 3–17. In this study, SEM was used to explain how the individual factors affect children and adolescents at the interpersonal, organizational, community, and policy levels of the model. SEM is used to describe how factors can put an individual at risk or protect them from experiencing mental health problems.

To address the research questions in the study, I conducted a cross-sectional research design using secondary data from the National Survey of Children's Health,

which the Data Research Center for Children and Adolescent Health (DRC) completed. The survey is conducted annually; however, the organization combined the data for 2 years in 2019 and 2020 due to low response rates. The survey was provided to households who answered that one or more children were present in the home on the U.S. Census ballot for the previous year.

Previously, the SEM has been used to describe how some factors affect female service members' health. Trago and Wilson (2020) used SEM to understand how individual experiences and daily activities influence U.S. military women's health and military culture while the women were serving in combat and combat support roles across the Department of Defense (DoD). Trago and Wilson (2020) described the layers in the military SEM present in the average service woman, such as military culture; occupational, physical, and psychosocial factors; and experiences. The research team argued that further investigation is needed to understand the role of the SEM in service women's health.

Literature Search Strategy

There has been little to no research conducted into parental education attainment, parental military status, and usage of mental health services for military-connected youth. For the literature review for this study, I sought research limited to only studies published in 2016 or later. The American Psychological Association (2016) recommends using articles, journals, or dissertations published within the last 5 years. Research published prior could be misinformed or outdated.

Recent studies have been focused on examining the role of parental military status and the onset or likelihood of mental health issues for military-connected youth upon parental return from wartime, deployments, or extended exercises. Moreover, researchers, public health leaders, and legislators are now beginning to understand the impact of military culture on service members and the usage of mental health services by families, spouses, and offspring.

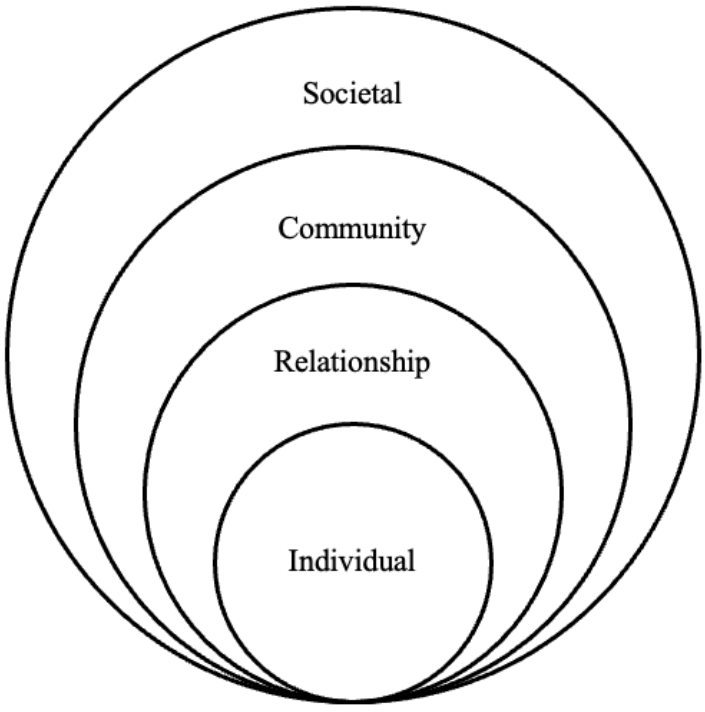
As a result, I used the following keywords to search for current literature: *gender, United States, childhood, adolescent, income, parental mental health, insurance, parental military status, parental education attainment, race, family structure, parental mental health, depression, usage, utilization, obtaining, difficulty, burden, suicide, anxiety, behavior disorders, mental health services, difficulty, military, enlisted, officer, warrant officer, special operations, Marine, Army, Air Force, Navy, Coast Guard, active duty, reserve, Department of Defense, retired, Customs and Border Control, separated, parental education attainment, generational education attainment, Black, White, Minority, Asian, Hispanic, military connected, ethnicity,* and *substance abuse*. Using these keywords, I searched the Walden University Library, Science Direct, Google Scholar, PubMed, PsycINFO, Psychology & Behavioral Science Collection, EMBASE, and Medline databases to acquire information. The search that included *military-connected youth using mental health services* produced more than 17,000 articles that were unrelated to this study. To accommodate for the lack of data, I reviewed studies that included the independent and dependent variables for each variable in this study.

Theoretical Approaches to the Social–Ecological Model

The layers in the SEM overlap, illustrating how factors at one level influence factors at another. The elements of the SEM for military-connected children include the individual surrounded by layers of influences designated as the individual, relationship, community, and public policy. Each layer has unique factors that influence the individual's health at the model's center. Figure 1 shows a summary of the elements of the SEM for military-connected children. The model can be used to identify factors influencing mental health service use for youths ages 3–17 in the United States.

Figure 1

Social–Ecological Model



Elements of the Social–Ecological Model for Military-Connected Youth

Individual

The first level of the model identifies person-specific factors that increase the likelihood of using mental health services or preventing mental illnesses in military-connected youth. These factors include age, gender, income, genetics, and education. Personal and religious beliefs, attitudes, and physiology have also been known to guide an individual's behaviors. This layer identifies individual characteristics and how they interact with other layers of the model. These factors are essential when constructing public health policies as they can be linked to a child's likelihood of using mental health services.

Relationship

The relationship level is also known as the intrapersonal level. This level examines the close relationships that may increase the risk of MCCAs using mental health services. An individual's closest social circle, such as peers, spouse, and family members, can influence their behavior and mental health service usage. For example, parental education and mental health issues are key influence factors at this level. A child's and parent's relationships and social networks may impact health behaviors.

Community

The community level of the SEM is focused on the networks and partnerships among organizations, corporations, and institutions that make up the community. Community relationships are often necessary in determining community members'

behavior and motivations. These are crucial to understanding the community level, the importance of behavior, and its origins.

The physical, social, and school environment may also influence an individual. Parental military status could affect an individual at the intrapersonal and community levels. Parent military status has been shown to expose family members to a specific military culture that can put them at a greater risk for mental health issues. Those at greater risk may require more mental health treatments or services.

Societal

The final level is the societal factors that help create an environment in which mental health services are either encouraged or impeded. More prominent societal-level factors that influence mental health service usage include gender inequality, policies, and cultural belief systems. Additionally, societal norms, roles, and rules have created gaps or differences in mental health service use for MCCAs.

Other significant societal factors include military health insurance coverage, DoD policies, and congressional policies that help to maintain economic or social inequalities between military-connected families in the United States. In this study, the levels of the SEM model were used to answer the research questions by identifying the role of parental military status and parental education in the use of mental health services among U.S. youth ages 3–17. Each level describes the role of the specific factors and the factor's influences on health behaviors in childhood and adolescence.

Previously, the SEM model has been used to describe how several internal and external factors affect military women's health. Trago and Wilson (2020) used the SEM to understand how individual lives and experiences influence U.S. military women's health and military culture while serving in combat and combat support roles across the DoD. Trago and Wilson (2020) argued that military-connected women are exposed to occupational, physical, and psychosocial factors that affect their health status. Trago and Wilson described the layers in the military SEM in relation to service women. Individual knowledge, genetics, experiences, beliefs, behaviors, and physiology are at the center of the model, and other service-specific factors have been identified in the relationship, community, and public policy. Some of the SEM service-specific factors for military service women included characteristics of military environment, community, congressional funding, health care system, regulations and policies, threat climate, and the military culture where women live and work. Service women interact with each level and their health behaviors, self-perception, and health status. Trago and Wilson (2020) argued that further investigation was warranting into the effects of public policies throughout all layers of the SEM among individual service women. The researchers' study emphasized the need to understand how the military ecological model affects mental health service utilization for MCCAs.

Literature Review Related to Key Variables

Child and Adolescent Mental Health

Chronic mental health issues in adulthood cause high individual and collective physical, social–emotional, and economic burdens. Adults with chronic or severe mental health issues typically present with symptoms in childhood or adolescence and are associated with poor or delayed care in childhood. Targeting mental health treatment and usage in childhood and adolescence can reduce the economic burden, loss of productivity, and poor well-being due to mental health issues in adulthood.

Barican et al. (2022) completed a meta-analysis to identify new mental health information, treatment options, and mental health progress for youth in high-earning countries worldwide. Barican et al. (2022) estimated that nearly 10% of children will have mental disorders requiring treatment at any time. However, fewer than 45% of affected children and adolescents in high-earning countries are receiving services for these conditions. The researchers found that anxiety, attention deficit, and hyperactivity are the most reported mental health illnesses, followed by oppositional defiant disorder, substance use, conduct disorder, and depressive disorder. Barican et al. (2022) argued that childhood and adolescent mental health is a growing concern for parents, policymakers, and public health leaders worldwide but did not advocate for specific approaches or treatment programs.

Moore et al. (2017) have argued that some children and adolescents are at a greater risk for mental health issues than others. Children and adolescents in military-

connected families are naturally exposed to service-specific factors such as military family lifestyle, frequent relocations, family separation, and loss of friends and peers. The extent to which military culture may affect mental health and childhood developmental phases remains unknown.

Cramm et al. (2019) examined mental health status and mental health symptom onset among children growing up in military-connected families across developmental phases through a meta-analysis in the United States. The research team found that studies examining the impact of frequent relocations resulted in mixed findings related to mental health. Studies examining mental health risks of parental combat injury and posttraumatic stress disorder (PTSD) suggested a negative effect on a child's mental health and well-being.

Additionally, Hisle-Gorman et al. (2015) studied the impact of parental deployment and combat injury on military-connected children's mental health, injuries, and maltreatment post-deployment. The researchers found that children of previously deployed and currently deployed military members had higher mental health-related visits, injuries, acute illnesses, and mental health diagnoses. Hisle-Gorman et al. (2015) argued that mental health risks for military-connected children exist regardless of deployment and long after the military-connected parent returns from a deployment.

Lucier-Greer et al. (2016) also stated that military culture negatively affects mental and physical well-being in childhood. Additionally, the authors indicated that military-connect youth have higher parental absences because of frequent deployments or

temporary training (Lucier-Greer et al., 2016). More increased absences result in poorer well-being and lower social engagement for adolescents, and these findings were further differentiated based on gender and age of the child. Furthermore, Lucier-Greer et al. (2016) found that pay grade and rank are associated with differences in attendance at family activities and military-sponsored events. The study also found that pay grade and rank were the only factors linked to poorer well-being and poorer social engagement. Youth of higher ranking and higher paying individuals demonstrated more complex family issues. Studies continue to argue about the role of parental military status. However, more research is needed to identify the role of the specific parental duty status and education on the use of mental health services for military-connected youth in America.

Parental Education Attainment

Previously, parental education improved offspring productivity, quality of life, and well-being (Assari, 2018). Additionally, children and adolescents who were offspring of higher-educated parents have demonstrated better resiliency and success(Assari, 2018). However, the military has a varied range of educational attainment and rank. Higher-ranked individuals are incorrectly associated with higher education, more income, and access to more services. According to Thomas et al. (2017), in a Canadian study, higher household education attainment was linked to more positive mental health for youth ages 12–19. The authors examined the relationship between household educational attainment and self-reported mental health issues for youth ages 12–19. The research

team found that adolescents, ages 12–14, are less likely to experience positive mental health in households where neither parent completed high school. However, Thomas et al. (2017) found no significant association between positive adolescent mental health and higher household educational attainment for students ages 12–14.

Additionally, further analyses showed that after adjusting for household income, single-parent status, and household size, participants had a lower risk of experiencing positive mental health in households where parents attempted but did not complete postsecondary education compared to households where parents completed postsecondary education. This association was strongest in female adolescents ages 12 to 14. The study findings suggest that additional factors, such as parental career, perceived parental work–life balance, and perceived parental stress, may have contributed to Canadian adolescents diminished positive mental health and not household educational attainment.

Assari (2018) also argued that parental and generational educational attainment can influence upward academic mobility and have positive effects. Assari (2018) compared the impact of parental education on upward mobility for Black and White students in America. Assari (2018) used the National Survey of American Life to compare 4,361 participants' gender, race/ethnicity, age, highest parental educational attainment, and respondents' educational attainment. Higher parental education was associated with higher educational attainment in offspring; however, the upward mobility was significantly lower in the Black participants (Assari, 2018). Furthermore, White

women demonstrated much higher upward mobility rates than Black and White men, yet Black women had the greatest disadvantage when compared to their counterparts (Assari, 2018).

Additionally, Assari and Caldwell (2019) studied the effect of higher parental education on academic success in American students. The team used the 2013–2014 Population Assessment of Tobacco and Health data. Previously, minorities diminished returns theory had been used to suggest racial and ethnic differences in the influence of parental education for White and non-White individuals. Assari and Caldwell (2019) argued that little was known about the role of socioeconomic status and parental and generational education attainment on minorities' diminished returns theory, school performance, and grade point average. Further, little is known about the role of parental education in the uptake of mental health services for children and adolescents. The research team found that higher parental education was associated with a high grade-point average (GPA) in youth (Assari & Caldwell, 2019). However, minorities displayed smaller positive effects of parental educational attainment on students' GPAs. Specifically, race and ethnicity significantly influenced parental educational attainment on students' GPA. The study also indicated minor positive effects of parental and transgenerational educational attainment on GPAs for Black, Hispanic, and non-Hispanic White students.

Assari et al. (2020) also found that parental education attainment was linked to differences in social, emotional, and behavioral problems in American youth. Assari et al.

(2020) compared the effects of parental education on adolescents' social, emotional, and behavioral issues across racial groups; Black and Hispanic youth were more likely to internalize and externalize symptoms than their White peers were. Additionally, Assari et al. found racial and ethnic inequalities in drug abuse, conduct disorders, aggressive behaviors, anxiety, and depression. Mental health issues in childhood are a gateway to health issues in adulthood. The issues a child or adolescent faces in childhood persist long after they subside. Assari et al. found that higher parental education was associated with fewer symptoms of social, emotional, and behavioral problems in students. While parental education attainment had been widely known to help protect children and adolescents from specific issues, little is known about how military-connected children benefit from parental education.

Higher-ranking military individuals have been assumed more educated, yet recent studies indicate that lower-ranking force members have the highest rates of higher and continuum education. Furthermore, all military members are afforded the same services and quality of care regardless of pay grade or rank. Little is known about the role of parental education in relation to military-connected children using mental health services in America.

Parental Military Status

The DoD is comprised of five different service branches. Each service performs a unique function and is home to its culture, rules, regulations, and expectations. There are more than 2.3 million total force service members. Approximately 60% of U.S. service

members have family responsibilities, which result in more than two million children and adolescents having been exposed to at least one parental maritime or wartime deployment within the last 10 years. Thus, servicemembers, parents, and legislators are concerned about children's and adolescents' health and well-being.

Access to care and support for military-connected families is a top national security policy priority in the United States due to the unique experiences and risks of military-connected youth. Overall, military-connected individuals and family members report higher resiliency rates yet are at increased risk for mental health issues, trauma, and loss of stability due to frequent relocations. However, it remains unknown if the increased resiliency is due to differences in the usage of mental health services for military-connected youth.

According to Siegal et al. (2020), deployment rates and lengths affect military-connected youth's mental, emotional, and physical health. The researchers found that each deployment phase is associated with specific symptoms and issues; for example, stages one and six are associated with higher mental health issues (Siegal et al., 2020). Stages one and two are the most difficult for children and adolescents, and participants reported the most severe symptoms (Siegal et al., 2020). There is little evidence of the effects of repeated exposures. However, Moore et al. (2017) argued a significant need for emotional, behavioral, and mental health services and treatment for military-connected youth. Because of the complexity of military culture, further investigations are needed to identify social determinants of mental health service use for MCCAs in the United States.

Parental military status could alter the uptake and usage of mental health services for children and adolescents in the United States.

Parental Mental Health Status

Previous studies had defined *parental mental health status* as the mental health status of an adolescent youth's mother and father. Parental mental health status has been linked to offspring's higher risk of mental health issues (Albanese et al., 2019). Albanese et al. (2019) found that offspring are 40% more likely to experience a mental health issue if their parent presented one at any point. However, parents and guardians who have experienced or been diagnosed with a mental health issue are more likely to seek and use mental health services for their children and adolescents (Albanese et al., 2019).

Health Insurance Coverage

Adequate health insurance was defined as continued health services. Proper health insurance has reduced the member's economic burden or out-of-pocket cost. However, poor or no health insurance coverage has been linked to fewer office visits and poorer health. Studies have shown that reduced health insurance coverage restricted and limited patient service usage. A survey in Gabon, Africa, showed that adequate or current health insurance coverage increased health visits in insured pregnant women compared to their counterparts (Yaya, 2020).

Additionally, the study showed that women and infants with health insurance reported fewer issues during pregnancy and post-partum and better health due to decreased delays in care because of poor or expensive care (Yaya, 2020). It was

necessary to identify the status and coverage of health insurance for participants as it could have influenced the usage of mental health services by children and adolescents.

Income

Families of low income were associated with low education, low help-seeking behaviors, and a higher risk of mental and physical health issues. Poor or no health insurance meant that patients and families were covering the cost of visits. Therefore, families' income significantly influenced the use of services due to expense. In the study completed in Gabon, Africa, nearly 63% of non-insured mothers reported living below the country's poverty level (Yaya, 2020). They reported that they could not afford to attend regular hospital visits due to the infeasible cost of the visit (Yaya, 2020). Low income resulted in lower utilization of mental health services by children and adolescents.

Race

Race was utilized as a control variable; race has shown difference in health service use and access by race/ethnicity and gender in previous studies. According to Manuel (2017), non-Hispanic whites had the highest physical and mental health service usage. At the same time, there had been a progression in service usage among non-White Hispanic respondents from 2012 to 2014. Asian men had the most significant increase in office visits since 2006. Black women and men fared the worst concerning changes in healthcare access and the usage of all mental and physical services (Manuel, 2017).

Family Structure

Family structure has been previously known to affect the usage of health services. Family structure, which included two parents, has been linked to higher academic success, a better quality of life, more income, and higher outcomes in their offspring (Ghadour et al., 2019). Previously, family structure had been listed as a factor that could influence the usage of mental health services and the prognosis of mental health issues in children and adolescents in the United States. (Ghadour et al., 2019). Ghadour et al. (2019) also found that households with two parents reported higher confidence in attending medical and mental health appointments and higher support.

Definitions

The independent variables were parental military status and parental educational attainment. The military status of the adults in the household was substituted for parental military status. The highest education of the adult in a child's household variable was substituted as parental educational attainment. The mental health status of the mother, and the mental health status of the father, was known as parental mental health status.

Race/ethnicity was defined by the five variables: race and ethnicity distribution of the child population - 4 categories, race, and ethnicity distribution of the child population - 7 categories, and race and ethnicity distribution of the child population with Asian data variables from the NSCH data set.

The usage of mental health services for children and adolescents aged 3-17 was the dependent variable and was defined by the received mental health care, ages 3-17

years, and difficulty receiving mental health care, ages 3-17 years, from the NSCH data set. Parental mental health, health insurance status, race/ethnicity, household income, and family structure are the control variables for the study. Additionally, the mother's and father's mental health status was known by proxy as parental mental health.

Assumptions

I assumed that the responders accurately and honestly answered all questions, followed the directions, consented to the survey, and only utilized one child for the survey. The original data collectors assumed that the survey responses included in this data set were responses conducted during 2019 and 2020. It was assumed that there were no duplicated responses.

Additionally, it was assumed that the respondents did not utilize adult-aged dependents requiring continued and specialized care in adulthood to respond to the survey. It was assumed that the respondents answered the survey truthfully and that the participant groups were stable. Lastly, it was assumed that all respondents and their households were American citizens, spoke English or Spanish, and understood the survey questions. Assumptions allow researchers to conclude correctly, and the data follow the rules of the analysis plan.

Scope and Delimitation

The scope of this study was to assess whether parental military status and educational attainment affect the utilization of mental health services among children/adolescents aged 3-17 in the U.S. after controlling for parental mental health

status, health insurance status, race/ethnicity, household income, and family structure. The secondary data was gathered in the continental United States in 2019-2020 by the Data Resource Center for Children & Adolescent Health. The parameters included youth and adolescents aged 3-17 in the U.S. who utilized mental health services during 2019-2020.

Other topics worth researching were not studied due to relevancy and time. The study was delimited to continental United States households that spoke or understood written English or Spanish; U.S. territories were excluded from the assessment because it was not feasible. The study also was limited to households who reported at least one child present in the house on the Census Bureau survey in the previous year or households where children were likely to be present. Additionally, the survey was restricted to January 1, 2019 – December 31, 2020. Surveys completed before 2016 would not be comparable to these surveys. Surveys conducted after 2016 were collected, processed differently, and data analysis changed significantly.

Limitations

Some of the limitations of this study included using secondary data gathered for a study unrelated to this project. The data set did not include many variables that could assist in identifying the role parental military status and educational attainment played in the usage of mental health services in youth aged 3-17 in the U.S. Additionally, the project ethically considered if the original organization properly utilized data from

minors, obtained parental consent, and discussed literacy and rights to autonomy. Furthermore, the study only allowed households to utilize one child in the questionnaire.

Households experienced the effects of military status, and highest educational attainment of the adults in the child's household, and the usage of mental health services in other children within the household that were not represented in the responses. Additionally, most data collected during the 2019 and 2020 NSCH was only comparable to those received since 2016, as they were conducted with the same design and administration. Surveys conducted before 2016 were incomparable as the survey methods and research design significantly changed. As a result, trend analysis or comparison could not be completed with current data and data before 2016.

Significance

Reduced mental health treatment rates further decreased youth success and lifelong outcomes. As minors transition into young adulthood, barriers to mental health services could create negative coping skills, low productivity, and poor well-being. Additionally, studies have suggested that children and adolescents of military families experienced higher rates of stress, trauma, and mental health issues (Moore et al., 2017). Public health leaders needed to identify if active duty, reserve, or guard military-connected youth utilize mental health services more than their counterparts.

Active-duty children and adolescents of military families experienced events specific to culture and military operations and were often underrepresented in research. It was previously known that military-connected youth demonstrated higher rates of

resiliency. Many believed the higher rates of resiliency protected the military-connected youth from experiencing severe symptoms of mental health issues, yet that has been disproven. It was essential to identify if military-connected youth and adolescents seek and utilize mental health services at lower rates than their civilian counterparts. There was little to no research on the influence of the specific military status, and highest educational attainment of the adults in the child's household, and the usage of mental health services for children and adolescents ages 3-17 in the United States prior to this study.

Upon completing the study, the researchers successfully examined the roles of parental education and parental military status. I hope to identify if parental military status influenced the usage of mental health services for American youth. The information garnered from this study could assist parents and military leaders advocate for better use of mental health services. Additionally, the data can be utilized to develop better school-based mental health programs and identify at-risk populations.

Summary

It was not known if the military status of the adults within the child's household provides protection or was a barrier to mental health care usage. It was necessary to understand the role of parental military status and educational attainment and how it affected the use of mental health services for children and adolescents aged 3-17 in the U.S. It was unknown if the specific military duty status of the adults in the households

was linked to more difficulty receiving or utilizing mental health services for youth and adolescents in the U.S.

Although previous studies stated that military-connected youth are at a greater risk for mental health symptoms and illnesses due to military culture and military dynamics, few sources discussed the effect of the specific parental military status and the usage of mental health services for their children or adolescents. The data gained from this study could aid public health leaders and legislators in advocating for better care for youth, improved school-based intervention, funding for intensive treatment options, and developing comprehensive family resources.

Section 2: Research Design and Data Collection

Methods and Material

Research Design and Rational

This study was conducted to assess the relationship between parental military status, educational attainment, and the use of mental health services among children and adolescents ages 3–17 in the United States, after controlling for parental mental health status, health insurance status, race/ethnicity, household income, and family structure. The study was a correlational research design in an attempt to identify and evaluate the associations between naturally occurring variables in a data set, such as parental education, parental military status, and received mental health services. The correlational design uses statistical data analysis to determine the degree of significance of the relationship variables (Sareem, 2019). It is best to use correlational studies to recognize trends and patterns in data, but they do not prove cause and effect. In this study, I was not interested in understanding cause and effect, but rather the variables' data, relationships, and distributions.

Methodology

Population

The NSCH is a national survey that provides comprehensive data on multiple aspects of children's health and well-being. The data includes information on several topics such as physical and mental health, access to quality health care, and demographics regarding the child's family, neighborhood, school, culture, and social

settings. The NSCH was designed to produce national and state-level data on the physical and emotional health of youths ages 0–17 in the United States.

The current version of the NSCH was introduced in 2016 and integrated content from the U.S. Census Bureau and two previous surveys on child and adolescent health. The survey was offered to households with a child in all 50 states and the District of Columbia. The survey is available online or through the mail, and parents select only one child per household as the subject of the questionnaire. The target population is youth ages 3–17 in the United States. Combined data from two years of the surveys allow researchers to obtain both national- and state-level estimates from more than 71,000 participants (Child and Adolescent Health Measurement Initiative [CAHMI], 2022). The 2019–2020 Combined Survey of Children's Health was completed by the Health Resources and Services Administration, the U.S. Department of Health and Human Services, the Data Resource Center for Child and Adolescent Health, and the Centers for Disease Control and Prevention. For the 2020 NSCH, the average weighted overall response rate was 42.4%, and 240,000 surveys were completed nationally by parents. The survey data are adjusted and weighted to reflect each state's demographic composition of non-institutionalized minors. All survey responses are cleaned for analysis, including removing duplicated responses, editing data quality, creating standardized and derivative variables, and imputing missing values.

The inclusion requirements for the study include youth between ages 3 and 17 (CAHMI, 2022). All participants lived in the United States, and the survey is only offered

in English or Spanish. Therefore, the sample is restricted to youth whose parents can speak or write in English or Spanish and who completed the survey. Participants who may have met the inclusion criteria were excluded due to the inability to complete the survey in the two languages offered. Furthermore, the originators excluded and removed all incomplete surveys.

Sampling Procedures

The 2019–2020 NSCH was administered online and by mail. Upon submission, the parent is asked to fill out an initial screener that includes information about the age and sex of all children in the household. Additionally, the survey requests information for the four youngest children, including race/ethnicity, household language, housing status, and the presence of special, health, behavioral, and emotional care needs. After submission of the screener, randomly selected households from across the United States are mailed instructions to access the online survey. Participants who responded to the mail-in survey receive a paper version of the screening questionnaire. After two reminders, households without access to the online survey are mailed a paper screening questionnaire.

To increase sampling effectiveness, administrative data from the U.S. Census Bureau is used to determine addresses more likely to be households with minors. The administrators oversample the group to accommodate low response rates for 0–5-year-olds with special healthcare needs. Additionally, the administrators oversample areas

with a high prevalence of minorities to accommodate previous low response rates among this population.

Each state's ZIP codes were stratified into three strata: 1, 2a, and 2b. Each stratum was defined by the master identification finder child flag codebook provided by the Census Bureau. Households flagged as having at least one child under 18 are assigned to Stratum 1. All other households that did not have explicit links to children were assigned to Stratum 2a. Households with the likelihood of having a child were assigned Stratum 2b. The needed response rates were estimated separately for each state, and the division threshold was based on limiting the response rates of Stratum 2a and maintaining 95% coverage of households with children in Strata 1 and 2b.

The original data set developers used the Centers for Disease Control and Prevention sample size calculator to determine the required sample size. The administrators developed a power level, effect size, and alpha level based on the Vital and Health Statistics guidebook, which estimates a confidence interval of .01, a power level of .80, and an alpha level of one. The administrators received more than 217,000 respondents in 2020; more than 100,000 surveys were selected in 2019. Approximately 145,300, or 61% of the responses, were selected from Stratum 1, and 94,700, or 39%, were selected from Stratum 2b. The administrators randomly selected 29,733 surveys from 2019 and 42,777 in 2020 to include in the NSCH. The required sample size for this study was 385 participants, but I used the entire NSCH data set. I used an effect size of

.05, power of .8, significance of .01, margin of error of .05, for a sample size of at least 385.

Figure 2

Sample Size Calculation

$$n = \frac{z^2 \times \hat{p}(1-\hat{p})}{\varepsilon^2}$$

$$n = \frac{1.96^2 \times 0.5(1-0.5)}{0.05^2} = 384.16$$

Instrumentation and Operationalization of Constructs

Data manipulation and analyses were performed using IBM SPSS Version 28. IBM SPSS 28 was developed in 2021 and is a powerful statistical software program for social science research. The program offers an easy interface, features, and tools for quick organization and easy data extraction. The program helps ensure high validity and reliability for accurate data manipulation. IBM SPSS is one of the most reliable statistics software programs, and more than 1,000 peer-reviewed studies have been conducted using it since its creation. SPSS has been used by scientists, public health leaders, health researchers, and government and nongovernment agencies. IBM SPSS is one of the most readily available programs for usage by statisticians and students and allows users to process data and download tables and reports.

Operationalization for each Variable

Based on the two research questions, the study included one dependent variable (usage of mental health service among children and adolescents ages 3–17 within the last

12 months), two independent variables (parental military status and parental education), and five control variables or controlling variables (parental mental health status, health insurance status, household income, race, and family structure).

Usage of Mental Services

The dependent variable (usage of mental health services among children and adolescents ages 3–17 within the last 12 months) was measured from two captured data points or variables. The main one was the variable children who were not able to receive needed mental health services during the past 12 months, ages 3–17 years, which was a binary categorical nominal variable, coded as 1 = did not receive needed mental health care, and 2 = received needed mental health care (or did not need mental health care). I used the variable difficulty obtaining mental health services, which was ordinal categorical, with four levels (1 = received or needed mental health care and did not have difficulty getting it, 2 = received or needed mental health care but it was somewhat difficult to get it, 3 = received or needed mental health care, but it was very difficult to get it, and 4 = it was not possible to obtain care). Usage of mental health services among children and adolescents ages 3–17 within the last 12 months was binary categorical coded 1 if they entered 2 received needed mental health care (or did not need mental health care) in the first variable or 1 = received or needed mental health care and did not have difficulty getting it, 2 = received or needed mental health care, but it was somewhat difficult to get it, 3 = received or needed mental health care, but it was very difficult to get it, in the second, and 0 otherwise.

Parental Military Status

The military status of the adults in the household was used as a proxy for parental military status. This variable was categorical, and ordinal scaled of four levels (1 = at least one caregiver is on active duty, 2 = at least one caregiver was on active duty in the past, but is not on active duty now, 3 = at least one caregiver was only on active duty during Reserve or National Guard training, and 4 = neither caregiver has ever served in the military).

Parental Education

The highest education of the adult in a child's household variable was also categorical, ordinal, and divided into four levels (1 = less than high school, 2 = high school or GED, 3 = some college or technical school, 4 = college degree or higher) and was used to define parental education.

Parental Mental Health Status

The controlling variables (control variables) were captured as parental mental health status, health insurance status, race/ethnicity, household income, and family structure. Parental mental health status was captured in terms of mental health status of the child's mother and mental health status of the child's father—each of which was ordinal categorical coded as 1 == excellent or very good, 2 = good, and 3 = fair or poor. Both variables can affect the help-seeking behaviors of offspring; parents who have received or currently are receiving mental health treatment are more likely to obtain mental health services for their children (Planey et al., 2019).

Health Insurance Coverage

Health insurance status was assured through the variable adequacy of insurance coverage for mental/behavioral health care, ages 3–17 who are insured and received mental health care, which was an ordinal categorical variable defined as 1 = always, 2 = usually, and 3 = sometimes or never. Historically, health insurance coverage is a significant contributing factor and barrier to help-seeking behaviors for mental and physical health issues (Planey et al., 2019).

Race and Ethnicity

Race and ethnicity distribution of the child population was qualitative, measured as ordinal, and divided into five subgroups (1 = Hispanic, 2 = White non-Hispanic, 3 = Black non-Hispanic, 4 = Asian non-Hispanic, and 5 = other/multiracial, non-Hispanic).

Income

The income level of the child's household was categorical and interval, measurable with four levels (1 = 0–99% federal poverty level [FPL], 2 = 100–199% FPL, 3 = 200–399% FPL, and 4 = 400% FPL or greater).

Family Structure

The family structure of a child's household was categorical, ordinal, and measured in five levels (1 = two parents currently married, 2 = two parents not currently married, 3 = single parent (mother or father), 4 = grandparent household, and 5 = other family type.

Statistical Analysis

The study utilized descriptive and regression analyses to determine if there was an association between parental military status and utilization of mental health services among children and adolescents ages 3-17 in the United States after controlling for parental mental health status, health insurance status, race/ethnicity, household income, and family structure additionally if there was an association between parental educational attainment and utilization of mental health services among children and adolescents ages 3-17 after controlling for household adult's military status, parental mental health status, health insurance status, race, household income, and family structure.

Data manipulation and analyses were performed using SPSS Version 28 (IBM, 2021). Apart from general descriptive statistics applying the complete probability survey design structure (survey weights, cluster, and strata as needed) and weighted percent, multivariable logistic regression models were applied to study the relationships involved in both research questions, linking the dependent variable to the independent variable will controlling for the Control variables.

Before fitting the final model, Pearson's chi-square test (or Fisher's exact test, as appropriate for small cell counts) and binary logistic regression was used to evaluate bivariate relationships between the dependent variable and each independent variable and Control variables. Only control variables with statistically significant relationships with the dependent variable were fitted in the final model.

The multivariable logistic regression analysis was utilized to understand the strength of the relationship between multiple independent, control, and dependent variables. The multiple regression model can predict or explain changes between the groups. The received mental health services within the last 12 months variable was the outcome, and the military status and highest educational attainment of the adults in the child's household were the predictors in each model.

Apart from general descriptive statistics applying the complete probability survey design structure (survey weights, cluster, and strata as needed) generating national population estimates and weighted percent, multivariable logistic regression models were applied to study the relationships involved in both research questions, linking the dependent variable to the independent variable controlled for the Control variables.

Threats to Validity

Several internal and external threats to validity were associated with utilizing secondary data. Some internal threats included misuse of information, and the survey was restricted to only one child in the household. There was no way to confirm that the parents only utilized one child to answer all household questions. There was also a risk that the parent-reported information they experienced before 2019 or 2020 was inaccurate for the current data set. However, to address the internal validity threat, the survey administrators completed a random and probable selection of respondents in all five iterations of the survey methodology.

Additionally, because there were several variables in the data set, there was a possibility for multiple variable interferences. Variables within the dataset could have influenced, clouded, and skewed the validity of the findings. Moreover, the administrators completed this survey annually and did not adjust the questionnaire, survey, sampling methods, or content since 2016. Furthermore, the study can be replicated, so other researchers can reconduct the same study using different subjects from various demographics within the U.S., reducing the risk of external validity issues.

Ethics

Some of the study's ethical concerns include using secondary data for an unrelated study. It must be considered if the original organization properly gained minors' data and obtained the correct parental consent. The study did not verify if the child utilized in the study was reported in another household. One duplicated observation causes no issue during analysis. However, multiple duplicates can create errors in the data set and influence improper data analyses.

Furthermore, the survey only allowed households to utilize one child in the questionnaire; households could have experienced the effects of military status, and highest educational attainment of the adults in the child's household, and usage of mental health services in other children within the household that were not represented in the responses. Lastly, the administrators purposely oversampled special groups; some may question if the data is skewed.

Summary

The data and codebook received from the administrators were a sound, peer-reviewed, and thoroughly accurate document. Data and collection were consistent with accepted practices in the field of study. There was no way to identify the identity of the participants. The proposed analysis plan was the most effective method to determine the relationship between parental military status and usage of mental health services for youth ages 3-17 in the United States.

Section 3: Presentation of the Results and Findings

Introduction

This study was conducted to assess the relationship between parental military status, parental education, and the use of mental health services among children and adolescents ages 3–17 in the United States, after controlling for parental mental health status, health insurance status, race/ethnicity, household income, and family structure. In this section, I discuss and report the results of the statistical analyses. The study was guided by the following research questions and hypotheses:

RQ1: Is there an association between parental military status and use of mental health services among children and adolescents ages 3–17 in the United States, after controlling for parental mental health status, health insurance status, race/ethnicity, household income, and family structure?

$H_0$1: There is no association between parental military status and use of mental health services among children and adolescents ages 3–17 in the United States, after controlling for parental mental health status, health insurance status, race/ethnicity, household income, and family structure.

H_A1: There is an association between parental military status and use of mental health services among children and adolescents ages 3–17 in the United States, after controlling for parental mental health status, health insurance status, race/ethnicity, household income, and family structure.

RQ2: Is there an association between parental educational attainment and use of mental health services among children and adolescents ages 3–17 in the United States, after controlling for household adults' military status, parental mental health status, health insurance status, household income, and family structure?

$H_0$2: There is no association between parental educational attainment and use of mental health services among children and adolescents ages 3–17 in the United States, after controlling for household adult's military status, parental mental health status, health insurance status, household income, and family structure.

H_A2: There is an association between parental educational attainment and use of mental health services among children and adolescents ages 3–17 in the United States, after controlling for household adults' military status, parental mental health status, health insurance status, household income, and family structure.

Accessing the Data Set for Secondary Analysis

After obtaining approval from the Walden University International Review Board (IRB, 02-13-23-1019820), I extracted data from the Data Research Center for Children and Adolescent Health database. The NSCH was designed to produce national and state-level data on the physical and emotional health of youths ages 0–17 in the United States. The 2019 and 2020 NSCH was offered to households with a child present in all 50 states and the District of Columbia. The target population for this study was youths ages 3–17 in the United States. The combined data from the 2 years of the surveys allow researchers

to obtain both national and state-level estimates from more than 200,000 participants (CAMHI, 2022).

A total of 240,000 surveys were completed nationally by parents, and the average weighted response rate was 42.4%. The survey data were adjusted and weighted to reflect each state's demographic composition of non-institutionalized minors. All survey responses were cleaned for analysis, including removing duplicated responses, editing data quality, creating standardized and derivative variables, and imputing missing values. The original data creators weighed data.

Initial descriptive statistics were conducted on the data to produce tables of the sample and its respondents. Data points that were incomplete were deemed invalid and removed from the data set. The data set was reduced to 72,210 participants, which significantly exceeds the recommended sample size of 385. The descriptive analysis of the independent, dependent, and control variables aligns with the general population of the United States. The case processing summary revealed there were 72,210 cases in the data set and a substantial amount of missing data. I only included cases in which the respondent completed the questionnaire for each variable in the study. Cases were also deemed invalid if participants were ages 0–2. This reduced the valid cases or sample size down to 61,331 data points

All variables' levels of measurement were nominal or ordinal, and frequency tables in which the sample sizes and percentages of the response associated with all response categories were also generated. Table 1 presents the descriptive statistics for the

independent, dependent, and control variables. The study was focused on valid responses, defined as data points where the parent answered each question for all studied variables. Approximately 98.8% of cases included children who received needed mental health services or did not need these services. In addition, only 1.2% did not receive needed mental health services in the past 12 months, representing 737 cases.

Table 1

Descriptive Results

Factors		N	Valid %
Parent education	Less than high school	1,854	2.6
	High school or GED	9,469	13.1
	Some college or technical school	16,518	22.9
	College degree or higher	44,369	61.4
Parental military status	At least one caregiver is on active duty	960	1.4
	At least one caregiver was on active duty in the past, but is not on active duty now	5,991	8.5
	At least one caregiver was on active duty during Reserve or National Guard training	1,154	1.6
	Neither caregiver has ever served in the military	62,124	88.5
Mother's mental health status	Excellent or very good	46,238	72.5
	Good	13,849	21.7
	Fair or poor	3,696	5.8
Father's mental health status	Excellent or very good	43,954	78.2
	Good	10,015	17.8
	Fair or poor	2,259	3.1
Health insurance coverage	Always	12,169	56.0
	Usually	5,765	26.5
	Sometimes or never	3,780	17.4
Race/ethnicity	Hispanic	9,317	12.9
	White, non-Hispanic	48,657	67.4
	Black, non-Hispanic	4,817	6.7
	Asian, non-Hispanic	3,774	5.2
	Other/multiracial, non-Hispanic	5,645	7.8
Household income	0-99% federal poverty level	8,644	12.0
	100-199% federal poverty level	12,087	16.7
	200-399% federal poverty level	22,336	30.9
	400% federal poverty level or greater	29,143	40.4
Family structure	Two parents, currently married	49,384	70.1
	Two parents, not married	4,378	6.2
	Single parent (mother or father)	13,911	19.7
	Grandparent household	2,120	3.0
	Other family type	679	1.0

Note. All percentages (%) reported in this table are weighted percentages. Data are from NSCH, 2019–2020 combined. Sample size = 72,210.

The dependent variable used in this study was computed based on a combination of the last two measures and defined as usage of mental health services among children and adolescents ages 3–17 within the past 12 months. The variable labeled difficulties obtaining mental health care in the past 12 months for youth 3–17, was the crosstabulation of two variables (children not able to receive needed mental health services during the past 12 months and difficulties obtaining mental health care during the past 12 months, age 3-17 years). This new measure consisted of a binary categorical variable. It was coded 1 if they, 1, received needed mental health care or did not need mental health care; and/or, 2a, received or needed mental health care and did not have difficulty getting it; 2b, received or needed mental health care but it was somewhat difficult to receive; or, 2c, received or needed mental health care, but it was very difficult to receive. In all other cases, this dependent variable was coded 0.

Calculating this new dependent variable required an accounting of missing data associated with these two variables' measures of mental health services. The initial measure incorporated values of 95 and 99 as indicative of missing data, with the second measure using values of 95, 96, and 99 to indicate missing data. Within the data, 8,804 children had received or did not need mental health services. Among the remaining 676, receiving mental health care was not possible in only 118 of these cases. This produced a new dependent variable that included only 118 individuals in this second group. As Table shows, almost all cases were associated with the usage of mental health services (99.8%),

with a total of only 118 cases (0.2%) not being associated with using mental health services.

The independent variables consisted of parental military status and parental education. The military status of the adults in the household was used as a proxy for parental military status. Neither caregiver was in the military for most of the sample (88.5%). Followed by one or more active duty in the past (8.5%), one or more Reserve or National Guard (1.6%), and one or more active duty (1.4%). Regarding highest level of education completed, most of the sample reported having a college degree or higher (61.4%), followed by having some college education or an associate degree (22.9%), having a high school diploma (13.1%), and having less than a high school diploma (2.6%).

The control variables comprised parental mental health status, health insurance status, race/ethnicity, household income, and family structure. As Table 1 shows, excellent or very good for mother's mental health was selected most often (72.5%), followed by good (21.7%), and fair or poor (5.8%). Similarly, mental health status of the father was most commonly excellent or very good (78.2%), followed by good (17.8%), and finally by fair or poor (4.0%). Insurance coverage for mental/behavioral health care was always in 56.0% of cases, usually in 26.5% of cases, and sometimes or never in 17.4% of cases. Race/ethnicity, was White, non-Hispanic in 67.4% of cases; Hispanic in 12.9% of cases; other/multiracial, non-Hispanic in 7.8% of cases; Black, non-Hispanic in 6.7% of cases; and Asian, non-Hispanic in 5.2% of cases. Regarding income, responses

of 400% FPL or greater were most common (40.4%), followed by 200–399% FPL (40.4%), 100–199% FPL (16.7%), and 0–99% FPL (12.0%). Finally, two-married parents was the most common family structure (70.1%), followed by single-parent families (19.7%), two unmarried parents (6.2%), grandparent households (3.0%), and other family types (1.0%).

Results

The assumptions of the logistic regression model were met. The assumptions included the independence of errors, linearity in the logic for continuous variables, absence of multicollinearity, and lack of strongly influential outliers. Logistic regression does not require a linear relationship between the dependent and independent variables. The errors did not need to be normally distributed, and homoscedasticity was not required. Finally, the dependent variable cannot be measured on an interval or ratio scale.

Before conducting the full logistic regression model, Pearson's chi-square of Fisher's exact tests was conducted to examine the bivariate association between the independent, control, and dependent variables. Fisher's exact test is preferred in cases where cell sizes are low. Pearson's chi-square and Fisher's exact test results did not indicate any significant differences. These initial analyses also included a series of simple logistic regression analyses. Only control variables that were found to be significantly associated with the dependent variable in one of these bivariate analyses were included as predictors in the final model. As a result, race/ethnicity was not included in the final model.

The initial bivariate analyses focused on the independent variables included in this analysis—using mental health services as the dependent variable in all cases. The independent variables examined the military status of adults in the household and the highest level of education completed, with the control measures consisting of the mother's and father's mental health status, health insurance status, race/ethnicity, poverty level, and family structure.

Regarding the control variables, a significant association was found between the mental health status of the mother and the usage of mental health services. As shown in Table 2, the usage of mental health services was highest in cases where mothers had excellent or very good mental health (99.9%), lower in cases where it was good (99.7%), and lowest in cases where this was fair or poor (99.0%). A significant association was also indicated between father's mental health status and usage of mental health services, concerning Pearson's chi-square = 39.893, *p*-value < .001. The usage of mental health services was found to be least likely in cases where the mother's or father's mental health status was indicated to be fair or poor (99.4%), with the usage of mental health services more likely in cases where this was rated as good (99.8%), and most likely in cases where this was rated to be excellent or very good (99.9%).

Statistical significance was indicated in parental education and the usage of mental health services, parental mental health, insurance coverage, income, and family structure. These analyses examine the relationship between the usage of mental health services. The independent and control variables present were analyzed differently than

the bivariate analyses presented earlier in this section because one category associated with these independent and control measures was selected as the comparison category in every case in the simple logistic regression analyses. The selected category was omitted from the analysis, and the results were calculated for all remaining categories of response as compared with this comparison category.

Parental education attainment was indicated to be significant overall but not concerning any of the individual dummy categories. The mother's mental health status was significant in the same direction as was found earlier in the bivariate analysis, with a response of "good" associated with a reduction in the usage of mental health services by 1.38%.

With a response of "fair or poor" health insurance coverage associated with a reduction in the usage of mental health services by 2.55% as compared with "excellent or very good." Among fathers mental health status, a response of "good" was associated with a reduction in the usage of mental health services by .92% as compared with "excellent or very good," and a response of "fair or poor" was associated with a reduction in the usage of mental health services by 1.80% as compared with "excellent or very good."

The following statistically significant results pertained to insurance coverage, income, and family structure. Insurance coverage of "always," a response of "usually" was associated with a reduction in the usage of mental health services by 1.25%, while a response of "sometimes or never" was associated with a reduction in the usage of mental

health services by 2.52%. Regarding income, here, compared with an income of 0-99% FPL, having an income greater than 400% FPL was associated with an increase in expected usage of mental health services by 1.36%.

Finally, significance was indicated for all included categories of family structure, with all included categories having usage of mental health services reduced as compared two married parents. These included the categories of two unmarried parents (-.70%), a single-parent family, mother, or father (-.67%), a grandparent household (-.99%), another family type (-1.32%).

Research Question 1

Research Question 1: Is there an association between parental military status and the utilization of mental health services among children and adolescents aged 3-17 in the U.S., after controlling for parental mental health status, health insurance status, race/ethnicity, household income, and family structure? I conducted a bivariate logistic regression analysis to assess the association and odds ratio between parental military status and the usage of mental health services.

The results from multivariable logistics regression (controlling for the mother's and father's health status, health insurance status, race/ethnicity, poverty level, and family structure) showed that, when compared to those who have at least one caregiver currently in active duty, there was a 14% reduced odds of using mental health services among children with at least one caregiver who was on active duty in the past but is not on active duty now ((OR=0.86, 95% CI [0.10, 7.09], p = 0.89), but a 71% and 24%

increased odds, respectively, among those with at least one caregiver who was only on active duty during Reserve or National Guard training (OR=1.71, 95% CI [0.10, 28.47], p = 0.71) and those with neither caregiver who has ever served in the military (OR=1.24, 95% CI [0.17, 9.26], p = 0.89).

However, these results were not statistically significant. Thus, the null hypothesis was not rejected, with the claim that there is no statistically significant association between parental military status and utilization of mental health services among children and adolescents aged 3-17 in the U.S. after controlling for parental mental health status, health insurance status, race/ethnicity, household income, and family structure."

Table 2

Use of Mental Health Services by U.S. Children and Adolescents (Ages 3–17)

Factors		Crude OR (95% CI)	Crude p-value	Adjusted OR (95% CI)	Adjusted p-value
Parental military status[a]	At least one caregiver is on active duty.	–	–	–	–
	At least one caregiver was on active duty in the past but is not on active duty now	0.52 (0.07, 3.95)	0.53	0.86 (0.10, .7.09)	0.89
	At least one caregiver was only on active duty during Reserve or National Guard	1.34 (0.07, 3.95)	0.84	1.71 (0.10, 28.48)	0.71
	Neither caregiver has ever served in the military	0.73 (0.10, 5.26)	0.76	1.24 (0.17, 9.26)	1.84
Mother's mental health status[b]	Excellent or very good	–	–	–	–
	Good	0.25 (0.16, 0.40)	< .001	0.47 (0.23, 0.94)	0.03
	Fair or poor	0.08 (0.05, 0.13)	< .001	0.23 (0.10, 0.49)	< .001
Father's mental health status[c]	Excellent or very good	–	–	–	–
	Good	0.40 (0.24, 0.68)	< .001	1.02 (0.52, 2.01)	0.96
	Fair or poor	0.167 (0.09, 0.32)	< .001	0.71 (0.31, 1.63)	0.42
Health insurance coverage[d]	Always	–	–	–	–
	Usually	0.29 (0.15, 0.56)	< .001	0.42 (0.18, 1.0)	0.051
	Sometimes or never	0.08 (0.05, 0.15)	< .001	0.11 (0.05, 0.22)	< .001
Race/ ethnicity[e]	Hispanic	–	–	–	–
	White, non-Hispanic	0.83 (0.47, 1.50)	0.55	–	–
	Black, non-Hispanic	0.98 (0.39, 2.47)	0.97	–	–
	Asian, non-Hispanic	2.68 (0.61, 11.90)	0.19	–	–
	Other/Multi-racial, non-Hispanic	0.56 (0.26, 1.18)	0.13	–	–
Household income[f]	1=0-99% federal poverty level	–	–	–	–
	100-199% federal poverty level	1.30 (0.74, 2.30)	0.36	1.03 (0.34, 3.15)	0.96
	200-399% federal poverty level	1.23 (0.75, 2.02)	0.41	0.87 (0.32, 2.33)	0.78
	400% federal poverty level or greater	3.77 (2.08, 6.81)	< .001	2.57 (0.84, 7.82)	1.0
Family structure[g]	Two parents, currently married	–	–	–	–
	Two parents, not currently married	0.50 (0.255, 0.975)	0.04	0.57 (0.27, 1.20)	0.14
	Single parent (mother or father	0.514 (0.337, 0.785)	< .01	0.76 (.43, 2.47)	0.53
	Grandparent household	0.37 (0.17, 0.81)	< .05	3547954.03 (0.00, -)	1.0
	Other family type	0.27 (0.08, 0.86)	0.03	2991850.83 (0.000, -)	1.0

Note. Nagelkerke R-Square=0.10a, 0.66b, 0.26c, 0.81d, 0.04e,0.17f, 0.10g. Data from NSCH, 2019-2020 combined. Sample size = 61,331.

Research Question 2

Research Question 2: Is there an association between parental educational attainment and utilization of mental health services among children and adolescents aged 3-17 after controlling for household adults' military status, parental mental health status, health insurance status, household income, and family structure?

Research Question 2: Before the complete logistic regression analysis, separate binary logistic regression analyses were conducted on the data, treating the independent variables included in the study as categorical. The assumptions of the model were homoscedasticity was not required, variance can occur from the independent variable, and there was no assumption of a linear relationship. We can say 16.2% of the change in the criterion variable can be accounted to the predictor variables in the model due to the Nagelkerke R-squared. The omnibus model stated the total accuracy of the model 99.6%.

A significant association was found with parental educational attainment; the first category's OR=.77, 95% CI [0.00, -], and *p*-value=.002, the second category OR=0.00, CI [0.00, -], *p-value*=.995, and the third category OR=0.00, CI [0.00, -], *p-value*=.995. The usage of mental health services was highest among those with less than a high school diploma (99.9%) and a high school diploma (99.9%), lower among those with a college degree or higher (99.8%), and lowest among those with some college or an associate degree (99.7%).

Following this, the relationship between health insurance coverage and the usage of mental health services was examined. The relationship between these two measures

was found to achieve statistical significance, the Pearson's chi-square (Pearson's $\chi^2(2)$ = (116.38, $p < .001$ (Exact, two-sided)), as well as Fisher's exact test (Fisher Exact Test $p < .001$). As shown in Table 3, the usage of mental health services was least likely in cases where health insurance coverage was sometimes or never adequate (98.6%), more likely in cases where this was usually adequate (99.6%), and with the usage of mental health services being most common in cases where health insurance coverage was found to be always adequate (99.9%).

Additionally, the usage of mental health services was highest in cases where both parents were currently married (99.9%), lower in cases of two parents who were not currently married or a single parent (mother or father) (99.7%), lower in grandparent households (99.6%), and lowest in other family types (99.5%).

Significance was found with income, Pearson's $\chi^2(3) = 26.67$, $p < .001$ (Exact, two-sided), Fisher Exact Test $p < .001$. As in Table 13, usage of mental health services was highest among those with 400% FPL or greater (99.9%), lower among those with 100-199% FPL (99.8%), and lowest among those with 0-99% or 300-399% FPL (99.7% in both cases). Lastly, the association between the usage of mental health services and race did not achieve statistical significance, Pearson's $\chi^2(4) = 6.10$, $p = .19$ (Exact, two-sided), Fisher Exact Test $p = .20$

Finally, Table 3 presents the results of the multiple logistic regression analysis conducted on these data, which was developed based on the results of the bivariate analyses reported previously. Only those measures found to achieve statistical

significance in the bivariate analyses were included in this regression model. This analysis indicated statistical significance in parental mental health status, mental & behavioral healthcare insurance coverage, and income.

With respect to these current results, significance was indicated with parental mental health status and insurance coverage. A similar pattern was found as previously in the father's mental health status, with a response of "good" associated with a reduction in the usage of mental health services by .77% as compared with "excellent or very good" and with a response of "fair or poor" associated with a reduction in the usage of mental health services by 1.48% as compared with "excellent or very good."

Health insurance coverage was also significant, with "sometimes or never" associated with a reduction in the usage of mental health services by 2.25% as compared with "always." Finally, income was significant, but only regarding the overall effect of this measure. Overall, Table 3 showed that parental education attainment was associated with a higher likelihood of utilizing mental health services for youth aged 3-17 at a statistically significant level for the (OR=.77, 95% CI [0.00, -], *P-value*=.002. As a result, the researcher failed to reject the null hypothesis.

Table 3

Likelihood That U.S. Adolescents and Children (ages 3–17) Used Mental Health Services

Factors		Crude		Adjusted	
		OR (95% CI)	*p*-value	*OR* (95% CI)	*p*-value
Parental education	Less than high school	–	–	–	–
	High school or GED	0.73 (0.09, 5.91)	0.77	0.77 (0.000, -)	1.0
	Some college or technical school	0.20 (0.01, 1.47)	0.11	0.000 (0.000, -)	1.0
	College degree or higher	0.35 (0.05, 2.55)	0.30	0.000 (0.000, -)	1.0
Parental military status	At least one caregiver is on active duty	–	–	–	–
	At least one caregiver was on active duty in the past, but is not on active duty now	0.52 (0.07, 3.95)	0.53	0.860 (0.10, 7.09)	0.89
	At least one caregiver was only on active duty during Reserve or National Guard training	1.34 (0.084, 21.49)	0.84	1.71 (0.10, 28.47)	0.71
	Neither caregiver has ever served in the military	0.73 (0.10, 5.26)	0.76	1.24 (0.165, 9.26)	0.84
Mother's mental health status	Excellent or very good	–	–	–	–
	Good	0.25 (0.16, 0.40)	< .001	0.47 (0.23, 0.94)	0.03
	Fair or poor	0.08 (0.05, 0.13)	< .001	0.23 (0.10, 0.49)	< .001
Father's mental health status	Excellent or very good	–	–	–	–
	Good	0.40 (0.24, 0.68)	< .001	1.02 (0.52, 2.01)	0.96
	Fair or poor	0.167 (0.09, 0.32)	< .001	0.71 (0.31, 1.63)	0.42
Health insurance coverage	Always	–	–	–	–
	Usually	0.29 (0.15, 0.56)	< .001	0.42 (0.18, 1.0)	0.051
	Sometimes or never	0.08 (0.05, 0.15)	< .001	0.11 (0.05, 0.22)	< .001
Race/ethnicity	Hispanic	–	–	–	–
	White, non-Hispanic	0.83 (0.47, 1.50)	0.54	–	–
	Black, non-Hispanic	0.98 (0.39, 2.47)	0.97	–	–
	Asian, non-Hispanic	2.68 (0.61, 11.90)	0.19	–	–
	Other/Multi-racial, non-Hispanic	0.56 (0.26, 1.18)	0.13	–	–

Table continues

Factors		Crude		Adjusted	
		OR (95% CI)	*p*-value	*OR* (95% CI)	*p*-value
Household income	1=0-99% federal poverty level	–	–	–	–
	100-199% federal poverty level	1.30 (0.74, 2.30)	0.36	1.03 (0.34, 3.15)	0.96
	200-399% federal poverty level	1.23 (0.75, 2.02)	0.41	0.87 (0.32, 2.33)	0.78
	400% federal poverty level or greater	3.77 (2.08, 6.81)	< .001	2.57 (0.84, 7.82)	1.0
Family structure	Two parents, currently married	–	–	–	–
	Two parents, not currently married	0.50 (0.255, 0.975)	0.42	0.57 (0.27, 1.20)	0.14
	Single parent (mother or father	0.514 (0.337, 0.785)	.001	0.63 (0.343, 1.52)	0.53
	Grandparent household	0.37 (0.17, 0.81)	0.01	3547954.03 (0.00, -)	1.0
	Other family type	0.27 (0.08, 0.86)	0.03	2991850.83 (0.000, -)	1.0

Note. OR=odds ratio; CI=confidence interval (OR are indicated for those who reported the usage of mental health services compared to those who did not), (Adjusted OR included all variables in the model that was found significant in the bivariate analysis) All percentages (%) reported in this table are weighted percentages. Nagelkerke R-Square = 0.16 based on parental educational attainment while controlling for parental military status, parental mental health status, and some socioeconomic variables [The 2019-2020 National Survey of Children's Health (NSCH), Sample Size=14394]

Summary

In this chapter, I used a data obtained from the 2019-2020 Combined National Survey of Children's Health to investigate the association between parental military status, parental educational attainment, and usage of mental health services for youth aged 3-17. I also presented descriptive statistics, which included frequency distribution analyses, percentages, and table illustrations to characterize the sample. In addition, I

presented the results of the multiple logistic analysis and bivariate analysis. I reported any associations, odds ratios, confidence intervals, and statistical significance.

In conclusion, I failed to reject the null hypothesis for research question one. There was not a significant association between parental military connection, parental education attainment, and the usage of mental health services in youth aged 3-17 in the U.S. However, I did reject the null hypothesis for research question two.

There was a positive association between higher parental education attainment and usage of mental health services for youth aged 3-17 in the U.S. after controlling for health insurance status, income, household status, and parental mental health status. The usage of mental health services was highest among those with less than a high school diploma and a high school diploma, lower among those with a college degree or higher, and lowest among those with some college or an associate degree.

While parental military status was not indicated as an influential factor, very little was known about the role of parental military status. In Section 4 will interpret and compare the current literature findings to my study's results. I will describe the strengths and limitations of the study, recommendations for future research, and the implications for positive social.

Section 4: Application to Professional Practice and Implication for Social Change

Introduction

This research project was conducted to examine the association between parental military status, parental education, and usage of mental health services in children and adolescents ages 3–17 in the United States. The prevalence of mental health issues in childhood and adolescence has continued to increase. Some of the causes of mental health problems are familial and generational trauma and childhood adversity experiences such as poverty and homelessness. There are significant differences in the usage of mental health services among children and adolescents worldwide. Military-connected youth are often overlooked due to many protective factors, such as parental education, income, higher rates of resiliency, and health insurance coverage. Discrepancies in mental health care usage can cause delays in treatment and can affect disease prognosis and well-being into adulthood. Military-connected youth need improved access to mental health services and prompt and regular use of mental health care.

Many factors in the past have influenced the usage of mental health services in youth and adolescents in the United States. Some factors include gender, age, race, geographical location, and status of health issues. Parental military status has not been listed as a factor that could increase or decrease the likelihood of using mental health services for children and adolescents in the United States. This research was conducted to study the role of parental military status and education attainment in the usage of mental

health services for military-connected youth. The interpretations of the findings, social implications, and recommendations are presented in this section.

In this study, I did not find a significant relationship between parental military status, parental education, and usage of mental health services for youth ages 3–17 in the United States. No significant association was found with compared race/ethnicity. However, significance was found with income; usage of mental health services was highest among those with 400% FPL or greater, lower among those with 100–199% FPL, and lowest among those with 0–99% or 300–399% FPL. Additionally, usage of mental health services was highest among those with less than a high school diploma or a high school diploma, lower among those with a college degree or higher, and lowest among those with some college or an associate degree.

A significant association was found between parental mental health status and usage of mental health services. The usage of mental health services was highest in cases where mothers had excellent or very good mental health, lower in cases where this was good, and lowest in cases where this was fair or poor. Usage of mental health services was highest in cases where both parents were currently married, lower in cases of two parents who were not currently married or a single parent (mother or father), lower in grandparent households, and lowest in other family types. Usage of mental health services was least likely in cases where health insurance coverage was sometimes or never adequate, more likely in cases where this was usually adequate, and usage of

mental health services was most common or most likely in cases where health insurance coverage was found to be always adequate.

Interpretation of the Findings

The extent to which a military connection may affect mental health across developmental phases among MCCAs remains unclear. The study's results neither support nor conflict existing research discussing physical health issues for military-connected youth in America. According to Cramm et al. (2019), military-connected children are naturally exposed to unique elements of the military family lifestyle, which is associated with an increased risk. Additionally, Burgin et al. (2022) suggested that the impact of war on military-connected children is excessive and well-documented with multiple implications. Some of these issues included immediate stress responses, increased risk for specific mental disorders, distress from forced separation from parents, and fear for personal and family safety (Burgin et al., 2022).

In contrast, Sullivan et al. (2021) suggested that military-connected children and military families are faring well. The researchers emphasized the need to evaluate both the stressors military families face and the strengths they develop (Sullivan et al., 2021). Briggs et al. (2020) suggested that military-connected children present a better whole child image. Sullivan (2018) also found that military-connected children understand and demonstrate higher rates of adaptability and flexibility due to a highly mobile lifestyle; military-connected children learn to be flexible and adjust to new people and situations. Military-connected children have been found to demonstrate higher rates of positive

coping strategies (Sullivan, 2018). Sullivan indicated that military-connected children learn positive coping strategies through experiences, deployments, transitions, and relocations not often experienced by their civilian peers; they also develop social awareness skills as they meet many other children from different backgrounds, schools, cultures.

In this study, significance was found with income, parental education, and usage of mental health services. Use of mental health services was highest among those with 400% FPL or greater. Mental health service usage was lower among those within the 100–199% FPL and lowest among those with 0–99% or 300-399% FPL. This outcome aligns with other literature on the topic. According to Cooper and Stewart (2021), children in low-income households have poorer health than children from more affluent backgrounds and score worse on tests of cognitive, social, and behavioral development. There is also clear evidence of a positive effect of income and parental education on important outcomes for children's development, including maternal mental health, parenting, and the home environment.

Additionally, a significant association was found between parental education and usage of mental health services in youth ages 3–17 in the United States. Usage of mental health services was highest among those with less than a high school diploma or a high school diploma, lower among those with a college degree or higher, and lowest among those with some college or an associate degree. Previously, low parental education was a risk factor for low productivity, poor quality of life, and poor physical, emotional, and

mental health (Janiri et al., 2020). Assari et al. (2020) suggested that lower parental education is linked to differences in social, emotional, and behavioral problems in American youth. The researchers found that the offspring of higher-educated individuals were more likely to have better outcomes due to receiving and regularly utilizing mental health services compared to their counterparts (Assari et al., 2020)

A significant association was indicated between parental mental health status and use of mental health services. Usage of mental health services was highest in cases where mothers had excellent or very good mental health, lower in cases where this was good, and lowest in cases where this was fair or poor. Usage of mental health services was found to be least likely in cases where the father's mental health status was indicated to be fair or poor, with the usage of mental health services more likely in cases where this was rated as good and most likely in cases where this was rated to be excellent or very good. Albanese et al. (2019) found that offspring are 40% more likely to experience a mental health issue that requires treatment if their parent has presented a mental health issue at any point in their life. Further, it has been documented that parents and guardians who have experienced or been diagnosed with a mental health issue are more likely to seek and use mental health services for their children and adolescents (Albanese et al., 2019).

Moreover, other studies emphasize the need for good maternal mental health. Maternal depression and anxiety were identified as risk factors for depression and anxiety across all age ranges and developmental stages in childhood and adolescence (Cameron

et al., 2020). Furthermore, Martin et al. (2019) found that children who were presenting for sleep issues and treatment were two times more likely to have a parent who had experienced a mental health issue in the past.

The results of this study further confirmed the need and benefit of married and two-parent households. The usage of mental health services was highest in cases where both parents were currently married, lower in cases of two parents who were not currently married or a single parent (mother or father), lower in grandparent households, and lowest in other family types. The usage of mental health services was highest in cases where both parents were currently married, lower in cases of two parents who were not currently married or a single parent (mother or father), lower in grandparent households, and lowest in other family types.

Behere et al. (2017) defined the association between family structure and hospitalization rates as an indicator of behavior problems in children in the United States. There were significant differences in the family structure and children's in-patient psychiatric hospitalization. They found that family structure adversely affected children's mental well-being and hospitalization rates when the child was in a single-parent, guardian, or grandparent household (Behere et al., 2017). Additionally, living in single-mother and stepfather families is more strongly associated with indicators of higher well-being and regular usage of mental health services (Muzik et al., 2010). Concluding that children and adolescents do better, on average, living with two biological or married parents (Muzik et al., 2010).

The relationship between health insurance coverage and the usage of mental health services in youth ages 3-17 in the United States. was also examined and found to be like other available data. The relationship between these health insurance coverages and mental health service usage was also statistically significant. The usage of mental health services was least likely in cases where health insurance coverage was sometimes or never adequate, more likely in cases where this was usually adequate, and the usage of mental health services was most common or most likely in cases where health insurance coverage was found to be always adequate.

Continued health insurance coverage was associated with increased outpatient, inpatient, and emergency department healthcare utilization for mental and physical health (Farrell & Gottlieb, 2020). Farrell & Gottlieb (2020) stated that health insurance expanded access to health care and could increase care utilization of all types and decrease barriers to medical services. Furthermore, continuous health insurance has been shown to reduce individual responsibility and out-of-pocket costs. However, poor, little or no health insurance coverage has been linked to far less office visits, delayed treatment, poorer health, and poor outcomes.

This study indicated that MCCA did not see differences in the usage of mental health services compared to their civilian counterparts. However, compared to other peer review literature, the findings support forthcoming data stating that MCCAs were underrepresented. Studies continue to indicate that military-connected youth were an understudied high-risk population.

They were experiencing higher rates of mental health issues and more severe symptoms due to parental military connection, and there were significant gaps in the usage of mental health services due to military culture and operations. The outcomes of this study emphasized the need to better understand the role of the social-ecological model in the utilization of mental health services in children and adolescents who have parents serving or who have served.

Social-Ecological Model Application

Urie Bronfenbrenner developed the model to identify systems that promote or hinder human development. The model stated individuals can influence, and be influenced by, people and organizations, communities, available resources and institutions, and social norms and rules. The social-ecological model (SEM) is a theoretical framework widely employed in public health research and practices.

Public health leaders utilize the social-ecological model to understand, identify and target general and specific health behaviors and develop interventions. It places health-related factors, social policies, and environments at the center of the model and hypothesizes how individuals and their relationships produce a mindset that fosters healthy and unhealthy behaviors.

Individual

The first level of the social-ecological model identifies person-specific factors that increase the likelihood of utilizing mental health services or preventing mental illnesses in MCCAs. The layer identifies the individual-specific characteristics and how they

interact with the other layers of the models. These factors were essential when constructing public health policies, as they were linked to the child's likelihood of utilizing mental health services

The results of the study emphasized that additional factors may play a role in the utilization of mental health services for military-connected youth and adolescents. The results suggest that factors may overlap within the model, such as parental military connection causing compounding effects. Additionally, the study identified the need to understand the role of individual factors such as gender and sexual orientation in the role of military-connected youth utilization of services.

This study missed a huge opportunity to incorporate gender and sexual orientation into the study. Previous findings indicated that gender was a key factor in the study. Many factors may disproportionately affect female mental health, compared to men. A study completed by Adams et al (2021), found when compared to males, female veterans were more likely to be younger, unmarried, college graduates, had less combat exposure, but more than twice as likely to have lifetime PTSD, depression, suicidal ideations, and lifetime mental health service use. Additionally, females were also more likely to have low psychological resilience and to have used psychotropic medications within the past year (Adam et al., 2021).

Relationship

The relationship level examines the close relationships between the individual and others, such as an individual's closest social circle, such as peers, spouse, and family

members, which can influence their behavior and mental health service usage. They may increase the risk of MCCAs utilizing mental health. For example, Military families, who receive health insurance through the Department of Defense (DoD), face several barriers.

Previously, DoD-insured families reported lower healthcare access and quality for their children compared to their civilian counterparts (Seshadri et al., 2019). DoD-insured families were also less likely to report accessible or responsive care compared to commercially or publicly insured or uninsured peers. Additionally, military-connected children with complex health or behavioral healthcare needs reported worse healthcare access and quality (Seshadri et al., 2019).

Furthermore, the usage of mental health services was highest among those whose parents reported less than a high school diploma and a high school diploma, lower among those with a college degree or higher, and lowest among those with some college or an associate degree. While parental educational attainment was indicated as statistically significant in affecting the utilization of mental health services, it is now necessary to understand how to leverage parental educational attainment to promote healthy outcomes in military-connected youth.

Community

The community level of the social-ecological focuses on the networks and partnerships between organizations, corporations, and institutions that make up the community or environment. The physical, social, and school environment could also

influence the individual, and understanding relationships were often necessary for determining the members' behavior and motivations.

A military connection extends further than the individual and relationship levels. The study and forthcoming studies continue to emphasize the need to research familial military connections. As the size of the military declines and operations continue to increase rapidly, the connections and gaps between military personnel and their civilian counterparts appear to be growing more distant (Assari, 2019).

Military-connected children have unique needs and experiences when compared with their peers. These experiences often include frequent relocations, prolonged separations due to training, and deployments of family members. Military families continue to be significantly challenged by deployments and unique military stressors.

Although these challenges may seem similar to the experiences of civilian children, they were widely different. For example, many military families lived in remote areas and were further removed from military and civilian healthcare networks. Nearly 50% of military-connected children receive physical, behavioral, and mental health care in the civilian sector. Yet less than 30% of providers believe they were adequately trained to identify military-specific risk factors in youth (Huebner et al., 2019).

Societal

The final level of the model identifies the societal and broader policy factors that help create an environment where mental health services were encouraged or impeded. Some factors that have been known to influence the usage of mental health services

include gender inequality, policies, and cultural belief systems. Societal norms, roles, and rules can create gaps or differences in mental health service utilization for MCCAs. Anand et al. (2020) utilized data from the 2012-2015 TRICARE Standard Survey to examine factors that affect civilian healthcare providers' acceptance of patients covered by the U.S. Department of Defense's TRICARE insurance program and Medicare (Anand et al., 2020). They found that health physicians reported they were less likely to accept new TRICARE patients when compared to new Medicare patients.

Additionally, less than 40% of mental health providers stated they would accept new TRICARE patents for any reason, far less likely than Medicare patients. The most common reasons physicians and mental health providers provide for not accepting TRICARE insurance type were insufficient reimbursement or their specialty not being covered; lack of awareness of TRICARE was also frequently cited, particularly among mental health providers. The findings suggest that successful strategies to increase mental health service utilization may involve increasing provider acceptance of TRICARE insurance (Anand et al., 2020).

Limitations of the Study

Some of the limitations of the study included utilizing secondary data. There were several variables in the dataset that could have been confounding, but their relationships were not studied due to the lack of time and resources. Additionally, the study did not assess the differences in usage of mental health services and age. Studies previously indicate that age and gender affect the utilization of mental health services in youth. For

example, in a study completed by Assari (2020), female students generally had more help-seeking behaviors and higher rates of regular and continued care than their male counterparts (Assari, 2020).

Moreover, many factors have known to disproportionately affect female mental health status and prognosis. A study completed by Adams et al (2021), found female veterans were more likely to have less combat exposure, but more than twice as likely to have lifetime PTSD, depression, suicidal ideations, and lifetime mental health service use. Additionally, females were also more likely to have low psychological resilience, report problems, and to have regularly used psychotropic medications within the past year (Adam et al., 2021).

Furthermore, the original dataset creators only allowed households to utilize one child on the survey. It is highly likely that some households experienced difficulties receiving and utilizing mental health services that were not accurately represented in the selected child. For example, households with more than one child may have selected a child that did not need or experience issues receiving care, but other children and adolescents in the home did. Furthermore, the original creators did not provide selection criteria for parents for the best and most accurate household representation.

Moreover, the study utilized the Census Bureau child indicator code, which provided the original data creators with households where children were likely to be present. The child indicator code does not account for households that relocated or households where a child was not previously present but may now have a child present.

In a study, the Census Bureau reported undercounting young children in several recent Census Bureau national counts.

For example, the undercount of young children varied by race and Hispanic origin. Young children and teenaged youth were more likely to be under-represented than other age groups due to complex living situations such as multigenerational households, households with nonrelatives, or blended family households with both biological and stepchildren (Census Bureau & Jensen, 2022).

There was no way for the original data set creators to ensure accurate responses. For example, they could not distinguish if a parent utilized more than one child's information while completing the study. Lastly, the study does not include data on migrants, refugees, institutionalized, undocumented, and non-Spanish or English speakers/writers. According to the American Psychology Association (APA), more than one million youth, or 16% were undocumented (APA, 2023). Additionally, nearly 250,000 youths were institutionalized, and four hundred thousand were in foster care, which was not represented in this dataset (CJCJ, 2021).

Lastly, the discrepancies between the results found in this final model and the previous bivariate analyses conducted, including that of the simple logistic regression analyses, was due to the multiple logistic regression model, the effects of all included independent and control measures were estimated while holding constant the effects of all other independent and control measures included in the model.

Additionally, this final model would suffer from reduced statistical power as the sample size in the final model was not larger than the sample sizes incorporated in the previous bivariate analyses. In contrast, this final model is larger, incorporating more variables. This multiple logistic regression analysis would produce a lower statistical power, increasing the difficulty of finding significant results in this final model. These two effects would explain why some measures found to achieve statistical significance in the previous analyses become non-significant when examining the results of this final model conducted.

Recommendations

I recommend that researchers who are interested in studying or focusing on military-connected youth complete a study utilizing primary data in the future. The response rate for participants reporting a military connection was low. Furthermore, there were little to no studies examining military-connected youth's unique experiences when deployments duty stations were removed. It is important to examine the impact of military culture, operations, tempo, and unique experiences to better promote well-being in youth and adolescents.

Secondly, I recommend limiting the sample size for future researchers utilizing the National Survey of Children Health (NSCH). I utilized all the data points, and it limited the significance between the variables. Future researchers could randomly select participants from each stratified age group; this ensures the researcher receives an adequate selection.

Additionally, I recommend over-sampling minority, high-risk, and special needs members, similarly to the original data collectors. Additionally, there were several incomplete data points, where some parental figures completed parts of the survey and not others. Therefore, I recommend that future researchers delete all incomplete data points and not utilize them in any of the analyses.

Furthermore, I recommend that in the future, the original creators define military status by service type and duty status. Each service faces unique challenges that may interfere with using mental health services for offspring. For example, servicemembers of the Navy spend considerably more time than any other service component in a deployment status.

Furthermore, Guard and Reserve components may have more access to services and increased continuity of care as they do not change duty stations or deploy as often as active-duty service members. Moreover, they spend more time in the civilian sector and may not adhere to the stigmas and social norms of military culture.

Implications for Professional Practice and Social Change

The results of this study challenge public health leaders to leverage the social-ecological model to develop resources, intervene, and target military-connected youth. Service members and their family members share common experiences and challenges of military culture, including deployment cycles, operation tempo, and frequent relocations. Parental work stress related to military culture has been associated with physical, behavioral, and mental health problems in military school-aged children and adolescents.

Improving the quality of life of servicemembers will significantly affect the lives of their offspring and spouses.

Moreover, many military-connected families live in remote areas with limited or no access to mental health services. Understanding the role of geographical location and the utilization of mental health services is critical for increasing care outcomes for servicemembers' family members. For example, the Department of Defense could provide additional resources to service members stationed in remote locations.

Many military-specific factors could determine the usage and adherence rates of mental health care. Such as, many military-connected children attend civilian schools and staff were often ill-prepared to respond to the effects of military culture, and operations. Children and adolescents spend majority of their portion of their time in an academic or school setting.

Educators and administrator possess a critical role in identifying, targeting, and addressing behavioral and mental health concerns that occur in military-connected students. It is necessary for educators and administrators to be better trained to identify military-connected student's mental health problems. Better identification can result in early intervention and higher adherence to regular and timely mental health utilization.

Furthermore, military childcare and educational programs must develop clear guidelines on mental health referral procedures and resource management. Mental health literacy and understanding in adults who work with or care for children is important. It

can influence the timeliness, usage, and adequacy of support that children in need receive for mental health problems.

Military-connected children often attend Department of Defense–sponsored childcare programs and schools and receive medical care through military treatment facilities. These programs are also vital in targeting, managing, and increasing the usage of mental health services. School/childcare-based mental health programs are critical to increasing the usage of mental health services among MCCAs and improving well-being.

Family-oriented care and educational programs are necessary for military-connected parents to understand the burden of military culture on family members. St. John & Fenning (2019) suggested that parental military status provides protection and social networks that are unique to military culture and active-duty status. More research is required to develop standard definitions and validated measures so gaps in childhood mental health literacy can be better identified across communities who have a role in supporting children with their mental health.

There needs to be increased importance on developing mental health literacy rates among parents and teachers, with a specific focus on knowledge, targeting, and recognition. Although parents and teachers can identify childhood mental health issues, their knowledge and recognition of internalized mental health issues and issues aside from attention-deficient hyperactive disorder (ADHD) is poor and limited. Future studies should target future research, intervention, and training for parents, school administrators,

and teachers and emphasize the need for more targeted research to achieve better outcomes in children & adolescent's mental health (Johnson et al., 2023).

As a result, there are significant misconceptions that military-connected youth are not experiencing mental health issues or are not at risk for mental health issues and do not require care. However, data continues to emphasize how military-connected youth are at a significantly higher risk for mental health issues and require timely and regular mental health care (Moore et al., 2017). Implementing family-oriented education programs target the interpersonal influences that influence mental health services uptake in American youth.

Conclusion

In conclusion, I failed to reject the null hypothesis for research question one. There was not a statistically significant association between parental military connection, parental education attainment, and the usage of mental health services in youth ages 3-17 in the United States. However, the null hypothesis for research question two was rejected.

There was a positive association between higher parental education attainment and usage of mental health services for youth ages 3-17 in the U.S. after controlling for parental military connection, health insurance status, income, household status, and parental mental health status. The usage of mental health services was highest among those with less than a high school diploma and a high school diploma, lower among those with a college degree or higher, and lowest among those with some college or an associate degree

The social-ecological system of military-connected youth is unique and multidimensional and must be thoroughly studied and understood to ensure the physical and mental health of service members and their families. Investigation of the effects of military culture throughout all layers of the social-ecological model on the usage of mental health services for children and adolescents ages 3-17 in the U.S. is necessary to improve outcomes and quality of life.

Children and adolescents are significantly affected by their parents, guardians, and care givers. Understanding the role of parental military culture and parental education on the usage of mental health services in children and adolescents ages 3-17 in the U.S. Although some of the stressors of military life have been associated with higher rates of mental health disorders and increased physical health care use among family members, there are a range of factors and interventions that have been found to promote resilience for mental health issues.

There are several implications for social change, Wooten et al. (2019) states that military-connected youth are experiencing a higher number of emergency room visits for mental health illnesses and issues than their civilian counterparts. Increasing the usage of mental health services in military-connected youth can decrease the overall economic burden on taxpayers and emergency room visits.

The U.S. spends approximately three hundred billion dollars on mental health issues annually, and child or adolescent-related care accounts for a third of the burden. Increasing mental health services for military-connected youth could decrease emergency

room visits and produce better outcomes and prognoses for mental health issues. A study completed by Wooten et al. (2019) showed that increasing usage of behavioral and mental health services usage in youth and children from 2013 – 2015 decreased in emergency department visits.

Policies, stigmas, and operation requirements at the DoD level directed at the parental figure can impact MCCAs at the individual, interpersonal, and community levels influencing the child's total environment and lifestyle. The potential changes in military culture, deployment and relocation cycles, and operations tempo could facilitate healthy behaviors such as physical fitness activity and mental health therapy adherence and increase mental health help-seeking behaviors.

These policies may result in the normalization and de-stigmatization of mental health care for the family members of service members and normalizing support for servicemember's family members seeking care. Utilizing the social-ecological model for MCCAs, an initiative for research on MCCA would provide the opportunity to use these findings to disrupt and enhance factors contributing to the differences in mental health service usage in military-connected youth in the U.S.

References

Adams, R. E., Hu, Y., Figley, C. R., Urosevich, T. G., Hoffman, S. N., Kirchner, H. L., & Dugan, R. J., & Boscarino, J. A. (2021). Risk and protective factors associated with mental health among female military veterans: Results from the veterans' health study. *BMC Women's Health, 21*(1), 1–10. https://doi.org/10.1186/s12905-021-01181-z

Albanese, A. M., Russo, G. R., & Geller, P. A. (2019). The role of parental self-efficacy in parent and child well-being: A systematic review of associated outcomes. *Child: Care, Health, and Development, 45*(3), 333–363. https://doi.org/10.1111/cch.12661

American Psychological Association. (2013). Undocumented teens: What is it like growing up as an undocumented youth in America. Retrieved from: https://www.apa.org/topics/immigration-refugees/undocumented-video

Anand, P., Ben-Shalom, Y., & Schone, E. (2020). Factors associated with the acceptance of new Tricare and Medicare patients by health care providers. *Medical Care Research and Review, 78*(5), 627–637. https://doi.org/10.1177/1077558720942700

Assari, S. (2018). Parental education attainment and educational upward mobility: The role of race and gender. *Behavioral Sciences, 8*(11), 107. https://doi.org/10.3390/bs8110107

Assari, S., Boyce, S., Caldwell, C. H., & Bazargan, M. (2020). Minorities' diminished

returns of parental educational attainment on adolescents' social, emotional, and behavioral problems. *Children, 7*(5), 49. https://doi.org/10.3390/children7050049

Assari, S., & Caldwell, C. H. (2019). Parental educational attainment differentially boosts school performance of American adolescents: Minorities' diminished returns. *Journal of Family & Reproductive Health*, 13(1), 7–13. https://doi.org/10.18502/jfrh.v13i1.1607

Barican, J. L., Yung, D., Schwartz, C., Zheng, Y., Georgiades, K., & Waddell, C. (2022). Prevalence of childhood mental disorders in high-income countries: A systematic review and meta-analysis to inform policymaking. *Evidence-Based Mental Health*, *25*(1), 36–44. https://doi.org/10.1136/ebmental-2021-300277

Battaglia, A. M., Protopopescu, A., Boyd, J. E., Lloyd, C., Jetly, R., O'Connor, C., Hood, H. K., Nazarov, A., Rhind, S. G., Lanius, R. A., & McKinnon, M. C. (2019). The relation between adverse childhood experiences and moral injury in the Canadian Armed Forces. *European Journal of Psychotraumatology*, *10*(1), 1546084. https://doi.org/10.1080/20008198.2018.1546084

Behere, A. P., Basnet, P., & Campbell, P. (2017). Effects of family structure on mental health of children: A preliminary study. *Indian Journal of Psychology Medicine, 39*(4), 457–463. https://doi.org/10.4103/0253-7176.211767

Bürgin, D., Anagnostopoulos, D., Doyl, M., Eliez, S., Fuentes, J., Hebebrand, J., Hillegers, M., Karwautz, A., Kiss, E., Kotsis, K., Pejovic-Milovancevic, M., Raeberg Christensen, A. M., Raynaud, J.-P., Crommen, S., Cetin, F. C.,

Boricevic, V. M., Keho, L., Radobuljac, M. D., Schepker, R., … & Fegert, J. M. (2022). Impact of war and forced displacement on children's mental health—multilevel, needs-oriented, and trauma-informed approaches. *European Child & Adolescent Psychiatry*, *31*(6), 845–853. https://doi.org/10.1007/s00787-022-01974-z

Briggs, E. C., Fairbank, J. A., Tunno, A. M., Lee, R. C., Corry, N. H., Pflieger, J. C., Stander, V. A., & Murphy, R. A. (2020). Military life stressors, family communication and satisfaction: Associations with children's psychosocial outcomes. *Journal of Child & Adolescent Trauma*, *13*(1), 75–87. https://doi.org/10.1007/s40653-019-00259-z

Cameron, E. E., Joyce, K. M., Delaquis, C. P., Reynolds, K., Protudjer, J. L., & Roos, L. E. (2020). Maternal psychological distress & mental health service use during the COVID-19 pandemic. *Journal of Affective Disorders*, *276*, 765–774. https://doi.org/10.1016/j.jad.2020.07.081

Child and Adolescent Health Measurement Initiative. (2022). 2019-2020 National Survey of Children's Health (2 years combined data set). SPSS codebook for data users: Child and family health measures, national performance and outcome measures, and subgroups, Version 1.0. Data Resource Center for Child and Adolescent Health supported by Cooperative Agreement U59MC27866 from the U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. www.childhealthdata.org

Cooper, K., & Stewart, K. (2021). Does household income affect children's outcomes? A systematic review of the evidence. *Child Indicators Research*, *14*(3), 981–1005. https://doi.org/10.1007/s12187-020-09782-0

Cramm, H., McColl, M.A., Aiken, A.B., & Williams, A. (2019). The Mental Health of Military-Connected Children: A Scoping Review. *Journal of Child & Family Studies*, p. 28, 1725–1735. https://doi.org/10.1007/s10826-019-01402-y.

Currie, J., & Goodman, J. (2020). Parental socioeconomic status, child health, and human capital. *The Economics of Education*, pp. 239-248. https://doi.org/10.1016/b978-0-08-044894-7.01268-9

Farrell, C.M & Gottlieb, A. (2020). The Effect of Health Insurance on Health Care Utilization in the Justice-Involved Population: United States, 2014-2016. *American Journal of Public Health*, 110(S1): S78-S84. https://doi.org/10.2105/ajph.2019.305399

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. Behavior Research Methods, 39, 175-191. https://doi.org/10.3758/bf03193146

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149-1160. https://doi.org/10.3758%2Fbrm.41.4.1149

Ginsburg, K. (2018) Supporting Military Families. Center for Parent & Teen Communication. https://parentandteen.com/supporting-military-families/.

Hess, S. A., Schultz, J. M., & Kraus, K. L. (2008). Chapter 3: Bronfenbrenner's ecological model. *Lenses: Applying lifespan development theories in counseling*, 52-82.

Hisle-Gorman, E., Harrington, D., Nylund, C. M., Tercyak, K. P., Anthony, B. J., & Gorman, G. H. (2015). Impact of Parents' wartime military deployment and Injury on young children's Safety and mental health. *Journal of the American Academy of Child & Adolescent Psychiatry*, 54(4), 294–301. https://doi.org/10.1016%2Fj.jaac.2014.12.017

Huebner, C. R., Kimball-Eayrs, C. A., Burnett, M. W., Cunningham, B. K., Faux, B. M., Foster, C. W., & The Committee on Psychosocial Aspects of Child and Family Health. (2019). Health and mental health needs of children in US military families. *Pediatrics*, *143*(1), 1428. https://doi.org/10.1542/9781610020862-part05-families_a

IBM Corporation. (2021). What's new in IBM SPSS Statistic 28. Retrieved from: https://www.ibm.com/downloads/cas/DKA95AXM.

Ingram, D.D., Malec, D.C., Makuc, D.M., Kruszon-Moran, D., Gindi, R.M., Albert, M., Beresovsky, V., Hamiliton, B.E., Holmes, J., Schiller, J., Sengupta, M. (2018). National Center for Health Statistics Guidelines Analysis of Trends: Data Evaluations and Methods Research. *Vital and Health Statistics*, 4(179), 1-71.

Retrieved from: Vital and Health Statistics, Series 2, Number 178, February 2018 (cdc.gov)

Janiri, D., Doucet, G. E., Pompili, M., Sani, G., Luna, B., Brent, D. A., Frangou, S. (2020). *The Lancet Psychiatry*, *7*(4), 317-326. https://doi.org/10.1016%2Fs2215-0366%2820%2930049-3

Jensen, E. (2022). Census Bureau expands focus on improving data for young children. U.S. Census Bureau. https://www.census.gov/library/stories/2022/03/despite-efforts-census-undercount-of-young-children-persists.html

Johnson, C. L., Gross, M. A., Jorm, A. F., & Hart, L. M. (2023). Mental Health Literacy for Supporting Children: A Systematic Review of Teacher and Parent/Carer Knowledge and Recognition of Mental Health Problems in Childhood. *Clinical Child and Family Psychology Review*, *26*(2), 569-591. https://doi.org/10.1007/s10567-023-00426-7

Juwariah, T., Suhariadi, F., Soedirham, O., Priyanto, A., Setiyorini, E., Siskaningrum, A., & Fernandes, A. D. C. (2022). Childhood adversities and mental health problems: a systematic review. *Journal of Public Health Research*, *11*(3), https://doi.org/10.1177/22799036221106613

Lucier-Greer, M., Arnold, A. L., Grimsley, R. N., Ford, J. L., Bryant, C., & Mancini, J. A. (2016). Parental military service and adolescent well-being: Mental health, social connections and coping among youth in the USA. *Child & Family Social Work*, 21(4), 421–432. https://doi.org/10.1111/cfs.12158

Martin, C. A., Papadopoulos, N., Chellew, T., Rinehart, N. J., Sciberras, E. (2019). Associations between parenting stress, parent mental health and child sleep problems for children with ADHD and ASD: Systematic review. *Research in developmental disabilities*, *93*, 103463. https://doi.org/10.1016/j.ridd.2019.103463

McLafferty, M., Ross, J., Waterhouse-Bradley, B., & Armour, C. (2019). Childhood adversities and psychopathology among military veterans in the US: the mediating role of social networks. *Journal of Anxiety Disorders*, *65*, 47-55. https://doi.org/10.1016%2Fj.janxdis.2019.05.001

Manuel, J. (2017). Racial/ethnic and gender disparities in health care use and access. *Health Services Research*, 53(3), 1407–1429. https://doi.org/10.1111/1475-6773.12705

Moore, K., Fairchild, A., Wooten, N., Ng, Z. J. (2017). Evaluating Behavioral Health Interventions for Military-Connected Youth: A Systematic Review. *Military Medicine*, 182(11). https://doi.org/10.7205%2Fmilmed-d-17-00060

Musick, K & Meier, A. (2010). Are both parents always better than one? Parental conflict and young adult well-being. *Social Science Research*, 39(5):814-30. https://doi.org/10.1016/j.ssresearch.2010.03.002

Planey, A. M., Smith, S. M., Moore, S., & Walker, T. D. (2019). Barriers and facilitators to mental health help-seeking among African American youth and their families: A systematic review study. *Children and Youth Services Review*, 101, 190–200.

https://doi.org/10.1016/j.childyouth.2019.04.001

Seeram, E. (2019). An overview of correlational research. *Radiologic Technology, 91*(2), 176–179. https://doi.org/10.1007/978-981-13-3244-9

Seshadri, R., Strane, D., Matone, M, Ruedisueli, & K., Rubin, D. (2019). Families With TRICARE Report Lower Health Care Quality and Access Compared to Other Insured and Uninsured Families. *Health Affairs,*38(8). https://doi.org/10.1377/hlthaff.2019.00274

Siegel, B. S., Davis, B. E., & Committee on Psychosocial Aspects of Child and Family Health. (2013). Health and mental health needs of children in U.S. military families. *Pediatrics*, *131*(6), e2002-e2015. https://doi.org/10.1542/peds.2013-0940

Sullivan K.S, Hawkins S.A, Gilreath T.D, & Castro C.A. (2021). Mental Health Outcomes Associated with Risk and Resilience among Military-Connected Youth. *Family Process,* 60(2):507–522. https://doi.org/10.1111/famp.12596

Thomson, K. C., Guhn, M., Richardson, C. G., & Shoveller, J. A. (2017). Associations between household educational attainment and adolescent positive mental health in Canada. *SSM-Population Health*, 3, 403 – 410. https://doi.org/10.1016%2Fj.ssmph.2017.04.005

Trago, L & Wilson, C. (2020). A Social-Ecological Model for Military Women. *Women's Health Issue,* 31(S1), 11 - 12. https://doi.org.10.1016/j.whi.2020.12.006

Wooten, N.R., Brittingham, J.A., Sumi, N.S., Pitner. R.O, Moore, K.D. Behavioral

Health Service Use by Military Children During Afghanistan and Iraq Wars. *Journal of Behavioral Health Services Research*, 46(4), 449 - 469. https://doi.org/10.1007/s11414-018-09646-0

World Health Organization (WHO). (2022). Adolescent Mental Health. https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health

Sanogo, N & Yaya, S. (2020). Wealth status, health insurance, and maternal health care utilization in Africa: evidence from Gabon. *BioMed Research International*, 2020, 1-12. https://doi.org/10.1155/2020/4036830