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## Examining the Relationship of Race on Students' Perceptions of Safety and Concealed Campus Carry on a University Campus

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**Examining the Relationship of Race on Students' Perceptions of Safety and Concealed  
Campus Carry on a University Campus**

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Dissertation submitted to the  
College of Applied Human Sciences  
at West Virginia University

in partial fulfillment of the requirements for the degree of  
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Counseling Psychology

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Morgantown, West Virginia  
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Keywords: campus carry, safety, gun beliefs, race, BIPOC

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## Abstract

### Examining the Relationship of Race on Students' Perceptions of Safety and Concealed Campus Carry on a University Campus

Whitney Mascaro

Previous literature suggests that students who feel unsafe in their academic settings experience harmful academic, social, and psychological ramifications. With an alarming increase in school shootings, violence, and media coverage, the political discourse surrounding gun violence and strategies to ensure safety on college campuses has become increasingly polarized. States like Texas, Georgia, and Colorado have passed bills allowing students to carry concealed handguns on university campuses. At the time of this study, the state legislature in West Virginia passed a similar bill known as the Campus Self-Defense Act (Senate Bill 246, 2021). College students who identify as Black, Indigenous, People of Color (BIPOC) face unique stressors compared to their White student peers when it comes to perceptions of safety on campus. At primarily White institutions (PWIs), students identifying as BIPOC have reported feeling less safe, likely contributing to higher attrition rates and other barriers to success (Gummadam et al., 2015). This study aimed to address a gap in the literature by investigating perceptions of safety regarding concealed carry gun policies among undergraduate students identifying as BIPOC. In the present study, 226 undergraduate students ( $M_{\text{age}} = 19.6$ , 85.4% women-identifying, 11.9% BIPOC) reported their gun beliefs and behaviors, fear of on-campus crime victimization, and attitudes toward campus carry. Controlling for gender identity, sexual identity, age, in-state residence, and years of undergraduate education, participants identifying as BIPOC reported feeling significantly less safe with campus carry gun policies, compared to their White counterparts. Future research directions and clinical implications are discussed.

*Keywords:* campus carry, safety, gun beliefs, race, BIPOC

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## CHAPTER I

### Introduction

#### **Examining the Relationship of Race on Students' Perceptions of Safety and Concealed Campus Carry on a University Campus**

Over the past 20 years, there have been high-profile firearm-related homicides on college campuses that have sparked a collective sense of fear in the United States. In 2007, a student at Virginia Tech opened gunfire on campus, killing 32 students and faculty members before dying by suicide. According to the literature, the Virginia Tech shooting and media coverage that followed triggered a dramatic increase in students' and faculties' concerns for safety regarding active shooters (Kaminski et al., 2020). In 2008, shortly after the Virginia Tech shooting, another active shooting incident at Northern Illinois University took five students' lives. On February 14, 2023, three students were killed in an active shooting incident at Michigan State University. Although school shootings are statistically rare, the larger American population has continued to express fear of being a victim of a mass shooting (Schildkraut et al., 2018). In response, policymakers and university administrators have considered various strategies to increase perceptions of safety in public spaces, particularly within academic learning environments. For instance, Texas legalized concealed handgun carry at all higher education institutions in 2015, excluding sporting areas and childcare facilities (State of Texas House Bill 11, 2015). For some, the presence of guns on university campuses provides a sense of self-protection and security; however, research indicates that individuals with minoritized identities, such as women and sexual minorities, may feel a greater sense of unsafety and fear of victimization with more guns on campus (DeBoer, 2018; Patten et al., 2013). Feeling unsafe has been shown to impede students' engagement in learning and motivation to succeed (Maslow, 1943; Soboroff et al.,

2019). As the racial demographics on university campuses continue to diversify, it is critical for research to consider the experiences of college students who identify as BIPOC on their respective campuses and assess barriers to their success, including perceptions of safety. For the purposes of this study, BIPOC will be used to refer to Black, Indigenous, People of Color. This study aims to breach a gap in the literature regarding perceptions of safety and fear of victimization considering increased legislation allowing concealed carry on college campuses, specifically for undergraduate students who identify as BIPOC.

### **Theoretical/Conceptual Background**

#### ***Incidents of College Shootings***

According to the Citizens Crime Commission in New York City, the rates of on-campus gun violence and homicides dramatically increased between the years 2001 and 2016, with a 153% increase in shooting incidents and a 241% increase in total casualties (Cannon, 2016). Regionally, there were significantly more shootings in southern states (64%) compared to other regions in the United States. Historical gun violence incidents are presented in Appendix A, showing 129 deadly campus shootings and 207 casualties between 2001 and 2021 (Cannon, 2016; Patten et al., 2013).

#### ***Sociocultural Background***

The United States has a longstanding history of racism, discrimination, and mistreatment of minority populations. Cultural mistrust is defined as distrust in the historical perpetrators (i.e., White folks) of racial violence, persecution, and maltreatment of folks who identify as BIPOC (Williams et al., 2021). College students who experience cultural mistrust in their higher education institutions indicate higher rates of alienation, disconnection, and maladjustment, which can lead to psychological and academic ramifications (Cody, 2017).

From the Pew Research Center's Racial Attitudes in America Survey, Lee and colleagues (2019) found that 50-75% of participants who identified as BIPOC indicated discriminatory treatment on a time-to-time or regular-occurring basis. The analyses of group-level discrimination prevalence rates revealed the following: Black (73%), Asian (57%), and Hispanic (45%) (Lee et al., 2022). Researchers suggest that individuals with minoritized identities, such as women, BIPOC, and LGBTQ+, may be prone to underreporting perceptions of discrimination or victimization associated with experiences of systemic trauma and cultural mistrust (Crosby, 1984; Lee et al., 2022). Researchers have hypothesized that this pattern of underreporting may be to circumvent the discomfort and difficulty in confronting one's fear and/or actualized experiences of victimization (Crosby, 1984; Lee et al., 2022).

Considering the sociocultural dynamics influencing students with minoritized identities on university campuses is important. White (2018) analyzed data collected from the Center for Collegiate Mental Health (CCMH) that was completed by college students in the United States using the Counseling Center Assessment of Psychological Symptoms (CCAPS) and the Standardized Data Set (SDS) measurements. The study explored the relationships among race/ethnicity, gender, and presenting mental health issues to determine the interaction between college students' demographics and psychosocial stressors (White, 2018). Research findings indicated a significant relationship between gender and African American, Hispanic, and Asian college counseling center clients' presenting mental health concerns and psychosocial stressors (White, 2018). Specifically, students who identify as BIPOC reported higher levels of financial stress, familial distress, and adjustment stressors than their White counterparts.

Recommendations for future research included further examination of various stressors college



students who identify as BIPOC experience on university campuses to illuminate barriers to success (White, 2018).

Using a nationwide dataset, Maffini (2018) researched Asian American and Asian international students' victimization experiences and perceptions of safety on their college campuses. Between the two groups, Asian American students reported higher rates of verbal threats compared to Asian international students. Furthermore, Asian American students felt significantly less safe on campus than the Asian international student group.

In terms of sociocultural privilege in the United States, White individuals and those who present as White passing have historically held the greatest level of power. For example, the presidency of the United States, seen as the highest role of leadership and power in the country, has largely been filled by White men. Also, at a national level, people who identify as White occupy higher-paying jobs and experience less race-based violence than those who identify as BIPOC (U.S. Bureau of Labor Statistics, 2021). Sheppard and colleagues (2018) stated, "White males undoubtedly hold the greatest social and economic power in the United States. [...] To the extent that the power disparity creates feelings of intimidation or threat, guns on campus could serve to exacerbate the threat" (p. 22). University administrators, politicians, and mental health providers at UCCs need to consider the various sociocultural components impacting the diverse needs of their students, especially those who have historically had lesser societal power or have historically experienced oppression/discrimination.

### *Appalachian Culture*

Given that this study occurred in the southeastern, Appalachian region, it is necessary to discuss the historical, sociopolitical context of this unique culture in the United States. Along the Appalachian Mountains, roughly six to ten states comprise the geographical and cultural

Appalachian region. From southern New York to northeastern Mississippi, the Appalachian region represents a long history traced to Indigenous populations. As seen in Figure 1, West Virginia is the only state of the 13 in the region to be entirely encompassed by the Appalachian region (Mercadal, 2021). Appalachia is known for its natural resources and the provision of coal, timber, and abundant wildlife (Mercadal, 2021). Culturally, the region is rich in tradition, art, and folk music (Brown, 2016). On the other hand, Appalachia has struggled with decades of stereotyping and poverty (Brown, 2016). As described in the Salem Press Encyclopedia (2021):

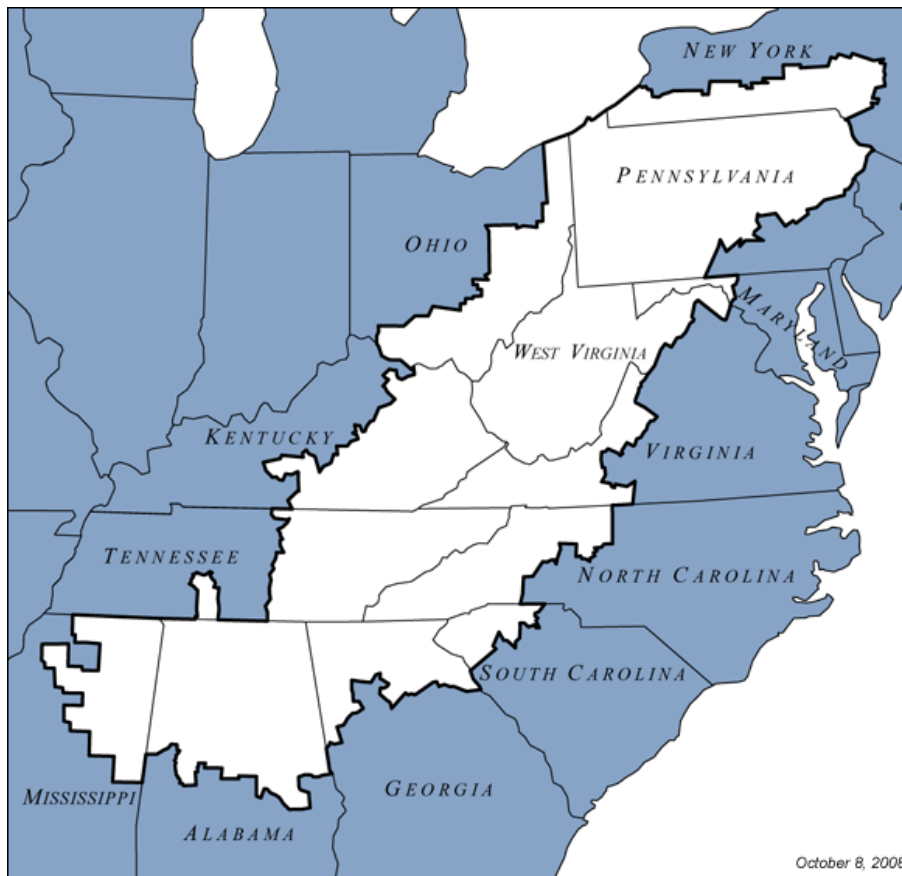
For many in the United States, Appalachia – southern Appalachia, in particular – represents cultural and economic backwardness, poverty, and violence. In popular culture, the region and its inhabitants often bring up images of hillbillies and moonshiners. Most historians and activists today argue that the region has been particularly subject to stereotyping, misunderstanding, and economic and environmental depredation (Mercadal, 2021).

Additionally, the literature points to Appalachian values linked to close family systems, sustainability (i.e., hunting, farming, markets), and a strong gun culture in rural communities (Lynch et al., 2018). This study took place at a public university in West Virginia; therefore, it is essential to consider the cultural implications of this research. It is important to gather data on perceptions of campus carry legislation in West Virginia, especially, as West Virginia is ranked number five for state-level estimates of the average household firearm ownership in the nation (58.5%) (Schell et al., 2020). The Appalachian region also has the highest firearm mortality rate (Lynch et al., 2018). Southern Appalachian states, such as Mississippi, Alabama, Tennessee, Kentucky, and West Virginia, are in the top 15 states with the highest death rates by firearm

(National Center for Health Statistics, 2022). Gun ownership is a unique culture found in West Virginia, and the greater Appalachian region at large.

### Figure 1

*Appalachian Region Map*



### *Racial Trauma*

Racial trauma has been defined as experiences of danger, threats of harm, shame, and/or humiliation because one's race (Comas-Díaz et al., 2019). The literature indicates racial trauma "can be experienced directly or vicariously [...] where exposure to racially traumatic events has been associated with increased anxiety, depression, and posttraumatic stress disorder (PTSD) as well as negative academic outcomes such as lower GPA and/or dropping out of college" (Grier-Reed et al., 2023, p.37). Hargons and colleagues (2022) discussed a three-part framework of

racism involving 1) Institutional (i.e., white-washed curriculum, discriminatory policies), 2) Personally mediated (i.e., microaggressions), and 3) Internalized (stereotypes accepted within one's self that keep students from reaching full potential). Comas-Díaz and colleagues (2019) highlighted the "urgent need for public policy interventions" (p.4) to promote healing processes within BIPOC populations who have experienced racial trauma. The literature on posttraumatic growth underscored the protective factors that may increase success in college student populations who identify as BIPOC, including social support, self-esteem, spirituality, and the feeling that one's racial identity is respected and supported (Grier-Reed et al., 2023). Research conducted by Hargons and colleagues (2022) suggested the following to address the enduring race-based stressors often experienced at PWIs: "involve students in building community and bringing about social change through healing programming, inclusive policies, and culturally congruent mental health services in the community, workplace, and institutional settings" (p.55).

### **Theoretical Context**

The primary theoretical approach to this study was Maslow's hierarchy of needs. Along with innate physiological needs, such as food, water, and shelter, Maslow theorized that humans have a need for physical and psychological safety (Maslow, 1943). From the hierarchy of needs theory (Maslow, 1943), humans require these primary needs to survive. Guns play an important role in perceptions of safety, as some may feel safer with guns, while others may perceive guns as a threat to their physical and psychological safety (Sheppard et al., 2018). Underpinning this study is a theoretical assumption that if undergraduate students' safety needs are not met, learning processes and sense of belongingness can be impeded.

Lorenc and colleagues (2012) developed a theoretical framework linking crime, fear of crime, the environment, and health and well-being. From the framework, fear of crime reportedly

significantly affects mental health and health behaviors, such as limited social interaction and physical activity (Lorenc et al., 2012). Maffini (2018) implemented the fear of crime theoretical framework (Lorenc et al., 2012) to conceptualize Asian American students' and Asian international students' experiences of victimization, feeling unsafe on-campus, and reported mental health concerns. These studies emphasized the importance of identifying culturally responsive prevention and intervention efforts to minimize fear of crime and maximize academic success and students' psychological well-being (Lorenc et al., 2012; Maffini, 2018).

The vulnerability model is another lens for contextualizing this study (Hale, 1996). The vulnerability model was founded as part of the fear of crime theoretical framework and posits that individuals with lesser social status, power, or social resources experience higher levels of fear than groups with more power and resources (Hale, 1996; Soboroff et al., 2019). With this model, it is important to consider individuals' intersecting identities, past experiences, and environmental factors that may influence perceptions of safety and feelings of empowerment. For instance, research has indicated that college students identifying as BIPOC, especially women of color, may experience higher levels of adjustment distress related to intersecting racial and gender identities (Soboroff et al., 2019). Furthermore, feeling vulnerable to crime or victimization negatively impacted students' comfort levels of participating in campus and/or classroom activities. A limitation of this study was the lack of diversity in the sample and low generalizability; however, the proposed vulnerability model of the fear of crime theoretical framework is a unique and critical context to consider implementing in this research study as it relates to students with marginalized identities.

### **Social Justice Concern**

Safety for college students who identify as BIPOC is a basic need and social justice issue. A thorough review of literature failed to reveal existing research regarding perceptions of safety for college students who identify as BIPOC. Findings from this study on campus carry may inform higher education institutions, policymakers, and other community and institutional partners in addressing a potential threat to safety, specifically for college students who identify as BIPOC. Research exploration on these social justice topics is necessary to identify and address areas of concern for minoritized students across the nation.

Along with informing policy change and advocating for minoritized populations at the institutional level, the findings from this study are valuable for mental health providers at university counseling centers (UCCs). Staff psychologists and licensed counselors at UCCs offer multiculturally-sensitive mental health treatment to students with various presenting concerns such as anxiety, depression, and academic distress. The findings from this study provide UCC clinicians with a more comprehensive understanding of the systemic issues influencing their clients with minoritized identities, including undergraduate students identifying as BIPOC. Additionally, mental health professionals would benefit from being aware of the theoretical underpinnings impacting their clients' general functioning (e.g., feeling unsafe on campus may lead to psychological, academic, and social disturbances). As such, this study could illuminate an area of focus for mental health providers to better support their clients with BIPOC identities.

## CHAPTER II

### Literature Review

#### **Perceptions of Campus Carry Policies in University Communities**

Attitudes toward guns is a critical component necessary to better understanding fear and safety on college campuses. To better understand beliefs around gun ownership and, further, campus carry legislation, one must consider cultural beliefs around guns and the geographical location of states that move to pass such legislation. Interestingly, the recent literature suggests that the majority of students, faculty, and staff that have participated in studies have not expressed support for concealed carry on university campuses (Eaves et al., 2016; Patten et al., 2013; Soboroff et al., 2019; Thompson et al., 2013). For instance, a study conducted in Texas found that 62% of undergraduate students disliked or strongly disliked the passing of Texas Senate Bill 11, permitting concealed guns on campus (Eaves et al., 2016). Additionally, the state of Georgia legalized the carry of concealed weapons on university campuses in 2017 and expanded the policy beyond just handguns (knives, knuckles, nun-chucks), despite 58% of students and other community partners expressing their lack of support (McMahon-Howard et al., 2020, State of Georgia House Bill 280, 2017).

#### ***Trends in University Communities***

Literature shows that universities in various areas of the United States hold varying levels of support for guns on campus. Therefore, examining differing gun beliefs and attitudes on campuses in various geographic regions of the United States is important.

One empirical study compared perceptions of guns on campus between two state universities (i.e., Washington and Texas) and found higher gun support among students from Texas than in Washington state (Cavanaugh et al., 2012). These findings align with the political

culture in western and southern regions, such as the state of Washington largely being pro-gun control and Texas primarily supporting wide-sweeping gun rights (Cavanaugh et al., 2012).

In 2013, faculty members from 15 randomly selected public Midwestern institutions distributed questionnaires to their undergraduate students measuring perceptions of safety and attitudes towards handguns on campus (Thompson et al., 2013). Findings showed that 79% of the undergraduate students opposed having concealed carry permitted on their respective university campuses. Despite the majority of students disapproving of possession of weapons on campus, around 15% of undergraduates indicated they would pursue a concealed carry permit if it were legalized in their state or at their institution (an estimated 1500% increase in the number of guns on campus) (Thompson et al., 2013). Demographically, the participants who supported the legalization of concealed carry on their campuses were identified as more likely to have grown up in homes with guns present, were male, classified as politically conservative, and were already gun owners. These empirical findings point to the conservative political culture in the Midwest that may influence students' willingness to pursue a concealed carry permit.

Kruis and colleagues (2020) explored regional differences in students' attitudes toward gun control and campus carry policies, specifically between the Northeast and Midwest areas of the US. For anonymity purposes, the researchers did not disclose which states were included in the study. The authors examined knowledge of gun policies, exposure to guns, and attitudes toward faculty/staff permitted to carry concealed weapons on campus. Results showed that students from the Northeast region reported significantly less exposure to guns and lower levels of support for campus carry policies when compared to their Midwestern counterparts. Further, approximately 52% of undergraduate students indicated being more comfortable with faculty and staff being permitted to carry concealed weapons on campus, than other students being allowed



to carry guns. Perhaps students perceive faculty and staff as more trusted members of the campus community and perceive that faculty and staff would be able to protect them in the case of an active shooter.

A recent study by Hassett and Kim (2021) investigated campus carry attitudes among different groups within a university community in Pennsylvania. The findings revealed an overall lack of support for concealed guns on campus, with undergraduate students being the most supportive of concealed carry followed by graduate students, staff, and lastly, faculty expressing the least amount of support (Hassett & Kim, 2021).

A dissertation study in Virginia was recently published focusing on gun beliefs and perceptions of guns on Liberty University's campus (Koester, 2019). The qualitative study revealed three themes related to beliefs about campus carry gun policies. One of the three themes included education and training, which pointed to the belief that concealed carry holders should be trained and for the larger campus community to receive further education regarding firearms on campus. The second theme was concern for emotional and cognitive maturity, associated with conceal carry holders' level of emotional intelligence, age, and cognitive maturity. Specifically, there was more concern for students having concealed weapons compared to faculty/staff in relation to faculty/staff's perceived higher levels of emotional and cognitive maturity. One student indicated:

If someone was in a situation where there was like an active shooter, people don't make great decisions in crisis moments unless they've been specifically trained to make good decisions in crisis moments and that's why they trained police the way they train them and even with their training, they make mistakes because they're human. It's going to happen. And so I just think taking people and putting a gun on them and thinking they're

going to make a good decision in a time of high crisis probably isn't terribly rational.

(Koester, 2019, p. 176)

Thirdly, participants expressed concern for students' mental health and access to lethal weapons on campus. One student described having passive suicidal ideation and being concerned about making a "rash decision" if he would have had access to a gun (Koester, 2019, p. 143).

The researcher noted,

The issue of mental health is concerning not only for how to help and handle mental health issues across campus, but when a campus allows for concealed carry on campus, it further opens the door for something negative to happen on campus [...] While one of the concerns regarding mental health is the possibility of a mass shooting, another concern held by faculty, staff, and students is the risk of someone with a mental health issue getting ahold of a firearm, whether that be a roommate's or someone they know who carries on campus, and committing suicide. (Koester, 2019, p. 173-174)

While this study provided an in-depth, unique understanding of gun beliefs on college campuses, a specific limitation of this study is the research site; Liberty University is a religious, conservative, private university in the south where faculty/staff and students may have different opinions compared to the greater US population.

Before the ban on concealed weapons was lifted in 2017, an empirical study in Texas estimated the anticipated prevalence of concealed handguns on campus (Bouffard et al., 2012). Researchers found the average number of concealed guns per classroom would increase from no guns in classrooms to between 1.2 to 9.1 guns per classroom once legalized. The reported estimates from Bouffard and colleagues (2012) suggested there would be at least one person in all undergraduate classes that would carry a concealed handgun on campus at the Texas

university site, representing an estimated 1000% increase in armed students on a given day. The actual impact on safety or violent crimes with guns on campus was beyond the scope of the study.

A study conducted in Florida surveyed three distinct participant groups, including non-gun owners, non-protection gun owners (sporting or hunting purposes), and protection gun owners (Sheppard et al., 2018). The results indicated all three groups reported guns on campus would likely harm the academic environment, such as classroom debate, heated conversations with instructors, and would decrease feelings of safety overall (Sheppard et al., 2018).

Among students, staff, and faculty/administrators at a large Georgia university, there were three significant variables that predicted support for campus carry (McMahon-Howard et al., 2020). The three variables were identifying as politically conservative or Republican, holding pro-gun attitudes, and lacking confidence in university police (McMahon-Howard et al., 2020). The strongest predictor of support for campus carry was political ideology and researchers found those who identified as politically conservative or Republican were four times more likely than participants who identified as politically liberal or Democrat to agree with the passage of campus carry laws in their state. As for the variable of lacking confidence in university police, it was noted that if the campus community felt more confident in the university police's ability to protect all groups on campus, the community may feel less of a need to protect themselves with concealed weapons. Lastly, McMahon-Howard and colleagues' study (2020) revealed a connection between exposure to guns and support for campus carry among university students. Therefore, it will be important for the current study to consider West Virginia collegiate students' exposure to guns as it relates to campus carry attitudes.

## **Safety**

Another important variable impacting support for campus carry has been linked to perceived risk of victimization or fear for safety. The literature suggests policy changes allowing handguns on campus may not increase students' feelings of safety on campus, despite that being the stated goal of the policy change (Cavanaugh et al., 2012).

In Georgia, a recent study assessed perceptions of fear and safety at a university before and after the legalization of concealed carry on-campus (McMahon-Howard et al., 2021). The results depicted a significant increase in campus safety concerns, fear of crime on campus, and lack of confidence in police. Among students, staff, and faculty/administrators, college students reported the largest increase in gun carrying behaviors. Lastly, it was recommended that future research examine the impact of campus carry laws in states outside of Georgia to gain more insight into various regions of the country.

A recent study conducted at a rural university in northeast Texas showed significant differences in general perceptions of safety between male and female students (DeBoer, 2018). On subscales measuring campus safety, female students indicated paying more attention to personal safety from crime on campus, feeling less safe on campus after dark, greater worry about being a victim of crime on campus, and campus safety concerns interfering with things they like to do (DeBoer, 2018). These findings are consistent with past literature that suggest fear of crime victimization has a direct impact on avoidance behaviors, including students' withdrawal from social environments or limiting extracurricular activities on campus (Lorenc et al., 2012). Additionally, this study explored the extent to which sexual orientation is related to perception of safety on campus, as well as perceptions of the legalization of campus concealed carry. The analyses revealed students who identified as LGBTQ+ reported experiencing significantly higher rates of worry related to being a victim of a crime on campus compared to

those who identified as straight/heterosexual. No significant difference was found between students who identified as LGBTQIA+ and straight/heterosexual regarding perceptions of campus carry, which may signify the importance of gun culture and exposure/familiarity to guns that the students in Texas may have had (DeBoer, 2018).

Sheppard and colleagues (2018) conducted a study at the University of Florida gauging campus community members' perceptions of safety and attitudes toward guns. Sample items from the questionnaire included: "What is your attitude regarding legislation that would allow people with a concealed gun license to carry concealed (not visible) guns on their college campus? (1 = Strongly opposed; 5 = Strongly support)," "How safe do you currently feel on campus? (1 = Not at all safe; 5 = Very safe)," and "How safe would you feel if other people legally carried a concealed gun on your college campus? (1 = Not at all safe; 5 = Very safe)" (Sheppard et al., 2018, p. 618). Among the 11,804 participants at the University of Florida, 63% reported they would feel significantly less safe if other people legally carried a concealed gun on their campus. The findings indicated the participants who self-identified as gun-owners were the only group who reported feeling safer if they were allowed to carry concealed guns on campus. As stated by Sheppard and colleagues (2018), "These findings suggest that allowing guns on campus would benefit a small group of protection owners but would exact a substantial cost on everyone else" (p. 620). Additionally, gun owners indicated they believed there would be a decrease in gun-related crimes on campus if guns were allowed, while non-gun owners and gun owners who used them for non-protection purposes (recreation, hunting, collection, etc.) believed there would be an increase in gun-related crimes if campus carry were legalized.

Patten and colleagues (2013) examined college women's perceptions of safety and concealed guns on a university campus in the state of California. During the study's data

collection, one of the university's female students was forcefully abducted at gunpoint and sexually assaulted. Researchers compared the college-aged women's feelings of safety and attitudes towards guns before and after the violent incident. Unsurprisingly, the results revealed that female students reported higher levels of unsafety on their campus following the violent incident. An interesting finding from this study was a significant increase in women's support for no concealed guns on campus following the female student's assault.

### **Safety and Success of Students who identify as BIPOC**

Higher education institutions continue to become more demographically diverse (National Center for Education Statistics, 2015). It is important to consider factors that may inhibit the success of students who identify as BIPOC, such as institutional discrimination or policies hindering BIPOC perceptions of safety (Stotzer & Hossellman, 2011). Findings from Stotzer and Hossellman's study (2011) suggested that universities with higher percentages of racial diversity on campus, specifically Black and Latinx students, reported fewer race-based hate crimes. However, data shows that Black and Latinx students have significantly higher attrition rates than White or Asian/Asian American students (National Center for Education Statistics, 2019). There is an increasing need for colleges and universities to prioritize their students' physical and psychological well-being, such as providing financial support, advocacy initiatives, and mental health services (Satiani & Singh, 2021; White, 2018). Moreover, college students who identify as BIPOC may have experienced heightened psychological and racial stressors in addition to the collective trauma experienced by the recent COVID-19 pandemic (Kahn & Money, 2021; Sanchez et al., 2022; Tessler et al., 2020). Therefore, university partners must consider the lasting, BIPOC-specific impacts of the pandemic despite college students in the U.S. beginning to return to "pre-pandemic normal" functioning.

*Asian/Asian American Students*

Asian American and Asian international students are another BIPOC group on university campuses. According to the National Center for Education Statistics (2021), Asian international and Asian American students comprise about 8% of the United States college student population. According to Sue and Sue (2016), the model minority myth (MMM) is a stereotype suggesting Asians are the representative racial minority group for health, harmony, and success across BIPOC populations (Sue & Sue, 2016). National trends have revealed that Asian Americans are more likely to experience race-related victimization, such as verbal harassment or hate crimes, than their peers who identify as White, Black, and Latinx (Maffini, 2018; Lui et al., 2022). The literature has identified Asian Americans as more likely to be victims of verbal threats, racial slurs, or microaggressive misperceptions than Asian international students (Sue et al., 2007). Research involving Asian American and Pacific Islander (AAPI) adolescents identified an association between school-based violence (i.e., xenophobic discrimination, harassment, threats) and suicidal ideation (Rajan et al., 2022). Rajan and colleagues (2022) emphasized the importance of educational systems improving their violence prevention programming and making institutional decisions promoting AAPI students' inclusiveness.

Yi and colleagues (2022) provided greater insight into anti-Asian discrimination related to the COVID-19 pandemic (Yi et al., 2022). Asians and Asian Americans reported a higher rate of vicarious discrimination during the pandemic related to witnessing xenophobic messages through social media and news outlets (Yi et al., 2022). In addition to experiences of vicarious and personal discrimination, Asian and Asian Americans reported feeling hypervigilant about their safety amid the pandemic, which reportedly impacted students' willingness to engage in their campus communities (Gover et al., 2020; Tessler et al., 2020; Yi et al., 2022).

A recent study by Maffini (2018) reported that Asian American and Asian international students who felt unsafe on their university campuses yielded poorer psychological and academic outcomes. These findings align with Lorenc and colleagues' (2012) framework, suggesting that fear of victimization may lead to restricted or avoidance behaviors that affect overall community engagement.

### ***Black/African American Students***

According to the National Center for Education Statistics (2021), college students who identified as Black made up an estimated 13% of the United States college student population. College students who identified as Black and attended predominantly White institutions in the Midwest reported higher levels of campus engagement when they perceived their university as intentionally confronting institutional racism (i.e., dialogue around oppression, social justice, and racial inequities in higher education) (Leath & Chavous, 2017). These findings point to the importance of university administrators' advocacy efforts and dedication to promoting inclusivity on their college campuses, especially regarding feelings of belongingness and safety for students who identify as Black or African American. Researchers encouraged future studies to consider the psychological impact of experiencing racism in one's surrounding institutional environments and the efficacy of institutional responses to racial/diversity concerns (Leath & Chavous, 2017).

Gummadam and colleagues (2016) explored the relationship of school belongingness among college students with racial and ethnic minority identities. The findings revealed a significant association between sense of school belongingness and psychological adjustment, as well as academic success. Therefore, this study points to the importance of school belongingness



and students of color's perceptions of security and acceptance at their institution (Gummadam et al., 2016).

Lastly, Kahn and Money (2021) revealed that many individuals who identified as Black or African American experienced a double bind during the COVID-19 pandemic related to choosing to wear a homemade mask and risk being racially profiled or choosing not to wear a mask and risk acquiring/spreading the virus. Therefore, individuals who identify as Black or African American may have faced greater race-based psychological distress than their White counterparts during the pandemic.

### ***International Students***

In 2021, The Pew Research Center reported that international student enrollment comprised of about 5% of total enrollment at United States universities (Silver, 2021). A recent qualitative study gathered data specifically related to international students' perceptions of guns on a university campus (Gelzhiser, 2018). One theme from the study conducted at the University of California, Los Angeles (UCLA) revealed international students often weigh the risks of pursuing a higher education overseas in a country that is perceived as having a "gun problem," such as the United States (Gelzhiser, 2018, p. 167). International students also indicated that a diverse city, such as Los Angeles, would be perceived as more of a safe haven for racial minorities compared to a university in a more rural, less diverse region, such as Kansas (Gelzhiser, 2018). These findings point to the importance of examining perceptions of safety related to campus carry for students who identify as BIPOC compared to the majority White student population in West Virginia.

### **Statement of the Problem**

Prior studies have explicitly articulated the need for national data to better understand the influence of various regions in the United States regarding concealed campus carry attitudes (Cavanaugh et al., 2012; Hassett et al., 2020; Hassett & Kim, 2021; Koester, 2019). According to Hassett and colleagues (2020), it is critical for researchers to continue examining concealed campus carry attitudes as the findings could assist state and university policymakers in deciding whether concealed firearms should be permitted on campus in their state and/or region. As stated by Schildkraut and colleagues (2018), “To gain a broader understanding of how these policies are viewed by various college students, studies need to examine the perceptions of these policies of those most affected by such legislation – the students themselves” (p. 490). From a theoretical context, students and university community members have a fundamental, psychological need to feel safe to function and engage in learning. The research has revealed that college students who identify as BIPOC may experience lower perceptions of safety on their university campuses, as well as higher attrition rates and mental health issues (Gummadam et al., 2015). According to Patten and colleagues (2013):

If the most scared contingent on campus does not want more concealed guns, and the addition of more concealed guns would make them more scared, does it not make sense to ban concealed gun possession and promote a cohesive and a safe learning environment? While public policy should not be driven solely by public opinion, certainly public opinion, especially in regards to a special population like college campuses – particularly the opinions of the most frightened – should be considered when deciding issues as powerful as concealed guns on campus. (p. 286)

To date, there have not been any empirical studies on the topic of race and campus carry attitudes in the state of West Virginia, and more specifically on university campuses in West Virginia, indicating a need for further exploration.

### **Purpose of Study**

The purpose of this study was to bridge the literature gap by assessing for differences in attitudes toward campus carry gun policies between students who identified as BIPOC and White. Furthermore, this study examined the differences in gun beliefs and behaviors between students who identified as BIPOC and White. Lastly, fear of on-campus crime victimization among students who identified as BIPOC and White was explored.

### **Definitions of Terms**

*Campus carry* - State legislative bills permitting university faculty, staff, and students to carry concealed handguns on campus (Senate Bill 246, 2021; State of Texas House Bill 11, 2015; State of Georgia House Bill 280, 2017).

*Gun beliefs* - Wamser-Nanney and colleagues (2019) described gun beliefs as five theoretically distinct dimensions regarding attitudes toward guns, including “Safety, Emotional Risk, Neighborhood Concerns, Gun Presence, and Social Perceptions” (p. 8). For the purposes of this study, “Neighborhood Concerns” was modified to “Campus Concerns” as approved by Dr. Wamser-Nanney (Appendix B).

*Race* - According to the United States Census Bureau (2017), race is defined as, “a person’s self-identification with one or more social groups” and “an individual can report as White, Black or African American, Asian, American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander, bi-racial or multiple races, or some other race” (p. 1).

*BIPOC* - According to Watson-Singleton and colleagues (2021), BIPOC refers to “Black, Indigenous, People of Color” and is aligned with the present research terminology (p. 1).

### **Research Questions**

1. How do college students who identify as BIPOC differ from college students who identify as White on gun beliefs and behaviors?
2. How do college students who identify as BIPOC differ from college students who identify as White on fear of on-campus crime victimization?
3. How do college students who identify as BIPOC differ from college students who identify as White on attitudes toward campus carry policies?

### **Hypotheses**

#### ***Hypothesis 1***

Full-time undergraduate students who identify as BIPOC will endorse lower Gun Beliefs and Behaviors Scale scores than full-time undergraduate students who identify as White.

#### ***Hypothesis 2***

Full-time undergraduate students who identify as BIPOC will endorse higher Fear of Crime Index scores than full-time undergraduate students who identify as White.

#### ***Hypothesis 3***

Full-time undergraduate students who identify as BIPOC will endorse lower Attitudes Toward Campus Carry Questionnaire scores than full-time undergraduate students who identify as White.

### CHAPTER III

#### Method

The purpose of this study was to investigate differences in attitudes toward campus carry policies and perceptions of safety between college students who racially identify as BIPOC and college students who identify as White. In addition, this study examined the relationship between full-time undergraduate students' racial identification, gun beliefs and behaviors, and perceptions of campus safety. This study employed a survey, correlational, cross-sectional research design. The three research questions are as follows: 1) How do college students who identify as BIPOC differ from those who identify as White in gun beliefs and behaviors?; 2) How do college students who identify as BIPOC differ from those who identify as White in perceptions of campus safety?; and 3) How do college students who identify as BIPOC differ from those who identify as White in attitudes toward campus carry policies?

#### Participants

In the current study, a sample of college students ( $n = 226$ ) completed an online survey. Of the 242 participants who began the survey, 226 participants completed the study in its entirety, for a 93% completion rate.

Participants were required to meet the following criteria to be eligible for inclusion in the study. All participants had to be at least 18 years of age, and currently enrolled as a full-time undergraduate student in at least one in-person course on West Virginia University's Morgantown, West Virginia campus.

Descriptive statistics are found in Table 1. The average age of participants was 19.56 years ( $SD = 1.72$ ), and 50.4% indicated being in their first year of full-time undergraduate enrollment. Many of the participants identified as White ( $M = 88.1\%$ ), heterosexual/straight ( $M =$

77.9%), and women ( $M = 85.4\%$ ). In-state, West Virginia residents made up 53.5% of the sample. Of the out-of-state participants (46.5%), the majority indicated being from the Northeast region of the United States (29.2% of the total sample, 63% of out-of-state participants). Lastly, only 0.4% indicated ROTC enrollment or military status (0.9%); therefore, these two predictor variables were excluded from the primary analyses due to lack of representation.

**Table 1**

*Demographic Data for the Sample (N = 226)*

Variables	Percentage
<i>Age</i>	$M = 19.56$ $SD = 1.72$
<i>Years of Education</i>	
1 year	50.4%
2 years	33.6%
3 years	12.9%
4 years	2.2%
5+ years	0.9%
<i>Gender Identity</i>	
Woman	85.4%
Man	11.5%
Non-binary/Third gender	2.7%
Prefer not to say	0.4%
<i>Military Status</i>	
Never served in the military	99.1%
Currently active duty	0.9%
<i>Racial Identity</i>	
White	88.1%
Black or African American	4.9%
Bi- or Multi-racial	3.5%
Asian	2.2%
American Indian or Alaska Native	0.9%
Native Hawaiian or Other Pacific Islander	0.4%
<i>ROTC Status</i>	
Not enrolled	99.6%
Enrolled	0.4%

*Sexual Orientation*

Heterosexual/Straight	77.8%
Bisexual	14.6%
Prefer to self-describe	3.1%
Gay/Lesbian	1.8%
Questioning/Unsure	1.8%
Prefer not to say	0.9%

*West Virginia Resident*

Yes – In-state	53.5%
No – Out-of-state	46.5%
Northeast	29.2%
South	11.5%
Midwest	4.0%
West	1.3%
International	0.5%

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**Measures***Attitudes Toward Campus Carry Questionnaire (ATCC-Q)*

The study's first measure was a 4-item questionnaire crafted by the researcher assessing attitudes toward campus carry legislation in West Virginia. The ATCC-Q was created for the study as there was no alternative measure in the literature, and it was the best way to operationalize this variable. Given that this study aimed to assess undergraduate students' perceptions of safety and campus carry policies, gathering data specifically related to the proposed Senate Bill in West Virginia was important. The questionnaire involved the participants reading the following brief description of the state statute before responding to four items:

“West Virginia Senate Bill 246, otherwise known as ‘The Campus Self-Defense Act’ (CSDA), is a legislative bill that would permit concealed carry weapons on higher education campuses throughout the state. The CSDA would allow faculty, staff, and students with

concealed carry permits to have handguns on WVU's Morgantown campus, including but not limited to lecture halls, libraries, and common areas of residence halls."

After reading the legislative description, participants were asked to indicate their perceived feelings of safety if Senate Bill 246 (CSDA) were to pass in West Virginia. The ATCC-Q included the following four items: "I would feel safer with a concealed weapon on campus," "I would feel safer with other students carrying concealed weapons on campus," "I would feel safer with WVU staff carrying concealed weapons on campus," and "I would feel safer with WVU faculty members carrying concealed weapons on campus" (see Appendix C). The rationale for including the four items was that participants could have felt differently in their perceptions of safety regarding various university community members carrying guns on campus (i.e., themselves, students, staff, or faculty). Participants indicated their level of agreement with each item on a five-point Likert-type scale ranging from 1 – Strongly disagree to 5 – Strongly agree. Although no psychometric properties were determined prior to the study, the measure yielded a high internal consistency ( $\alpha = .91$ ), suggesting the scale had high reliability.

***Gun Behaviors and Beliefs Scale (GBBS; Wamser-Nanney et al., 2019)***

In the current study, the researcher selected the GBBS as it aims to assess perceptions of safety and attitudes about guns. The GBBS is a 24-item self-report measure rated on a seven-point Likert-type scale ranging from 1 - Strongly disagree to 7 - Strongly agree (see Appendix D). The GBBS has five subscales with previously reported high internal reliabilities, gauging safety ( $\alpha = .93$ ), emotional risk ( $\alpha = .85$ ), neighborhood concerns ( $\alpha = .86$ ), gun presence ( $\alpha = .83$ ), and social perceptions ( $\alpha = .80$ ). From the safety subscale, an example item is "Guns protect people from criminals." From the emotional risk subscale, an example item is "It would be emotionally troubling for me if I had to shoot someone, even in self-defense." For this study, the



“Neighborhood Concerns” subscale was reworded to “Campus Concerns” to assess perceptions within the university community better. For example, the wording of the original item, “In my neighborhood, a gun is needed to protect me,” was reworded to “On my campus, a gun is needed to protect me.” Dr. Wamser-Nanney granted permission to modify the measure for the purpose of the study (see Appendix B). From the gun presence subscale, an example item is “In my area, keeping guns is an important tradition.” From the social perceptions subscale, an example item is “I look up to people who carry a gun.” Lower scores on the GBBS represented less favorable gun beliefs and lower gun behaviors. Higher scores on the GBBS represented more favorable gun beliefs and higher gun behaviors.

In prior research, the development of the GBBS involved two samples, students enrolled in a psychology program at a Midwestern university (287 participants) and MTurk workers (143 participants). Researchers conducted an exploratory factor analysis (EFA) to measure the scale’s preliminary psychometric properties using a scree plot and identified five distinct subscales: safety, emotional risk, neighborhood factors, gun presence, and social perceptions. A confirmatory factor analysis (CFA) revealed all the items significantly loaded on their assigned factors, ranging from .49 to .95.

Wamser-Nanney and colleagues (2019) reported that the GBBS showed evidence of convergent validity as it correlates with existing measures of gun beliefs and aggression, such as the Attitudes Toward Guns Scale (ATGS), Buss-Perry Aggression Questionnaire (BPAQ), and Code of the Street Scale (COS) (Anderson, 2000; Branscombe et al., 1991; Buss & Perry, 1992). The GBBS exhibited evidence of construct validity through the small-to-medium correlations with the ATGS (safety  $r = .57$ , neighborhood concerns  $r = .25$ , gun presence  $r = .32$ , and social perceptions  $r = .23$ ), and the only subscale to not correlate was emotional risk ( $r = -.07$ ). This

result was described as an advantage because the emotional risk subscale aimed to elucidate reasons for or against gun ownership, which is unique for the GBBS. Divergent validity was further evidenced through small-to-medium correlations with the BPAQ ( $r = -.11$  to  $.25$ ) and COS ( $r = -.16$  to  $.38$ ) as well. In the current study, the measure yielded a high internal consistency ( $\alpha = .91$ ), suggesting the measure's high reliability.

### ***Fear of Crime Index (FCI; Jang et al., 2014)***

For the current study, the researcher used the FCI to assess perceptions of fear related to being victims of crime on their university campus. The fear of crime variable was defined as “an emotional reaction to the perception of impending victimization” (Jang et al., 2014, p. 310). Jang and colleagues (2014) developed the FCI to measure college students' fears of crime regarding the legalization of concealed carry handguns on university campuses. Researchers indicated that they analyzed the scale with a university sample of 451 participants. The measure contains the prompt, “How afraid are you of the following things happening to you while on a college campus?” answered on a five-point Likert-type scale of 1 – Not afraid at all to 5 – Very much afraid (see Appendix E). Eight total items gauge levels of fear in categories including being murdered, robbed or mugged, attacked by someone with a weapon, being sexually assaulted, being raped, having one's things stolen, having one's car stolen, and being stalked. Lower scores on the FCI represented that participants perceived themselves to have less fear of being victimized by the eight-listed crimes. Higher scores on the FCI represented that participants perceived themselves to have more fear of being victimized by the eight-listed crimes.

The FCI exhibited evidence of convergent validity as the multi-item index reportedly aligns with similar, previous literature on this construct, such as Warr's (1984) study on fear of victimization, Ferraro's (1995) book *Fear of Crime: Interpreting Victimization Risk*, and Melde

and colleagues' (2009) typological examination on fear of crime. Reliability testing for fear of crime variable revealed a Cronbach's alpha coefficient of 0.94. In the current study, the FCI yielded a high internal consistency ( $\alpha = .91$ ), suggesting the measure has high internal consistency.

### *Demographic Questionnaire*

An eight-item questionnaire was included to gather descriptive data about racial identity, gender identity, sexual identity, age-in-years, home location, military status, ROTC status, and years in full-time undergraduate enrollment (see Appendix F). These variables were used as control and predictor variables in this study.

Consistent with guidelines from the United States Census Bureau (US Census Bureau, 2018), the racial identity item included the fixed answers: "American Indian or Alaska Native," "Asian," "Black or African American," "Native Hawaiian or Other Pacific Islander," "White," "Bi-/Multi-racial," and a "Prefer to self-describe: \_\_\_\_\_" option. Consistent with gender-inclusive data collection guidance from the Human Rights Campaign (2016), the gender identity item provided the fixed options: "Man," "Woman," "Non-binary/Third gender," "Prefer to self-describe: \_\_\_\_\_," and "Prefer not to say." Consistent with LGBTQ-inclusive data collection guidance from the Human Rights Campaign (2019), the sexual identity item offered the fixed options: "Heterosexual/Straight," "Bisexual," "Gay/Lesbian," "Queer," "Asexual," "Questioning/Unsure," and "Prefer to self-describe: \_\_\_\_\_," and "Prefer not to say." (Persad, 2019). The age-in-years item was a closed question with fixed answers from 18 to 99 years. Home location was assessed by first asking whether the participant was a West Virginia resident receiving in-state tuition (Yes/No). If the participant indicated "No," they were provided a map of the United States and asked which geographic region best described their home location:

“Northeast,” “Midwest,” “South,” “West,” or “International” (Gindi, 2021). The item assessing military status provided the options: “Never served in the military,” “Served in the military in the past, but not currently active duty,” and “Currently active duty in the military.” Participant’s enrollment in the ROTC programs was assessed using “Yes/No” fixed answers. For the years of full-time undergraduate enrollment item, participants indicated how many years (including this academic year) they have been a full-time undergraduate student, with answers ranging from “1” to “5+” years.

### **Procedure**

A convenience sample of college students was recruited through a psychology subject pool with the following inclusion criteria; participants were required to be over 18 years old, a full-time undergraduate student at the university, and currently enrolled in at least one in-person course. To gain research access to the undergraduate psychology student subject pool, emails were sent to the SONA liaisons in the WVU Psychology department with the approved Institutional Review Board letter (Appendix G) and project number. Participants accessed the study through the SONA online research platform. SONA is a West Virginia University psychology program-supported software allowing students to participate in research studies in exchange for extra credit for an undergraduate course.

From the piloted survey, the study was expected to take approximately 5-10 minutes to complete. When participants clicked on the Qualtrics survey link in SONA, they were directed to the study’s informed consent (see Appendix H) outlining details of the study, any potential risks, and their right as a participant to discontinue participation in the study at any time without any consequence or repercussion. There were two possible responses to the informed consent: “I have read the informed consent and willingly choose to participate in this study” and “I choose to

not participate in this study.” If the participant selected the “I choose to not participate in this study” option, the survey ended, and participants were thanked for their time. If the participant selected the “I have read the informed consent and willingly choose to participate in this study” option, the survey directed the participant to the second page. The second page entailed the inclusion criteria items: “I am over the age of 18 years old” (Yes/No), “I am currently enrolled as a full-time undergraduate student” (Yes/No), and “I am currently enrolled in at least one in-person course” (Yes/No). If the participant selected the “No” option for any of the three inclusion criteria items, the survey ended, and participants were thanked for their time. If the participant selected the “Yes” option for all three inclusion criteria items, the survey directed participants to the measures section of the study.

The first measure participants completed was the Attitudes Toward Campus Carry Questionnaire. The Gun Behaviors and Beliefs Scale and Fear of Crime Index were counterbalanced to account for order effects. The demographics questionnaire was the final measure completed. Participants were thanked for their time and participation in the research study. On the final page, mental health resources were provided (Appendix I) along with the Principal Investigator (PI)’s name and email address (Whitney Hyatt, [wah0008@mix.wvu.edu](mailto:wah0008@mix.wvu.edu)) and the PI’s dissertation committee chair’s contact information (Dr. Christine Schimmel, [chris.schimmel@mail.wvu.edu](mailto:chris.schimmel@mail.wvu.edu)), in the case participants had questions or concerns. After the survey was submitted, participants were compensated extra credit via the SONA platform.

## CHAPTER IV

### Results

The purpose of the study was to assess the differences between the attitudes of college students who identify as BIPOC and White toward campus carry, gun beliefs and behaviors, and perceptions of campus safety. The Statistical Package for Social Sciences (SPSS) software was used to perform the statistical analyses. Correlational analyses were conducted to analyze the relationships among the three research variables and the ordinal-level or higher variables (age in years and years of full-time undergraduate education). The researcher used a series of linear regression analyses to calculate the variance accounted for by the predictor variable (i.e., racial identity) on the outcome variables (i.e., gun beliefs and behaviors, fear of crime/perceptions of safety, and attitudes toward campus carry). There were five control variables, including gender identity, sexual identity, age in years, in vs. out-of-state residence, and years of full-time undergraduate education. The control variables were added to the model to increase the internal validity of the study and to limit the influence of confounding variables. This chapter presents the preliminary analyses and screening of the data, the results of the primary analyses, and a summary of the statistical findings.

#### **Preliminary Analyses**

First, an a priori analysis was conducted in G\*Power (Faul et al., 2007) to determine the required sample size given Cohen's  $f^2 = 0.15$  for a medium effect size, power of .80, and an alpha level ( $\alpha$ ) of .05. The indicated sample size requirement of 146 participants for adequate power was surpassed with a total of 226 participants ( $n = 226$ ).

#### ***Tests of Statistical Assumptions***

Before interpreting the results, the statistical assumptions for multiple regression were tested in SPSS. Five statistical assumptions were tested to ensure the results of the regression analyses were valid and reliable, including random samples, linearity, homoscedasticity, normality, and multicollinearity (Privitera, 2015). The tests of statistical assumptions were checked by producing scatterplots, collinearity diagnostics, Durbin-Watson statistics (Dufour & Dagenais, 1985), a normal probability plot, and Cook's distance values (Sulthan & Jayakumar, 2014) in SPSS. The five tests of statistical assumptions confirmed the data to be statistically valid and interpretable; therefore, no further tests were necessary.

### ***Descriptive Statistics***

As seen in Table 2, descriptive statistics were performed to collect information on the study measures. The ATCC-Q yielded an average score of 2.25 ( $SD = 1.11$ ,  $\alpha = .91$ ) with a range of 1 – Strongly disagree to 5 – Strongly agree, suggesting, on average, the undergraduate students at West Virginia University would feel less safe if the Campus Self-Defense Act were to pass allowing concealed weapons on campus. The GBBS produced an average score of 2.86 ( $SD = .91$ ,  $\alpha = .91$ ) with a range of 1 – Strongly disagree to 7 – Strongly agree, indicating the sample overall had low gun beliefs and behaviors. The FCI generated an average score of 3.26 ( $SD = 1.04$ ,  $\alpha = .91$ ) with responses ranging from 1 – Not afraid at all to 5 – Very afraid, implying that participants, on average, presently felt somewhat to moderately afraid on their university campus.

**Table 2**

### *Descriptive Statistics for the Study Measures*

Variable	Number of Items	Sample Mean	SD	Range	Possible Range	Cronbach's $\alpha$
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ATCC-Q Total	4	2.25	1.11	1-5	1-5	.91
GBBS Total	24	2.86	0.91	1-5	1-7	.90
FCI Total	8	3.26	1.04	1-5	1-5	.91

*Note.*  $N = 226$ ; ATCC-Q Total = The Attitudes Toward Campus Carry Questionnaire Averaged Total Score; GBBS Total = Gun Beliefs and Behaviors Scale Averaged Total Score; FCI Total = Fear of Crime Index Averaged Total Score.

## Primary Analyses

### *Bivariate Correlation Analyses*

The first of the primary analyses was a series of bivariate correlations. In Table 3, the bivariate correlation matrix displays the relationships between the study measures and continuous-level control variables. The analyses included two continuous-level control variables: age and years of full-time undergraduate education.

From the Pearson correlation analyses, there are several significant associations to discuss. The first significant, positive correlation was between the ATCC-Q and the GBBS ( $r = .69, p < .01$ ). This result indicates that the higher gun beliefs and behaviors reported, the safer participants reportedly would feel with campus carry. These findings seem conceptually sensible as higher scores on the GBBS represent more familiarity and exposure to guns, and higher scores on the ATCC-Q represent feeling safer with concealed guns on campus. The second significant, positive correlation was between participant age and years of education ( $r = .39, p < .01$ ), which conceptually would be expected as first-year students tend to be younger than fourth- or fifth-year college students. No significant associations were found between the study measures and FCI, nor the study measures and continuous variables.

### **Table 3**



*Bivariate Correlations Among the Study Variables*

Variable	1	2	3	4	5
1. ATCC-Q Total	--				
2. GBBS Total	.69**	--			
3. FCI Total	-.07	-.03	--		
4. Age	.10	.06	-.06	--	
5. Education – Years at University	-.00	-.03	-.07	.39**	--

*Note.*  $N = 226$ ; ATCC-Q Total = The Attitudes Toward Campus Carry Questionnaire Averaged Total Score; GBBS Total = Gun Beliefs and Behaviors Scale Averaged Total Score; FCI Total = Fear of Crime Index Averaged Total Score. \*\*  $p < .01$

***Multivariate Regression Analyses***

In this study, the three hypotheses were tested using linear regression analyses. The first hypothesis stated that full-time undergraduate students who identified as BIPOC would endorse lower scores on the Gun Beliefs and Behaviors Scale than participants who identified as White. As seen in Table 4, Model 1, racial identity with the response of White as the reference category was significantly, negatively predictive of endorsement on the GBBS (adj.  $R^2 = .03$ ;  $SE = .89$ ;  $\beta = -.19$ ;  $p < .01$ ). This means participants who identified as BIPOC were significantly less likely to endorse gun beliefs and behaviors compared to participants who identified as White. Five demographic variables were entered into Model 2 to control for covariance, including age in years, in-state vs. out-of-state residency, years of education, sexual orientation, and gender

identity. Racial identity, WV residency, sexual orientation, and gender identity were coded as a binary with 0 as the reference category (i.e., White, in-state, heterosexual/straight, and women) and 1 as all other responses. Even when controlling for covariates, racial identity remained statistically significant in predicting endorsement of the GBBS ( $adj. R^2 = .10$ ;  $SE = .86$ ;  $\beta = -.17$ ;  $p < .01$ ), indicating participants who identified as BIPOC were more likely to have lower scores on the GBBS than those who identified as White (Table 4). This finding indicated that racial identity was predictive of gun beliefs and behaviors, over and above the predictors added to the regression model. In addition, there was a significant relationship between sexual orientation and GBBS scores ( $\beta = -.22$ ;  $p < .01$ ), suggesting that participants with LGBTQ+ identities reported significantly lower scores on the GBBS than those who identified as heterosexual/straight.

**Table 4**

*Summary of Multiple Regression Analyses for Predicting GBBS*

Variables	<u>Model 1</u> Racial Identity Predicting GBBS			<u>Model 2</u> Racial Identity Predicting GBBS + Control Variables		
	$adj R^2 = .03 (SE = .89)$			$adj R^2 = .10 (SE = .86)$		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Racial Identity (ref: White)	-53	.18	<b>-.19*</b>	-.49	.18	<b>-.17*</b>
Age	--	--	--	.04	.04	.07
WV Resident (ref: In-state)	--	--	--	-.15	.12	-.08
Years of Education	--	--	--	-.01	.08	-.01
Sexual Orientation (ref: Heterosexual/Straight)	--	--	--	-.48	.14	<b>-.22**</b>

Gender Identity (ref: Woman)	--	--	--	.42	.16	.16
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*Note.*  $N = 226$ ; GBBS = Gun Beliefs and Behaviors Scale Averaged Total Score; Racial Identity, WV Resident, Sexual Orientation, and Gender Identity coded as a binary – 0 = reference category, 1 = all other responses.

\*  $p < .05$ ; \*\*  $p < .01$

The second hypothesis stated that full-time undergraduate students who identified as BIPOC would endorse higher scores on the FCI than participants who identified as White. As seen in Table 5, Model 1, racial identity with the response of White as the reference category was significantly, positively predictive of endorsement on the FCI (adj.  $R^2 = .01$ ;  $SE = 1.03$ ;  $\beta = .13$ ;  $p = .04$ ), which means participants who identified as BIPOC indicated greater fears of on-campus crime victimization than the participants who identified as White. Five demographic variables were entered into Model 2 to control for covariance, including age in years, in-state vs. out-of-state residency, years of education, sexual orientation, and gender identity. Racial identity, WV residency, sexual orientation, and gender identity were coded as a binary with 0 as the reference category (i.e., White, in-state, heterosexual/straight, and women) and 1 as all other responses. Even when controlling for covariates, racial identity remained statistically significant in predicting endorsement of the FCI (adj.  $R^2 = .09$ ;  $SE = .99$ ;  $\beta = .14$ ;  $p = .03$ ), indicating participants who identified as BIPOC were more likely to report higher scores on the FCI than those who identified as White, over and above the predictors added to the regression model (Table 5). Among the demographic variables, gender identity was also found to be statistically significantly predictive of endorsement of the FCI ( $\beta = -.26$ ;  $p < .01$ ), specifically participants who identified as women reported greater fears of on-campus crime victimization than those who identified as men.

**Table 5**

*Summary of Multiple Regression Analyses for Predicting FCI*

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Variables	<u>Model 1</u> Racial Identity Predicting FCI  adj $R^2 = .01$ ( $SE = 1.03$ )			<u>Model 2</u> Racial Identity Predicting FCI + Control Variables  adj $R^2 = .09$ ( $SE = .99$ )		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Racial Identity (ref: White)	.42	.21	<b>.13*</b>	.43	.21	<b>.14*</b>
Age	--	--	--	-.02	.04	-.03
WV Resident (ref: In-state)	--	--	--	.18	.14	.09
Years of Education	--	--	--	-.12	.09	-.10
Sexual Orientation (ref: Heterosexual/Straight)	--	--	--	.31	.16	.12
Gender Identity (ref: Woman)	--	--	--	-.76	.19	<b>-.26**</b>

*Note.*  $N = 226$ ; FCI = Fear of Crime Index Averaged Total Score; Racial Identity, WV Resident, Sexual Orientation, and Gender Identity coded as a binary – 0 = reference category, 1 = all other responses.

\*  $p < .05$ ; \*\*  $p < .01$

The third hypothesis stated that full-time undergraduate students who identified as BIPOC would endorse lower scores on the ATCC-Q than participants who identified as White. The linear regression results displayed in Table 6, Model 1, revealed that racial identity with the response of White as the reference category was significantly, negatively predictive of endorsement on the ATCC-Q (adj.  $R^2 = .03$ ;  $SE = 1.10$ ;  $\beta = -.17$ ;  $p < .01$ ). This means participants who identified as BIPOC indicated anticipation of feeling less safe on-campus if the Campus Self-Defense Act passed in their state. Five demographic variables were entered into Model 2 to control for covariance, including age in years, in-state vs. out-of-state residency,

years of education, sexual orientation, and gender identity. Racial identity, WV residency, sexual orientation, and gender identity were again coded as a binary with 0 as the reference category (i.e., White, in-state, heterosexual/straight, and women) and 1 as all other responses. Even when controlling for covariates, racial identity remained a significant, negative predictor of endorsement of the ATCC-Q (adj.  $R^2 = .12$ ;  $SE = 1.05$ ;  $\beta = -.14$ ;  $p = .02$ ), indicating participants who identify as BIPOC were more likely to report lower scores on the ATCC-Q than those who identified as White, over and above the predictors added to the regression model (Table 6). Among the demographic variables, sexual orientation and WV residence were also found to be strong predictors for endorsement of the ATCC-Q. Participants who identified as LGBTQ+ reported anticipation of feeling less safe if concealed guns were to be allowed on their university campus ( $\beta = -.28$ ;  $p < .01$ ). Participants who identified as out-of-state reported anticipation of feeling less safe if concealed guns were to be allowed on their university campus, in comparison to in-state WV students ( $\beta = -.13$ ;  $p < .05$ ).

**Table 6**

*Summary of Multiple Regression Analyses for Predicting ATCC-Q*

Variables	<u>Model 1</u> Racial Identity Predicting ATCC-Q  adj $R^2 = .03$ ( $SE = 1.10$ )			<u>Model 2</u> Racial Identity Predicting ATCC-Q + Control Variables  adj $R^2 = .12$ ( $SE = 1.05$ )		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Racial Identity (ref: White)	-.58	.23	<b>-.17*</b>	-.49	.22	<b>-.14*</b>
Age	--	--	--	.06	.04	.10
WV Resident (ref: In-state)	--	--	--	-.29	.14	<b>-.13*</b>

Years of Education	--	--	--	.01	.09	.01
Sexual Orientation (ref: Heterosexual/Straight)	--	--	--	-.75	.17	<b>-.28**</b>
Gender Identity (ref: Woman)	--	--	--	.37	.20	.12

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*Note.*  $N = 226$ ; ATCC-Q = Attitudes Toward Campus Carry Questionnaire Averaged Total Score; Racial Identity, WV Resident, Sexual Orientation, and Gender Identity coded as a binary – 0 = reference category, 1 = all other responses.

\*  $p < .05$ ; \*\*  $p < .01$

### Summary

The regression analysis results supported all three of the study's hypotheses. From the first hypothesis, racial identity was a significant predictive factor of gun beliefs and behaviors, meaning participants who identified as BIPOC endorsed less familiarity with guns and viewed guns more negatively than participants who identified as White. Additionally, sexual orientation was a predictive factor of gun beliefs and behaviors. Participants who identified as LGBTQ+ reported less familiarity with guns and viewed guns more negatively than participants who identified as heterosexual/straight.

Secondly, racial identity was a significant predictive factor for fear of on-campus crime victimization. After controlling for other demographic covariates, the participants who identified as White remained significantly less afraid of being a crime victim than those who identified as BIPOC. In other words, undergraduate students who identified as BIPOC indicated greater fear for their safety on campus than those who identified as White. Participants who identified as women also conveyed greater fears of on-campus crime victimization than participants who identified as men.

Thirdly, racial identity was a significant predictor of attitudes toward campus carry. Participants who identified as BIPOC revealed they anticipate feeling significantly less safe if

the Campus Self-Defense Act was to pass and permit concealed weapons on their campus than participants who identified as White. In addition, participants who identified as LGBTQ+ indicated they also anticipate feeling significantly less safe if the Campus Self-Defense Act was to pass and permit concealed weapons on campus than those who identified as heterosexual/straight.

Taken together, these findings corroborate the hypotheses indicating college students who identified as BIPOC 1) reported less support for guns and gun-related behaviors, 2) indicated greater fear of on-campus crime victimization, and 3) anticipated feeling less safe with concealed carry policies on their campus, compared to college students who identified as White. Furthermore, BIPOC identity remained predictive of the outcomes even when accounting for the covariates. Additionally, results revealed that participants who identified as LGBTQ+, out-of-state, and women experienced lower levels of on-campus safety at the time of the study and anticipated feeling less safe if a campus carry policy is implemented, compared to participants who identified as heterosexual/straight, in-state WV resident, and men, respectively. The final, subsequent chapter discusses the implications of the study's results and underscores the study's strengths, limitations, and future research directions.

## CHAPTER V

### Discussion

#### Summary of Findings

Prior research has minimally assessed the impacts of campus carry policies on college students' perceptions of safety. According to Vasquez (2012), "One of our tasks [as psychologists] is to determine what our psychological theories, scientific research, and clinical experience have to say about the grand challenges that profoundly affect our daily lives, our society, and our world" (p. 342). The goal of this study was to expand psychological science by determining the influence of race on perceptions of safety and fears of on-campus crime victimization to understand better the implications of campus concealed weapon carry policies. This study's independent, or predictor, variable was racial identity (i.e., BIPOC and White). This study's three dependent, or outcome, variables were gun beliefs and behaviors, fear of on-campus crime victimization, and perceptions of safety regarding campus concealed weapon carry policies. This study's control variables were gender identity, sexual identity, age in years, WV residence, and years of full-time undergraduate education. Three hypotheses were generated to examine the relationships among this undergraduate student sample.

#### *Hypothesis Testing*

The first hypothesis stated that racial identity would significantly predict lower scores on the Gun Beliefs and Behaviors Scale (GBBS) for participants who identified as BIPOC than those who identified as White. In this study, racial identity significantly predicted gun beliefs and behaviors measured by the GBBS. Thus, these results indicate undergraduate students who identified as BIPOC endorsed significantly less support, less comfort, and less exposure to guns than those who identified as White. These results could offer many potential explanations, such



as sociopolitical factors and a lack of familiarity with guns. Race, culture, and political beliefs may explain these findings, as gun ownership has historically been associated with more White, southern, and conservative political beliefs (Thompson et al., 2013). Furthermore, college students who identify as White may have been raised in familial and social groups where gun ownership or gun-related sports, such as hunting or target shooting, were normalized and accepted. On the other hand, individuals from BIPOC communities may have been exposed to more negative portrayals of guns and their association with violence (Gelzhiser, 2018; Kahn & Money, 2021). Overall, these findings align with the prior literature (Wamser-Nanney et al., 2019) and suggest that historical and cultural factors are at play in shaping college students' beliefs and behaviors toward guns.

The second hypothesis stated that racial identity would significantly predict higher scores on the Fear of Crime Index (FCI) for participants who identified as BIPOC than those who identified as White. The study's analyses found that racial identity significantly predicted fear of on-campus crime victimization as measured by the FCI. Thus, these results indicate that undergraduate students who identified as BIPOC felt significantly more fear of on-campus crime victimization than those who identified as White. Several factors may contribute to the heightened fear of on-campus crime victimization among college students who identify as BIPOC, including social and historical factors, lack of trust in law enforcement, and perceptions of campus safety. Racism, discrimination, and prejudice have long been entrenched in U.S. history, and as a result, individuals with BIPOC identities are more likely to experience race-based violence, harassment, and discrimination (Jang et al., 2014; Leath & Chavous, 2017; Luo & Shi, 2020). These experiences likely contribute to feelings of fear and vulnerability, leading to a greater fear of being victimized by crime on their university campus. Furthermore, individuals

with BIPOC identities may have adapted to feelings of fear and vulnerability using coping mechanisms, such as hypervigilance. College students identifying as BIPOC may experience hypervigilance toward potential threats of violence, crime, or discrimination in response to generational and personal experiences of race-based trauma (Maffini, 2018; Sanchez et al., 2022). It is also important to consider that this study occurred at a PWI in the Appalachian region during heightened discourse around race-based discrimination. For instance, the Black Lives Matter movement, riots in response to incidents of police brutality and the murder of George Floyd, the Trump administration and border policies regarding Latinx populations, and anti-Asian messages related to the COVID-19 pandemic simultaneously occurred at the time of data gathering for this study. Therefore, these findings could be traced to the present-day experiences of vicarious trauma via media consumption and a long history of systemic racism in the U.S. In contrast, college students who identified as White may have endorsed feeling less fear of crime victimization for two reasons, 1) they identify with the majority demographic at the PWI and surrounding Appalachian region, and 2) they feel inherently more trusting of law enforcement to protect and effectively respond to potential threats of crime. As such, the reasons for heightened fear of on-campus crime victimization among college students who identify as BIPOC are complex, multifaceted, and require further research.

The third hypothesis stated that racial identity would significantly predict lower scores on the Attitudes Toward Campus Carry Questionnaire (ATCC-Q) for participants who identified as BIPOC than those who identified as White. The study's analyses found that racial identity significantly predicted perceptions of safety regarding the campus carry policy as measured by the ATCC-Q. Thus, these results indicate that undergraduate students who identified as BIPOC perceived themselves as less safe should the campus carry policy be implemented than those who

identified as White. There could be many reasons to explain these findings, such as fear, racism, and gun violence, to name a few. Individuals from BIPOC populations have a higher risk of being a victim of gun violence, whether from police brutality, hate crimes, or everyday gun violence, than their White counterparts (Sue & Sue, 2016; Yi et al., 2022). Therefore, the presence of firearms on campus may trigger feelings of fear and trauma for students who identify as BIPOC. Additionally, individuals who identify as BIPOC experience racial profiling and discrimination at higher rates than their White counterparts, leading to distrust in law enforcement to intervene or protect them (Kahn & Money, 2021). Lastly, the recent rise of political conflict and explicit acts of White supremacy could elicit feelings of unsafety with more guns on campus for students who identify as BIPOC. Therefore, the presence of guns on campus may be a reminder of this history and its ongoing impact.

### ***Additional Findings***

In addition to the primary findings on college students identifying as BIPOC, there were four additional significant findings. First, there was a significant relationship between sexual orientation and GBBS scores. These results indicate that undergraduate students who identified as LGBTQ+ endorsed significantly less support, less comfort, and less exposure to guns than those who identified as heterosexual/straight. It is possible that LGBTQ+ folks have a different relationship with guns due to their experiences with discrimination and marginalization, which may create a heightened sense of vulnerability or discomfort around guns (DeBoer, 2018; Patten et al., 2013). In contrast, heterosexual/straight folks may be more likely to see firearms as a symbol of their masculinity or a method of self-defense (McMahon-Howard et al., 2020; Sheppard et al., 2018). Further research is needed to understand better these differences in sexual identity, beliefs, and behaviors toward guns.

Secondly, a significant relationship was revealed between gender identity and FCI scores. These results indicate that women felt significantly more fear of being a victim of crime on their college campus than those who identified as men. This finding is consistent with previous literature and could be explained by several factors linked to gender differences in experiences and perceptions of on-campus crime (Crosby, 1984; Lee et al., 2022). Women are historically more likely than men to experience certain types of crime, such as sexual assault and intimate partner violence, which may make women more fearful of crime in general (DeBoer, 2018; Patten et al., 2013). Moreover, the socialization of women to exhibit feminine traits may elicit more caution and fear in public spaces, particularly at night or in areas perceived as dangerous. To contrast, the socialization of men to exhibit masculine traits may elicit more confidence and assertiveness in public spaces, making them feel less fearful of being victimized by crime. As evidenced by this study and prior literature, it is important for future research to explore interventions to reduce the fear of crime among women on college campuses and to increase their perceptions of safety in public spaces.

Thirdly, a significant relationship was revealed between sexual orientation and ATCC-Q scores. These results indicate that undergraduate students who identified as LGBTQ+ perceived themselves as less safe with the campus carry policy than those who identified as straight. College students who are a part of the LGBTQ+ community may fear that the presence of guns on campus could increase the likelihood of homophobic or transphobic violence, especially if the guns are in the hands of individuals who may hold discriminatory attitudes towards LGBTQ+ people. Due to historical and ongoing discrimination against LGBTQ+ people by law enforcement and criminal justice systems, college students who identify as LGBTQ+ may worry that the presence of guns on campus could lead to more harm than protection (DeBoer, 2018;

Lee et al., 2022). In contrast, college students who identify as heterosexual/straight may have more trust in campus law enforcement and other authorities of power to protect them from harm, and thus feel more confident in the ability of guns to provide protection. Overall, this finding suggests that the intersection of sexual identity and attitudes toward campus carry gun policies is complex and that college students identifying as LGBTQ+ may have different perceptions of safety than their heterosexual/straight peers.

There was a fourth significant relationship discovered between in-state vs. out-of-state residence and ATCC-Q scores. These results indicate that undergraduate students who identified as out-of-state perceived themselves as less safe with the campus carry policy in place than those who identified as in-state residents. Participants whose residence was considered out-of-state were primarily from the Northeast region of the United States. Many states in the Northeast region support gun control laws and individuals from this area may have been raised with similar beliefs. In contrast, in-state participants are more likely to have been raised immersed in Appalachian culture, which often involves gun ownership for sporting or self-protection purposes. Therefore, participants who identified as out-of-state may have less exposure, familiarity, and trust in the presence of guns than the participants who identified as in-state students. The four additional findings illuminate potential areas for future research focused on ways to explore strategies that ensure campus carry policies are inclusive and respectful of all university members, regardless of gender expression, sexual identity, or in-state vs. out-of-state residence.

## **Strengths and Limitations**

### ***Strengths***

Along with the study's groundedness in psychological theory and peer-reviewed literature, this study is relevant given the United States' current racial and political climate. The United States has a complicated and longstanding history related to guns and discrimination against racially minoritized populations. The number of mass shootings and the rate of gun violence in America has continued to increase over the past several decades, leading to a collective sense of fear for safety (Kaminski et al., 2020; Schildkraut et al., 2018). Many states have implemented or are considering implementing campus carry policies in response to the rise in mass shooting incidents and the collective sense of fear. From Maslow's hierarchy of needs theory (1943), it is conceptualized that following the basic needs for survival (i.e., air, food, water) is the fundamental human need for safety. Safety needs include fulfilling personal security, resources, and one's health. Historically, guns have represented personal security and freedom for Americans who identify as White, heterosexual, and male (Lynch et al., 2018; Schell et al., 2020). However, guns may symbolize generational violence, victimization, and dehumanization for others, specifically in BIPOC, LGBTQ+, and women-identifying populations. This study's primary strength is that it aims to address a gap in the literature regarding campus carry policies and elevate the perspectives of students who have been historically underrepresented in higher education settings, that being college students who identify as BIPOC.

Another strength of this study is the advancement of the literature on multiculturalism and psychological considerations for mental health providers working in UCCs. Alongside the gun violence epidemic, there is a mental health crisis in our nation related to high rates of anxiety, depression, suicide, substance abuse and addiction, post-pandemic stressors, and other psychological concerns (Maffini, 2018; Satiani & Singh, 2021; Soboroff et al., 2019; White,

2018). College students with minoritized identities have reported higher rates of mental health concerns and victimization experiences, pointing to a need for social justice efforts at the institutional (university) and systemic (state/national) levels (Grier-Reed et al., 2023; Hargons et al., 2022; Platt, 2020). Findings from this study were consistent with previous literature indicating that participants who identified as BIPOC, LGBTQ+, and women experienced greater levels of fear of on-campus crime victimization (Kahn & Money, 2021; Sanchez et al., 2022; Tessler et al., 2020). These findings confirm that more research is needed to provide UCCs with knowledge and resources to support the populations they work closely with.

### ***Limitations***

The findings contribute to the literature regarding university students' perceptions of safety on campus, but some limitations and methodological explanations must be considered. One of the methodological shortcomings is that the researcher created the four-item Attitudes Toward Campus Carry Questionnaire (ATCC-Q) as there was no measure in the literature quantifying level of safety related to campus carry policy at their university. Psychometric properties were not assessed in a pilot or pre-test study. At the time of data collection, the campus carry policy in West Virginia had not been passed or put into effect; therefore, participants had to indicate their anticipated level of safety if the CSDA were to pass in the future. However, following this study's data collection and during the analysis stages, the Governor of West Virginia signed the CSDA into law on March 1, 2023. The bill will go into effect, allowing campus carry by faculty, staff, and students, on July 1, 2024.

Another limitation is that these findings must be considered within Appalachian culture, gun exposure, and the primarily White female sample. These results would benefit from a larger sample with more participants who identified as male and BIPOC to explore the implications

further. Due to the relatively small sample, all participants who identified as BIPOC collapsed into one group, limiting our understanding of race-specific variations. It is a limitation of this study to have merged all participants who identified as non-White into one group. Additionally, a surveying error on the demographic questionnaire excluded a Latinx/Hispanic response option. As the research has shown, college students who identify as Latinx or Hispanic are a growing population in the United States (NCES, 2021), and it is unfortunate to have failed to include this demographic response option. Even with the added control variables, the effect sizes from this study were low, which indicates there are other factors that were not included that may better explain the differences revealed between the dependent variables.

This study also used a survey, which is not representative or generalizable to the population. Due to the quantitative survey, the participants did not have the opportunity to share deeper, more qualitative explanations for their responses; therefore, caution must be used when interpreting this study's findings. Another limitation is the convenience sampling procedure, which involved recruiting undergraduate students enrolled in a psychology course using the SONA platform for extra credit in exchange for research participation. This is a limitation, given that participants could choose a variety of research studies to participate in, and there is a likelihood that the students who decided to participate in this study had a personal or political interest in the research topic. It is uncertain what the motivating factors were for participants to have selected this study to complete (political beliefs, the brevity of the study, etc.). Additionally, no attention check item was implemented in the survey. An attention check item may have increased the validity of the study by ensuring participants were actively reading the questions and removing the submissions that did not respond correctly to that item. Despite these limitations, the findings of this study provide valuable insights into the experiences and



perceptions of college students who identify as BIPOC and may inform future research and interventions on university campuses.

## **Implications and Future Directions**

### ***Counseling Psychology Implications***

The implications of campus carry policies on university campuses are largely uncharted territory in the literature. The findings gathered from this study are important for informing future research and interventions in the field of counseling psychology. One important implication of the study is the need for universities to consider the potential impact of campus carry policies on minoritized populations. This could include conducting assessments of the potential risks and benefits of such policies and considering the unique needs and concerns of college students identifying as BIPOC when making decisions about campus safety policies. Another implication of the study is the need for universities to provide resources and support for students identifying as BIPOC who may feel vulnerable or unsafe on campus. This may include greater access to mental health services, campus safety escorts, and other resources designed to support the safety and well-being of students with minoritized identities. Considering prior research and this study's findings, there may be deleterious effects on college students' sense of belongingness, willingness to try new experiences, and academic success/retention for students who do not perceive themselves as safe on campus (Gummadam et al., 2016; Leath & Chavous, 2017; Mazuelas, 2022; Sims et al., 2020). Counseling psychologists, and other mental health providers, working at UCCs may consider implementing support groups for college students who identify as BIPOC to discuss shared experiences of unsafety or victimization on campus. It is important for counseling psychologists to support college students who identify as BIPOC in easing vicarious trauma responses (i.e., racialized violence in the media, the effects of

generational trauma). Counseling psychologists must advocate for political change to promote inclusive policies and alleviate the psychological distress often associated with feeling vulnerable or unsafe in living environments.

Given that college student populations across the United States are continuing to become more culturally diverse, university partners and policymakers are encouraged to consider the findings from this study. Vasquez and colleagues (2012) defined social justice as “the goal to decrease human suffering and to promote human values of equality and justice” (p. 337). The results of this study illuminate an area of social justice for university and community partners and policymakers to consider. Results revealed that women, individuals who identify as LGBTQ+, and BIPOC populations may face more significant threats to their perceptions of safety with the passing of campus carry policies. State-level policymakers are encouraged to review the prior literature and this study’s findings to inform more inclusive policies around campus safety. By permitting college students, faculty, and staff to carry concealed weapons on campus, students with minoritized identities may be at an even greater risk of experiencing gun violence through death threats, domestic violence, and hate crimes. Further, there is warranted concern for the safety of individuals with intersecting minoritized identities, such as women with identities in the LGBTQ+ and/or BIPOC communities. While there seems to be motivation to increase feelings of safety on university campuses in response to the rise of mass shooting incidents, previous research and the findings from this study suggest that overall feelings of safety may be harmed with the implementation of campus carry policies.

Along with the perceptions of safety that may be negatively impacted by more guns on college campuses, prior research points to the physical risks associated with the presence of guns. The Centers for Disease Control and Prevention (2022) indicated that approximately

45,000 people died from gun-related injuries in 2020. Of the 45,000 gun-related deaths, 24,292 were reported as completed suicides using a firearm (Centers for Disease Control and Prevention, 2022). Furthermore, approximately 19,000 firearm-related deaths were reported as homicides (Centers for Disease Control and Prevention, 2022). Siegel and Rothman (2016) reported that state-level firearm ownership correlated with an increase in firearm-related deaths by suicide in both men and women. West Virginia is one of the highest-ranking states in the nation for gun ownership per capita (Schell et al., 2020). Since the launch of this study, the West Virginia legislature passed Senate Bill 246, and West Virginia's Governor signed the bill into law, permitting the carrying of concealed weapons on college campuses beginning in July 2024. The findings from this study point to an anticipated increase in fear of crime victimization, and the findings from prior research point to an anticipated increase in actual experiences of gun violence (incidents of homicide and suicide) (National Center for Health Statistics, 2022). Overall, the findings from this study suggest that campus carry policies may have significant implications for the safety and well-being of all college students, and further attention is needed to address these concerns.

### ***Future Directions***

The results of this study highlight several important areas for future research related to campus safety, particularly in the context of inclusive policies and campus carry. Future research could attempt to identify further macro-level changes to be made to improve college students' feelings of safety on their university campuses. This could involve exploring alternative approaches to campus safety, such as increased investment in campus security personnel, expanded mental health services, or using non-lethal self-defense tools. Quantitative research should also incorporate larger sample sizes for more power and greater generalizability of

findings. This could include studies from different universities and regions across the United States. Along with larger samples, it is critical to gather a more diverse sample with participants of multicultural identities, given that this study's sample was primarily White, heterosexual, and woman-identifying. Future studies should aim to better represent diverse student groups in participant demographics. This would allow exploring differences in perceptions and concerns among BIPOC and other minoritized groups related to campus safety.

Finally, future research is needed to assess the long-term impact of campus carry policies on the safety and well-being of college students who identify as BIPOC. This could involve longitudinal studies, assessing changes in perceptions of campus safety, and incidents of gun violence over time. Future research could examine the impact of these policies on college students' mental health and academic outcomes. Additionally, further studies in this area can help to identify the impact of campus carry policies on identity-based crimes, such as incidents of gun violence and racism, homophobia, transphobia, sexism, and so forth. This study's findings suggest a need for continued research and attention to the impact of campus carry policies on minoritized student populations.

## **Conclusion**

In conclusion, the findings from this study are consistent with previous literature and confirm that more research is needed to provide university partners, policymakers, and mental health providers with the knowledge and resources to promote students' perceptions of campus safety. This study's primary findings were threefold: 1) Participants who identified as BIPOC reported less exposure and familiarity with guns than their peers who identified as White, 2) Participants who identified as BIPOC reported feeling significantly more fearful of being a victim of on-campus crime compared to those who identified as White, and 3) Participants who

identified as BIPOC indicated anticipation of feeling significantly less safe with the implementation of a campus carry policy than those who identified as White. Results from this study suggest that campus carry gun policies may disproportionately impact college students who identify as BIPOC, leading to increased fear and feelings of vulnerability on campus. The findings of this study indicate that campus safety policies must be designed to consider the unique needs and concerns of students with minoritized identities. Universities can work to establish a sense of community and inclusion and to provide resources designed to support the safety and mental health of college students with diverse backgrounds. Overall, the findings of this study demonstrate that universities must be committed to creating an inclusive, supportive, and safe environment for all students, regardless of their multicultural identities.

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**Appendices****Appendix A****Casualties by Guns on University Campuses in the United States (2001-2021)**

Year	College	Casualties
2001	Grambling State University	1
2001	Alcorn State University	1
2002	Appalachian School of Law	3
2002	Broward Community College	1
2002	Catawba College	1
2002	Southern University – Baton Rouge	1
2002	Widener University	1
2002	University of Arizona	3
2003	Ohio University	1
2003	Miles College	1
2003	Case Western Reserve University	1
2003	Northeastern University	1
2003	Virginia State University	1
2003	Norfolk State University	1
2004	Benedictine University	1
2004	Virginia Commonwealth University	1
2004	Edward Waters College	1
2004	Butler University	1
2005	Temple University	1
2005	Johnson & Wales University – North Miami	1
2006	University of Wyoming	1
2006	Shepherd University	2

2006	South Carolina State University	1
2007	University of Washington	1
2007	Virginia Tech	32
2007	Delaware State University	1
2007	University of Memphis	1
2007	Louisiana State University – Baton Rouge	2
2008	Northern Illinois University	5
2008	Northeast Lakeview Community College	1
2008	University of Central Arkansas	2
2009	Henry Ford Community College	1
2009	Wesleyan University	1
2009	Harvard University	1
2009	Clark Atlanta University	1
2010	University of Alabama - Huntsville	3
2010	Ohio State University - Columbus	1
2010	Frostburg State University	1
2010	Catholic University	1
2010	Seton Hall University	1
2010	Mid-Atlantic Christian University	1
2011	Youngstown State University	1
2011	Southern Union State Community College - Opelika	1
2011	San Jose State University	2
2011	Old Dominion University	1
2011	University of Idaho	1
2011	Northern Illinois University	1
2011	Niagara University	1
2011	Virginia Tech	1

2012	University of South Alabama	1
2012	Mississippi State University - Starkville	1
2012	Jackson State University	1
2012	Oikos University	7
2012	University of Southern California	2
2012	Auburn University	3
2013	Hazard Community and Technical College	3
2013	Chicago State University	1
2013	University of Maryland – College Park	1
2013	Coastal Carolina University	1
2013	Santa Monica College	5
2013	Morehouse College	1
2013	Savannah State University	1
2013	Eastern Michigan University	1
2014	Purdue University – West Lafayette	1
2014	South Carolina State University	1
2014	Los Angeles Valley College	1
2014	Union University	1
2014	University of California – Santa Barbara	3
2014	Seattle Pacific University	1
2014	North Carolina A&T State University	1
2014	Auburn University	1
2015	University of South Carolina - Columbia	1
2015	Vanderbilt University	1
2015	Wayne Community College	1
2015	University of Kentucky	1
2015	Wichita State University	1

2015	Texas Southern University	1
2015	Savannah State University	1
2015	Sacramento City College	1
2015	Delta State University	1
2015	Umpqua Community College	9
2015	Texas Southern University	1
2015	Northern Arizona University	1
2015	Tennessee State University	1
2015	Miles College	1
2015	Winston-Salem State University	1
2015	Florida Atlantic University	1
2016	University of Kentucky	1
2016	Rutgers University - Newark	1
2016	New Jersey Institute of Technology	1
2016	University of California – Los Angeles	1
2016	El Centro College	5
2016	Kansas State University	1
2016	Ohio State University	1
2016	University of Utah	1
2017	North Lake College	1
2017	Georgia Institute of Technology	1
2017	Texas Tech University	1
2017	Grambling State University	2
2017	University of Utah	1
2017	East Stroudsburg University	1
2017	Penn State Beaver	1
2018	Wake Forest University	1

2018	Savannah State University	1
2018	Central Michigan University	2
2018	Compton College	1
2018	University of Utah	1
2018	Voorhees College	1
2019	Claremont McKenna College	1
2019	University of North Carolina at Charlotte	2
2019	University of Oregon	1
2019	Tennessee State University	1
2019	Austin Peay State University	1
2019	Texas State Technical College	1
2019	University of Central Missouri	1
2019	Florida Memorial University	2
2019	Southern University at New Orleans	1
2019	Illinois Institute of Technology	1
2019	Southwestern College	1
2020	Florida Institute of Technology	1
2020	Texas A&M University - Commerce	2
2020	Louisiana Culinary Institute	1
2020	West Virginia University	1
2020	Stillman College	1
2020	North Carolina State University	1
2020	Southern Arkansas University	1
2020	University of Alabama at Birmingham	1
2021	University of Arizona	1
2021	Kennesaw State University	1

## Appendix B

### Approval to Modify GBBS Measure



Whitney Hyatt <wah0008@mix.wvu.edu>

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#### Requesting approval for using and/or modifying your GBBS scale

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Whitney Hyatt <wah0008@mix.wvu.edu>  
To: wamserR@umsl.edu

Tue, Sep 21, 2021 at 3:51 PM

Hi Dr. Wamser-Nanney,

I am a doctoral candidate in the Counseling Psychology program at West Virginia University, and I am currently working on my dissertation study.

My topic is: "Examining the Relationship of Race on Students' Perceptions of Safety and Concealed Campus Carry on a University Campus."

In conducting my literature review, I came across your research and am hoping to utilize the Gun Behaviors and Beliefs Scale (2020) in my dissertation.

I am seeking your permission to modify the items on "Neighborhood Factors" to "Campus Factors," in order to further the body of knowledge on campus safety at West Virginia University. Would it be alright if I reworded the items regarding "In my neighborhood..." to "On my campus...?"

Thank you for conducting meaningful work in our field, your research is greatly appreciated and valued! I look forward to your response.

Kindly,  
Whitney

—  
Whitney A. Hyatt, M.Ed., NCC  
Doctoral Candidate  
Counseling Psychology Ph.D. Program  
West Virginia University



Whitney Hyatt <wah0008@mix.wvu.edu>

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#### Requesting approval for using and/or modifying your GBBS scale

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Wamser, Rachel Ann <WamserR@umsl.edu>  
To: Whitney Hyatt <wah0008@mix.wvu.edu>

Thu, Sep 23, 2021 at 12:23 PM

Dear Whitney,

Nice to meet you! Yes- please feel free to use/modify! And please do let me know how your results pan out! :) Really interesting research, would love to hear/read more! I have an interest in doing something similar here.

Best,

Rachel

Rachel Wamser-Nanney, Ph.D.  
Assistant Professor  
Psychological Sciences  
University of Missouri- St.Louis  
[WamserR@umsl.edu](mailto:WamserR@umsl.edu)

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**Appendix C**

**Attitudes Toward Campus Carry Questionnaire (ATCC-Q)**

West Virginia Senate Bill 246, otherwise known as "The Campus Self-Defense Act" (CSDA), is a legislative bill that would permit concealed carry weapons on higher education campuses throughout the state. The CSDA would allow faculty, staff, and students with concealed carry permits to have handguns on WVU's Morgantown campus, including but not limited to lecture halls, libraries, and common areas of residence halls.

For the following items, please indicate your perceived feelings of safety **if Senate Bill 246 (i.e., The Campus Self-Defense Act) were to pass** in the state of West Virginia:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I would feel safer with a concealed weapon on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would feel safer with other students carrying concealed weapons on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would feel safer with WVU staff carrying concealed weapons on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would feel safer with WVU faculty members carrying concealed weapons on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>















**Appendix E**

**Fear of Crime Index (FCI; Jang et al., 2014)**

For the following items, please indicate your level of feeling afraid of the following things happening to you while on your college campus:

	Not afraid at all	Mildly afraid	Somewhat afraid	Moderately afraid	Very much afraid
Being murdered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being robbed or mugged	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being attacked by someone with a weapon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being sexually assaulted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being raped	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having your things stolen from you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having your car stolen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being stalked	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Appendix F****Demographic Questionnaire**

1. What term(s) best describe your racial identity?

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White
- Bi- or Multi-racial

2. What term best describes your gender identity?

- Man
- Woman
- Non-binary/Third gender
- Prefer to self-describe: \_\_\_\_\_
- Prefer not to say

3. Which term best describes your sexual identity?

- Heterosexual/Straight
- Bisexual
- Gay/Lesbian
- Questioning/Unsure
- Prefer to self-describe: \_\_\_\_\_

Prefer not to say

4. What is your age in years?

18

19

.....

99

5. Are you a West Virginia resident receiving in-state tuition?

Yes

No

5a. (If participant selected “No”) Using the map provided, which term best describes your home geographically?

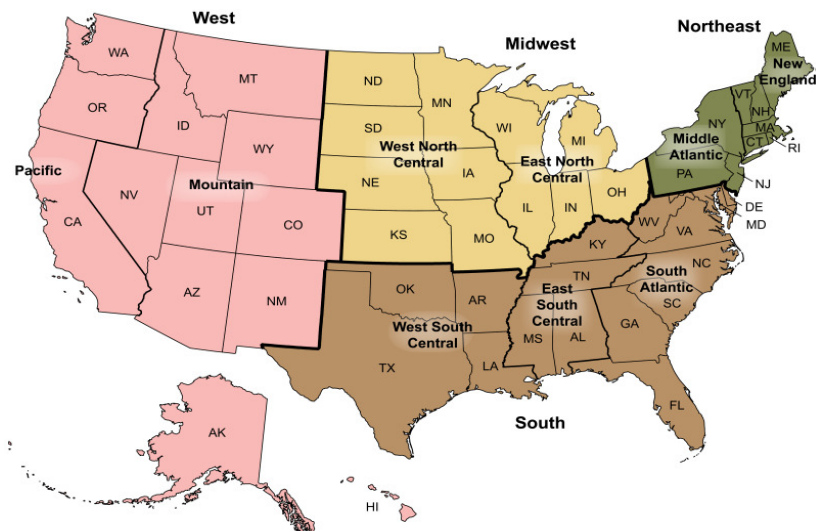
Northeast

Midwest

South

West

International





6. What is your military status?

- Currently active duty in the military
- Served in the past, but not currently active duty
- Never served in the military

7. Are you enrolled in either ROTC program at WVU?

- Yes
- No

8. Including this academic year, how many years have you been a full-time undergraduate student?

- 1
- 2
- 3
- 4
- 5+

## Appendix G

### Institutional Review Board (IRB) Approval



#### Acknowledgement of Exemption

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01/26/2022

**To:** Christine Schimmel

**From:** WVU Office of Human Research Protections

**Protocol Type:** Exempt

**Approval Date:** 01/26/2022

**Submission Type:** Initial

**Expiration Date:** 01/25/2027

**Funding:** N/A

**WVU Protocol #:** 2111457345

**Protocol Title:** Examining the Relationship of Race on Students' Perceptions of Safety and Concealed Campus Carry on a University Campus

## Appendix H

### Informed Consent

Dear Prospective Participant,

This letter is a request for you to participate in a research project to explore undergraduate students' attitudes toward guns, feelings of safety, and identify potential relationships between various demographic factors. This project is being conducted by Whitney Hyatt, M.Ed., in the Department of Counseling and Learning Sciences at WVU under the supervision of Dr. Christine Schimmel, an Associate Professor in the Department of Counseling and Learning Sciences, to fulfill requirements for a Doctor of Philosophy Degree in Counseling Psychology.

If you decide to participate, you will be asked to complete a Qualtrics survey involving four total questionnaires. Your participation in this project will take approximately 5-10 minutes to complete the survey. You must be 18 years of age or older to participate. In addition, you must currently be enrolled as a full-time undergraduate student at WVU and enrolled in at least one in-person course on the Morgantown campus at WVU. You may directly receive extra credit in an enrolled psychology course via the SONA software for participating in this study, although the researchers do not have a direct influence on these academic benefits.

Your involvement in this project is anonymous. All data will be reported in the aggregate. You will not be asked any questions that could lead back to your identity as a participant. Your participation is entirely voluntary. You may skip any question that you do not wish to answer, and you may stop participating at any time. Your class standing will not be affected if you decide not to participate or withdraw. The West Virginia University Institutional Review Board's acknowledgment of this project is on file with the WVU Office of Human Research Protections. If you have any questions about this research project, please feel free to contact me by email at [wah0008@mix.wvu.edu](mailto:wah0008@mix.wvu.edu) or Dr. Christine Schimmel at [chris.schimmel@mail.wvu.edu](mailto:chris.schimmel@mail.wvu.edu). Additionally, you can contact the WVU Office of Human Research Protections at 304-293-7073.

I hope that you will participate in this research project, as it could help us better understand perceptions of campus safety, attitudes toward guns, and campus carry policies.

Thank you for your time and consideration.

Sincerely,

Whitney Hyatt, M.Ed.  
Christine Schimmel, Ed.D.

## Appendix I

### Mental Health Resources

**Thank you for your time and participation in this study. Your response has been recorded.**

**Please feel free to review these resources and utilize them as you see fit:**

The Carruth Center for Psychological and Psychiatric Services  
carruth.wvu.edu  
304-293-4431

Crisis Text-Line  
Text "WVU" to 741741

APEX Counseling in Morgantown  
apexcounseling.org  
304-381-3659

Natural Resilience in Morgantown  
naturalresilience.org  
304-281-2211

National Suicide Prevention Lifeline  
800-273-8255

**Contact the Primary Investigators (PIs) with any questions, comments, or concerns:**

Whitney Hyatt, M.Ed.  
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Christine Schimmel, Ed.D.  
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