The Distress in Academia Due to Gun Violence Assessment

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PSY 504: Psychological Measurement

Assumption University

November 16th, 2023
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Introduction

Attending school in the United States offers many unique learning opportunities, yet induces significant stress on students. Students, especially those college-aged, are experiencing more complex issues than those who attended school over a decade ago. These problems include more intense and competitive academic pressure, personal growth in the wake of uncertainty and new environments, and exposure to new perspectives and ideas (Kumaraswamy, 2013). Though these obstacles are not specific to students in the United States, there is one particular stressor that seems to affect American students at a disproportionate rate than students from other countries.

Unfortunately, gun violence has become a common reality in the United States. The rates of such violence have increased dramatically over the years. According to the Pew Research Center, there was a 23% increase in the number of gun violence deaths from 2019 to 2021 (Gramlich, 2023). Though this data includes suicides and homicides, they also reported that the rates of gun murders sharply increased after the COVID-19 pandemic with about a 45% increase from 2019 to 2021 (Gramlich, 2023). Gun violence affects people in various communities and settings; however, the United States has recently experienced a rise in cases of school shootings.

According to the National Center for Education Statistics, gun violence is a leading cause of injury and death on school campuses as evidenced by over 100 instances of armed violence between 2019 and 2020. Given the sharp increase in active shooter incidents in recent years (more than a 50% increase between 2020 and 2021), it is important to evaluate and understand how such violence affects students (Federal Bureau of Investigation, 2022). The
Distress in Academia Due to Gun Violence (DADGV) assessment aims to explore the amount of psychological distress experienced by students as a result of direct and indirect gun violence.

**Problem of Concern**

Students face significant psychological distress in their everyday lives due to various academic demands. Roughly 75% of college students reported experiencing moderate to severe psychological distress within the last two years, without the effects of gun violence being considered (American College Health Association, 2021 as cited in Abrams, 2022). This type of distress can best be described as emotional suffering. Psychological distress (PD) is characterized by various symptoms such as unhappiness, restlessness, loss of interest, feeling tense, and various somatic symptoms like insomnia and fatigue (Horwitz, 2002 as cited in Belay et al., 2021).

PD has been found to lead to various adverse academic and personal outcomes in students. For instance, Sharp and Theiler (2018) found that increased levels of psychological distress are positively correlated to an increase in depressive and anxious symptoms. PD is also associated with higher rates of college attrition rates and poor academic performance (Saha & De Choudhury, 2017; Sharp & Theiler, 2018). These effects also impact the rates of new student enrollment and average test scores of students in Kindergarten through twelfth grade (Stanford Institute for Economic and Policy Research, 2022).

Overall, PD has significant academic and mental impacts on students of all levels (e.g., Kindergarten - college). Many studies show how gun violence in school settings can increase these negative academic and mental impacts, while also causing PD that is similar to levels of those diagnosed with Post-Traumatic Stress Disorder (PTSD) (SIEPR, 2022; Saha & De Choudhury, 2017; Steinheimer, 2020). Though there is significant evidence to suggest that gun
violence in school settings negatively impacts students’ psychological well-being, a proper assessment to measure the PD as a result of such violence has yet to be developed. The DADGV was created to address this gap in psychological assessment and allow clinical professionals, parents, students, and administrators to understand how the threat of direct and indirect gun violence is affecting students.

Various assessments measure respondents’ rates of PD following certain traumatic events. For instance, the National Center for PTSD created the COVID-19 Exposure Scale in an attempt to understand how the COVID-19 pandemic negatively impacted the mental well-being of individuals (NCPTSD, 2021). This scale questions individuals about their direct and indirect exposure to coronavirus, the injury and death they experienced or witnessed, and measures their overall PD surrounding these experiences. This assessment inspired the DADGV because of its ability to measure PD following a specific traumatic event that had a direct or indirect impact on individuals. The need for an assessment that measures PD following gun violence on campuses is evident due to the negative effects of such events. Students, who already have elevated levels of PD due to academic pressures, experience added PD following and hearing about gun violence in school settings (SIEPR, 2022; Turner et al., 2019). To address these psychological effects and increase the sense of security of students, counselors must first be able to assess the levels of PD due to gun violence reliably and validly.

**Nature of Assessment**

**Item Content**

With respect to the present assessment’s content, items pertain to assessing students’ distress and/or impairment secondary to experiencing gun violence. To do so, the assessment asks respondents to indicate the extent to which they agree (strongly disagree to strongly agree)
with a given statement. Specifically, the DADGV assesses the degree to which students view gun violence as a threat, students’ perceived sense of safety and security on campus as well as any adverse physical and/or emotional symptoms experienced due to gun violence exposure. Additionally, items measure perceived functional impairment (particularly in academic and interpersonal spheres) stemming from armed violence exposure, perspectives on governmental response to school gun violence, and opinions on school safety protocol(s). As a means of gathering information on the extent of respondents’ gun violence exposure, the DAD-GV concludes with 2 short questions pertaining to students’ direct and indirect exposure to armed violence (e.g., knowing someone who’s survived gun violence).

In terms of the rationale behind assessing students’ perceptions of threat, there is strong evidence to suggest that gun violence is a concern endorsed by student populations. As per Graf (2018), more than 50% of students indicated feeling worried about their high school becoming a target of gun violence. Although Graf’s (2018) report was published shortly after the Marjory Stoneman Douglas High School shooting (a time during which fears of school gun violence were likely elevated), the upward trend in school shootings over the past decade likely contribute to anxieties over gun violence observed among high school and college students (Matthews, 2023).

In addition to measuring views on the threat posed by gun violence, the DADGV’s assesses perceptions of campus safety and perspectives on gun violence safety protocols. Inclusion of items reflecting these themes is warranted given that concerns over safety/security frequently emerge in college student populations. Indeed, college students reported concerns about safely navigating campus (e.g., walkways/alleys) due to worries about campus crime - anxieties that plausibly may extend to potential gun violence (Chekwa, Thomas & Jones, 2013).
Furthermore, it is not unreasonable to suggest that high school students share similar worries about campus safety given the aforementioned spike in school violence (an increase from 16 incidents in 2013 to 69 reported shootings as of 2023) (Matthews, 2023).

In terms of the sequelae of gun violence exposure, the gun violence literature clearly indicates that exposure to armed violence is associated with a number of adverse physical and emotional outcomes. Exposure to gun violence may contribute to physiological complaints such as headaches, fatigue, hypertension, and muscle tension (Vargas & Hemenway, 2021). In a related vein, common affective symptoms include feeling worried, anxious, angry, sad, and/or distrustful of other individuals (Vargas & Hemenway, 2021). Although Vargas & Hemenway (2021) noted that individuals broadly report experiencing distressing physical and emotional symptoms following crime victimization, such symptoms were especially pronounced in situations in which the perpetrator was armed. In this context, assessing how students may be physically and emotionally affected by gun violence is of critical importance.

In terms of functional impairment, research indicates that exposure to violent crime is associated with impairment within academic, occupational, and interpersonal spheres (Langton & Truman, 2014). As gun-related crimes are undoubtedly violent in nature, it is probable that experiencing gun violence results in similar impairment. Indeed, Garbarino, Bradshaw & Vorrasi (2002) noted that children and youth exposed to armed violence often experience declines in school performance as well as lower academic and occupational achievement and aspirations. Supporting these findings, the Stanford Institute for Economic Policy Research (SIEPR) (2022) reported that students exposed to gun violence in their early high school years were less likely to finish high school or attend and graduate from university - in turn, linked to lower earnings and career prospects in early adulthood. Experiencing gun violence is also tied
to social withdrawal and reduced quality of friendships among exposed youth, although such exposure likely impacts relationships with other significant figures (e.g., parents) as well (Garbarino, Bradshaw & Vorrasi, 2002). Taken together, the findings of Garbarino et al. and the SIEPR (2022) underscore the far-reaching negative impacts of gun violence exposure on academic/occupational and social functioning, highlighting the need to assess students’ functional impairment.

Turning to student opinions regarding federal responses to gun violence, evidence suggests that student populations are dissatisfied with government management of gun-related violence. As per Lewis et al. (2016), 56% of college students reported believing that the United States government is not doing enough to address the issues of gun violence. Similarly, over 50% of college students indicated that they believe military assault weapons should be banned - indicating discontentment with present gun control policies (Lewis et al., 2016). As both firearm availability and governmental response to school violence undoubtedly influence students’ perceived safety and associated distress, the DAD-GV’s assessment of student perspectives on school security is justified.

**Source of reporting**

The present assessment is a self-report-based measure oriented toward high school and college-aged individuals. The instrument is agnostic with respect to gender and may be utilized in outpatient settings. Item wording is simple and straightforward and requires participants to read at the 8th-grade level at minimum. Self-report is an appropriate means of assessment given that items require participants to respond in retrospective terms.

**Target population**
Turning to the assessment’s target demographic, increased gun violence in academic settings in recent years suggests that high school and university students are vulnerable to the multiple negative effects of armed violence exposure (outlined above), thus warranting clinical attention (Reeping et al., 2022; Katsiyannis et al., 2023).

**Administration and Scoring**

**Instructions for Administration**

The DADGV is a self-report 17-item instrument that measures an individual’s perceived distress or impairment as a result of exposure to gun violence in the United States. This assessment is self-administered on the website Qualtrics using an electronic device. Prior rapport and familiarity between the test taker and the administrator is not necessary. Administration of assessment can be performed following an incident involving exposure to gun violence, as delay in screening is not recommended (Rockville (MD): Substance Abuse and Mental Health Services Administration (US), 2014).

**Scoring Procedures**

In this assessment, there are fifteen four-point Likert scale questions. Test-takers can respond to the level in which they agree or disagree with various statements regarding perceptions of gun violence in academic settings. The responses to these items include “strongly disagree,” “disagree,” “agree,” or “strongly agree.” Items 3 and 15 on the likert portion are reverse scored. There are also two dichotomous (e.g., “yes” or “no”) questions at the end of the assessment. Scoring for this assessment is norm-based. An individual’s score will be assessed relative to the norming group. Scores that are one Standard Deviation (SD) above the norm should be viewed as above average and indicate higher levels of perceived psychological distress as a result of armed violence in academia. It should also be noted that a score of four on
any of the Likert-scale items should be noted for follow-up clinical interviews, as a four would suggest severe levels of distress. With respect to scoring this assessment, there is no true cutoff score because the scores themselves are not to be used for diagnostic use. However, the score can provide insight into whether other standardized assessments and clinical instruments should be utilized to help personalize care and guide treatment.

Score ranges are based on the normal distribution of the assessment. Scores below the mean and up to the mean should be considered average with no cause for further evaluation or intervention regarding the participants perceived distress regarding gun violence exposure in an academic setting. Scores that are one SD above the mean with at least one distress marker, indicated as “Strongly Agree,” on questions 1, 2, 4, 7, 8, 9, and 10 should be considered for further evaluation. This instrument lacks construct and criterion validity for the scoring to indicate diagnostic features or qualities. The content instead can offer a focus on areas of distress that require further exploration during the clinical interview and future treatment planning.

**Interpretation and Reporting of Scores**

The scoring interpretation for this assessment is norm-based. As a result of this, scores above or below one SD are interpreted as above or below the average range. Thus scores above the mean indicate that the participant is experiencing potentially elevated levels of distress regarding their perceived threat of gun violence within their academic setting. Questions 1, 2, 4, 7, 8, 9, and 10 specifically focus on the participants’ affective, somatic, and perceived threat responses, and so are marked as critical items where scoring “strongly agree” should be flagged for follow-up evaluation.

The score itself can be reported to the client during the interview, but it must be expressed that it holds no real value outside of its standing which is relative to the norm. The
therapist should explain this and indicate that scoring high (a score of “strongly agree”) on items 1, 2, 4, 7, 8, 9, and 10 only offers direction for exploration. Additionally, the clinician should provide any additional resources that the individual may need.

**Assessment Development Process**

The first version of the DADGV developed included 16 items. The first 14 items of the original assessment were measured on a four-point Likert scale ranging from “strongly disagree” to “strongly agree.” The final two items in this version of the assessment were dichotomous and asked respondents if they had directly been affected by gun violence in a school setting or if they knew anyone who had been directly impacted by gun violence in a school setting. This version of the assessment was created using Qualtrics and was piloted by sending a link to the questionnaire to college students who volunteered to take the assessment. At the beginning of the assessment, volunteers were told why the assessment was developed, the warning for the potential exposure to a triggering topic, the assurance that all responses were anonymous and that volunteers could withdraw from the survey at any time, and asked whether they provided informed consent to participate.

A total of 37 volunteers took the first version of the DADGV and provided feedback. Though the majority of the feedback received was complimentary, rather than constructive, there were a few points made by volunteers that altered the development of the revised version of the assessment. For instance, one volunteer revealed that many of the items and the assessment as a whole revolved around the experience of college students when they wished it could have been applied to those who were not currently in college. This feedback was received and provided an opportunity to conduct more research.
that high school students also experienced higher levels of distress as a result of gun violence in academia, the target population was expanded to include high school students.

Multiple volunteers expressed their concern regarding the number of points on the Likert scale used throughout the assessment. One volunteer mentioned that they would have liked to see a neutral option, which would make the Likert scale a five-point rather than a four-point. However, on the other hand, there were volunteers who suggested adding more options such as “somewhat agree” and “somewhat disagree” to create two more neutral options, which would indicate a six-point Likert scale. Though this feedback was appreciated, it was not implemented in the updated version of the DADGV because more response items, especially those that are neutral, could further complicate the degree to which a student experiences distress or not.

Another volunteer revealed that they were unsure of how to answer some of the questions because they had past experiences with gun violence, but it was not in a school setting. Though the respondents were asked at the beginning of the assessment to keep gun violence in school settings in mind while responding to the items, this feedback indicated that the wording of particular items needed to be more explicit. For instance, one item that was changed was “I view gun violence as a real threat to my safety and well-being.” In order to make this item more specific to school settings, “on campus” was added to the end of the statement. This addition was included in multiple items on the second version of the DADGV in order to correct any outlets for uncertainty or confusion.

The last piece of feedback given was to change the specific wording of two items. One of these items originally read “I find my academic performance is negatively impacted after exposure to gun violence (direct or indirect).” A volunteer expressed that the item would be easier to interpret if “direct” and “indirect” were embedded in the statement before the word
“exposure.” Due to this feedback, these items were edited to include “...after direct or indirect exposure of gun violence.” This feedback made the items easier to interpret and contributed to the flow of the assessment overall.

Finally, upon further research, the developers of the DADGV decided that there should be an item that encapsulated more somatic symptoms that could be experienced by students as a result of gun violence in school settings (Vargas & Hemenway, 2021). In the original version, the only somatic symptom assessed for was feelings of being tense. In the final version, an item was included that assessed for fatigue, stomach problems, and headaches as a result of armed violence in academia. Though this change was not suggested by a volunteer, the developers still noticed that this was an area of improvement that could be expanded within the assessment.

Overall, the final version of the DADGV contains 17 items, utilizes a four-point Likert scale, and asks two dichotomous questions.

**Proposed Technical Evaluation**

*Norms – Desired Population Characteristics to Develop Psychometric Properties for Assessment*

The size of the norming group would be at least 100 students who are currently in high school or college (undergraduate or graduate). Ideally, the norming group would consist of roughly 1,000 or more students. This group would consist of individuals of any age, race, ethnicity, or gender as long as they are attending high school or a higher education program. Additionally, the norming group would include participants from across the United States and would encompass all geographic regions within the country. This assessment’s target populations include students in high school and at the undergraduate or graduate college level.
For this reason, there is an education level requirement that requires, at least, an 8th-grade reading level to complete.

The norming group for this assessment utilizes cluster sampling. The assessment would be administered to individuals in high school and college campuses across the country while they are currently enrolled. The norming group mimics the population the assessment intends to test. This population is vulnerable to negative outcomes due to exposure to gun violence. These outcomes include high attrition, or dropout, rates in high school and college (SIEPR, 2022). A total of 1,000 or more students would be representative of 1% of the estimated 100,000 students that attended a school where a school shooting occurred in 2018-2019 alone. This percentage potentially provides a stronger representation of the affected students (SIEPR, 2022). The desired population characters are intentionally left broad in order to widen the scope of affected individuals. The age is not restricted to conventional and predominant age ranges regarding college and graduate students, as older students may have similar or even greater prevalence with exposure to gun violence (Lewis et al., 2015; Riedman & O’Neill, 2022).

**Reliability**

For this assessment, the analyses used would be Cronbach’s Alpha, Kuder-Richardson, and test-retest. Kuder-Richardson would be utilized for testing the reliability of the dichotomous portion of the DADGV, while Cronbach’s Alpha would assist in testing the reliability of the Likert-scale portion of the test. Test-retest would be applied to test the reliability of the entire assessment.

**Validity**

With respect to validity, assessing content and criterion validity is of great importance. Given that the present assessment functions as a measure of current levels of distress, assessing
content-related validity is necessary to ensure that the items adequately represent distress as a result of exposure to direct or indirect gun violence. Furthermore, examining criterion validity (specifically convergent evidence) is similarly important to determine the degree of alignment with other instruments assessing gun violence-related distress.

**Practical Applications of Assessment**

The DADGV aims to determine the degree to which school shootings impact students and could inform further courses of action that should be taken as determined by individual results. The results of said assessment inform the individual’s school and clinical team of any additional resources or therapeutic interventions the client may require due to higher levels of distress directly related to gun violence within academic settings. These results could also be viewed as a way for clinicians to narrow their focus on what the client’s psychological distress and symptoms are centered around. If the results show the client is displaying distress levels related to gun violence, the therapist can devise a treatment plan specific to that stressor. The DADGV can also provide insight for the school district as a whole or college campus. This assessment allows the administrative and academic officials to determine the level of safety their students feel and implies if further steps need to be taken to ensure students feel a sense of security on campus.

Many currently available assessments along the lines of the one developed, do not narrow their study of gun violence to a specific setting (Turner & Mitchell, 2019). This assessment narrows the focus from gun violence in a general sense, down to directly looking at the effects of gun violence within academia. The questionnaire targets the level of exposure to school shootings whether it be via media or firsthand, and then seeks to compare that to the amount of distress one reports experiencing.
One strength that this survey presented was the fact that the questionnaire was self-reported. Self-report assessments are common tools of measurement that most individuals experience at some point, whether it be at their primary care or taking an online survey (Salters-Pedneault, 2023). Providing a straightforward assessment that was structured in a familiar way to clients was determined to be the most effective way of gathering data. While the self-report measurement was viewed as an overall strength, it is important to note that a possible limitation of this survey is that the questions are retrospective. The goal of the assessment is to examine the levels of distress experienced by students when they are exposed to gun violence in a school setting. Given that the questions asked individuals to recall thoughts and feelings from their most recent exposure, if any, the results may vary based on how much time has passed since the exposure. A client who experienced any type of exposure to school gun violence just a day before taking this assessment would likely have a result that differed from someone who had not been exposed in several years. Another limitation of this study was that it was originally targeted specifically to college students rather than all students in general. After receiving feedback during the initial assessment, this limitation was addressed and the study was broadened to include high-school and college-level attendees.

Conclusion

In conclusion, the increasing incidence of school (and more broadly, community) gun violence is cause for serious concern. Despite the high rates of armed violence in academic settings, rising student concern regarding the threat of gun violence and adverse effects related to gun violence exposure (e.g., poor physical/mental health, functional impairment in academic/occupational/interpersonal domains), the existing body of research is marked by a dearth of instruments assessing distress and/or impairment among student populations. Given
that gun violence is the unfortunate reality of living and learning on educational campuses, the DADGV may serve to help mitigate the effects of armed violence exposure by helping identify at-risk individuals in need of clinical intervention. In addition to this, the DADGV may further contribute to current understanding of how and to what extent gun violence is affecting students - useful for informing the development of future instruments to assess the many negative sequelae associated with exposure to armed violence within student populations.
References


https://www.apa.org/monitor/2022/10/mental-health-campus-care

Abrams (2022) explains that college students are one of the most significant populations in the United States at risk for developing mental illnesses and experiencing other negative affective symptoms. Further, research states that 60% of college students meet the diagnostic criteria for at least one mental disorder, and that 75% of students report experiencing moderate to severe psychological distress. The author of this article suggests various ways to address the mental health gap that exists for this population such as walk-in appointments for a single intake or session instead of waiting weeks for an appointment.


https://doi.org/10.4314/ejhs.v31i6.21

Belay et al. (2021) discusses how nurses in Ethiopia are more likely to exhibit higher levels of psychological distress as a result of their occupational experiences. This psychological distress was characterized by unhappiness, loss of interest, anxiety, restlessness, and feeling tense. As a result, researchers suggest that more mental health interventions should be available for nurses in public hospitals.

Chekwa, Thomas & Jones (2013) examine university students’ perspectives on safety and security on college campuses. For students, campus safety is a significant concern, specifically with respect to selecting an institution and navigating school grounds. Chekwa and colleagues (2013) also survey students’ perceptions of what a safe campus would ideally look like as well as endorsement of self-defense measures (e.g., owning a firearm for personal protection).


The Federal Bureau of Investigation (FBI) reports the number of active shooter incidents that occurred during 2021. This report reveals that the rates of active shooter incidents have increased by 52.5% from 2020 to 2021. Various biographical data about individuals who committed armed acts of violence in the United States over time.

https://doi.org/10.2307/1602739

Garbarino, Bradshaw & Vorrasi’s (2002) review of the gun violence (GV) literature highlights the multiple adverse sequelae of exposure to armed violence. Consequences
of GV exposure include changes in affect (e.g., anger), post-traumatic stress, social withdrawal and academic/occupational impairment among others. In addition to this, Garbarino and colleagues (2002) specifically explore how exposure to community violence, school violence and GV through the media may affect youth. Finally, the article concludes with a discussion on how to protect youth from the aforementioned negative psychological impacts of GV exposure.


Gramlich (2023) reports various facts related to the events of gun violence in America over the span of decades. This information clearly illustrates the increase in deaths associated with gun violence and how this trend changes over time. This source states that the number of murders as a result of armed violence increased by roughly 45% between 2019 to 2021. This data also shows that the number of gun deaths in children and adolescents increased by 50% between 2019 and 2021.


Katsiyannis et al. (2023) examines rates of school mass shootings in the United States between 2017 and 2022. Katsiyannis and colleagues (2023) note that the number of reported school shootings declined during the COVID-19 pandemic (specifically in 2020) given mandated school closures to limit the spread of coronavirus before rising
again in 2021. Mortality rates associated with intentional gun deaths (including police brutality, suicide etc.) and crude death rates are also reported; these are broken down by age group, race/ethnicity and gender.


Kyle et al.’s (2017) investigation largely centers on the differences between students, faculty and staff with respect to safety policies on campus (many of which pertain to firearm use). As a secondary objective of their study, Kyle et al. examines how factors such as prior crime victimization, satisfaction with the public safety department etc. are associated with endorsement of safety initiatives (e.g., refusing admission/expelling students with criminal history).


Pedneault (2023) examines the advantages as well as disadvantages to the use of self-report assessments in a clinical setting. Pedneault lists several personality tests as being good examples of a self-report assessment. This article was taken into consideration when discussing the strengths of the presented assessment.

Langton & Truman (2014) explore the socio-emotional impact of experiencing violent crime (including violence involving a gun). Common issues reported following crime victimization include interpersonal conflict, problems at school/work as well as negative emotional symptoms such as anger and anxiety. Although this article does not directly relate to school/university violence, it is not implausible to suggest that high school/college students experience similar negative effects secondary to GV exposure.


Lewis et al. (2016) investigates students’ beliefs on firearm availability, the right to carry weapons on college campuses and factors that may contribute to gun violence. The influence of gender and ethnicity on beliefs relating to gun control/violence is examined alongside implications posed by the study’s findings.


This online news article presents an overview of the incidence of school shootings in the US during the last decade (beginning 2008). Rates of school GV are broken down by year and to some extent, geographic region.


The National Center for Education Statistics (NCES) (2023) reports that school shootings are the number one cause of death in academic settings as evidenced by over
100 school shootings between 2019 and 2020. This evidence suggests that gun violence in school shootings has increased over the years and continues to be an issue for students, faculty, and staff.


The National Center for PTSD (NCPTSD) (2021) developed an assessment to measure the perceived amount of distress as a result of the COVID-19 pandemic. This assessment asks individuals about their direct and indirect experiences with sickness, injury, and death due to coronavirus. Overall, this source demonstrates that assessments have been created to measure perceived psychological distress as a result of traumatic events that were experienced either directly or indirectly.


Kumaraswamy (2013) discusses many variables that contribute to the stress levels of college students. Current levels of stress for this population are at an all time high and are projected to increase further throughout the years. Levels of stress in college students are impacted by complex issues that are affecting current students at a disproportionate rate to those who were in college over a decade ago. These stressor include more academic pressure, more competitive school environments, new experiences, social pressures, and more. These stressors lead to higher rates anxious and depressive symptoms along with psychological distress.

Reeping et al. (2022) considers the association between state gun laws, rates of firearm possession by state and school/active shooting incidents over a 20-year period (1999-2018). Key findings indicate a surge in GV in K-12 schools since 2015 as well as the presence of an association between permissive state gun laws, higher gun ownership and increased rates of intentional school GV.


The fourth chapter of the Treatment Improvement Protocol (TIP), focused on the factors and importance surrounding screening and assessment of traumatic experiences. It discusses the importance of trauma-informed screening at intake and its purpose for further evaluation. The advice section for counselors is the first section that highlights the importance not to delay screening, with a follow-up section on timing later on in the chapter.

Saha & De Choudhury (2017) report the negative effects that stress has on college students. Unfortunately, the levels of stress are believed to increase after college students experience gun violence on campus. This study illustrates how researchers, mental health professionals, and parents can monitor student stress after an incident of gun violence by reflecting on what students are posting on social media. Evidence suggests that college students are more likely to experience reduced cognition, higher self-preoccupation, and discussions about death online as a result of school shootings.


Salters-Pedneault (2023) assesses the advantages and disadvantages of self-report surveys similar to the DADGV and determines that self-report surveys are common tools that provide a sense of familiarity during assessment (2023).


Sharp & Theiler (2018) report that psychological distress is experienced by many college and university students worldwide. This distress can cause negative outcomes such as poorer academic performance, higher attrition/dropout rates, and negative mental health outcomes such as depressive and anxious symptoms.

This policy brief offers a brief survey of the long-ranging effects of GV exposure. Indeed, experiencing GV is associated with poorer mental health outcomes (e.g., increased rates of antidepressant prescriptions), diminished school performance, lower academic/vocational aspirations and attainment as well as fewer future employment prospects etc.


Steinheimer (2020) reports how the rates of gun violence impact students from low-income homes are affected more by gun violence than those who come from homes with more wealth. Students in lower income neighborhoods are more likely to experience community gun violence from a young age, which can impact their ability to function in various areas of their lives, including school. This paper suggests that students who have experienced gun violence (e.g., have seen someone be shot, been shot, or have heard gun shot sounds) can develop psychological distress symptoms that are comparable to those who have been diagnosed with PTSD.

Turner et al. (2019) reveals in their study that witnessing gun violence first-hand and hearing gun shots can lead to post-traumatic stress symptoms in children ages 2 - 17. They also found that gun violence that is directed at children and adolescents personally leads to higher rates of negative symptoms that can affect their mental well-being.


Vargas & Hemenway (2021) outline the various emotional and physical symptoms experienced by survivors of gun-related crimes. GV exposure is associated with a high degree of impairment and distress as evidenced by negative emotional symptoms such as anger, sadness and depression as well as somatic complaints including headaches, hypertension, stomach issues. Symptom endorsement by type of crime (e.g., robbery, rape) and weapon (e.g., firearms, other weapons) are also compared.
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Introduction

(Pexels, 2020; Unicode, 2006)
Figure 1. Number of student, staff, and other nonstudent school-associated violent deaths and number of homicides and suicides of youth ages 5–18 at school: School years 1992–93 through 2019–20

(National Center for Education Statistics, 2023)
Problem of Concern

01
Problem of Concern

Characteristics of Problem
- Anxious & depressive symptoms
- Poor academic performance
- Higher rates of academic attrition
- Similar levels of psychological distress as compared to those with PTSD

Rationale for Chosen Problem
- Higher rates of gun violence
- Gap in current empirical data
- No available assessment
Nature of Assessment
Nature of Assessment

**Item Content**
Threat of GV, safety/security, physical/emotional symptoms, functional impairment associated with GV, opinions on government response, perspective on safety protocols

Degree of exposure

**Source of Reporting**
Retrospective self-report
Simple wording and phrasing

**Target Population**
High school and college students - vulnerable populations
Outpatient settings
**Administration and Scoring**

**Instructions for Administration**
- What should the therapist know?
- What should be communicated to the client?

**Scoring Procedures**
- How is it being scored?
- Overall score/scale
- Score range and proposed cut-off scores
- Rationale

**Interpretation and Reporting of Scores**
- What do the scores mean?
- How to communicate results to client?
Instructions For Administration

● What should the therapist know?
  ○ Self report (17 items)
  ○ Measures perceived distress
  ○ Self administered (Qualtrics)
  ○ No rapport necessary
  ○ Can be performed immediately after an incident

● What should be communicated to the client?
  ○ Triggering content
  ○ Can cease testing anytime
  ○ Inform purpose of assessment
Scoring Procedures

- How is it being scored?
  - Likert scale (15 questions)
  - Dichotomous (2 questions)

- Overall score/scale
  - Norm based
    - 1 SD above norm is above average

- Score range and proposed cut-off scores
  - No cut-off score
  - Indicates need for future assessments + follow up
  - Score ranges are based on normal distribution
  - Scores below mean and up to mean indicate no cause for concern
  - Answering strongly agree on questions 1, 2, 4, 7, 8, 9, and/or 10 require future evaluation

- Rationale
  - Lack of construct/criterion validity
    - Cannot indicate diagnostic features
Interpretation and Reporting of Scores

● What do the scores mean?
  ○ Norm based scoring
    ■ Any score above 1 SD is above average range
      ● Elevated levels of distress
  ○ Questions 1, 2, 4, 7, 8, and 9, 10 focus on affective, somatic, and perceived threat responses
    ■ Strongly agree should be flagged

● How to communicate results to client?
  ○ Score can be reported
    ■ DOES NOT hold value outside of its standing relative to the norm
    ■ Scoring high just offers direction for exploration
Proposed Technical Evaluation
Proposed Technical Evaluation

**Norms**
- Demographics
- Procedures to obtain norming sample
- Rationale

**Reliability**
- Type of reliability Analyses

**Validity**
- Type of Analyses Rationale
Norms

- Demographics
  - At least 100 people, ideally more
  - Any age, race, ethnicity, or gender
    - Age is not restricted because all ages in higher education can experience gun violence exposure
  - High school or college students
  - At least 8th grade reading level
  - United States

- Procedures to obtain sample
  - Cluster sampling
  - Administered to high school and college students while they are on campus

- Rationale
  - Mimics population intended to be tested
  - This population is vulnerable to high attrition/dropout rates from high school and college
Reliability

- Cronbach’s Alpha
  - Likert scale portion
- Kuder-Richardson
  - Dichotomous portion
- Test-Retest
  - Entire test
Validity

- Criterion-validity
  - Makes sure the items adequately represent distress due to exposure to direct/indirect gun violence

- Content-validity
  - Convergent evidence
    - Needs to be correlated with other assessments that measure distress due to direct/indirect exposure to gun violence
The following assessment pertains to respondents’ experiences with gun violence. It is important to keep in mind that this topic may be triggering for some individuals. As such, participants may stop taking the assessment at any time and are guaranteed full anonymity with respect to responses.

If you choose to complete the assessment, please respond to the questions with the threat of gun violence in mind and by considering how such violence affects your experience as a college student. In the case that completion of this survey causes distress or discomfort, participants may benefit from a list of local mental health resources provided at the end of the questionnaire.

Please indicate below if you consent, or do not consent, to complete this survey.

Yes, I consent to participating in this survey

No, I do not consent to participating in this survey
## Assessment Development Process

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am worried about my school becoming a target of gun violence</td>
<td></td>
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<tr>
<td>I think that gun violence affecting other school communities could reasonably affect me</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel anxious attending school due to the threat of gun violence</td>
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</tr>
<tr>
<td>I feel unsafe attending school due to the threat of gun violence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Assessment Development Process

I feel tense at school due to the threat of gun violence
- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

I would feel safer at school if teachers were armed
- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

I would feel safer if there were armed security guards or police officers at school
- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

I find it difficult to engage with others socially following exposure to gun violence (direct or indirect)
- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

I believe that the United States government has appropriately addressed the issue of gun violence in schools
- Strongly Disagree
- Disagree
- Agree
- Strongly Agree
Assessment Development Process

- “I liked the depth of the survey!”
- “A lot of the questions are about colleges only. Also one of the last questions: one of my friends knew someone affected by gun violence but not a school shooting.”
- “A neutral option.” “There should be two more choices of ‘somewhat agree’ or ‘somewhat disagree.’”
- “I think the wording on these two questions should be changed. Instead of having ‘(direct/indirect)’, you should say this before the word ‘exposure.’”
- Though this was no feedback received from one of our anonymous respondents, we changed a few of the items to clarify that the fear or distress felt was “on campus” or in a school setting.
Assessment Development Process

I view gun violence as a real threat to my safety and well-being on campus

Strongly Disagree  Disagree  Agree  Strongly Agree

I find my academic performance is negatively impacted after direct or indirect exposure to gun violence

Strongly Disagree  Disagree  Agree  Strongly Agree

I’ve experienced one or more of the following symptoms due to direct or indirect gun violence exposure (e.g., fatigue, stomach problems, headaches)

Strongly Disagree  Disagree  Agree  Strongly Agree
Practical Applications of Assessment
Practical Applications of Assessment

**Clinical Setting**
Assesses needs for clinical intervention

**School Setting**
Identifies at risk students/flaws in school district

**Strengths**
Self-report

**Limitation**
Retrospective in nature
Only open to college students
Conclusions
Distress in Academia Due to Gun Violence (DADGV)
Version 1
Intro

According to the National Center for Education Statistics, gun violence is a leading cause of injury and/or death on college campuses as evidenced by over 100 instances of armed violence between 2019 and 2020. Given the sharp increase in active shooter incidents in recent years (more than a 50% increase between 2020 and 2021), it is important to evaluate and understand how such violence affects students.

While much of the current literature explores the impact of gun violence on students attending kindergarten through high school, college students remain an understudied yet vulnerable demographic.

As such, this survey aims to measure perceived distress/impairment stemming from experienced or potential gun violence in college students in the United States.

Informed consent

The following assessment pertains to respondents' experiences with gun violence. It is important to keep in mind that this topic may be triggering for some individuals. As such, participants may stop taking the assessment at any time and are guaranteed full anonymity with respect to responses.

If you choose to complete the assessment, please respond to the questions with the threat of gun violence in mind and by considering how such violence affects your experience as a college student. In the case that completion of this survey causes distress or discomfort, participants may benefit from a list of local mental health resources provided at the end of the questionnaire.

Please indicate below if you consent, or do not consent, to complete this survey.

- Yes, I consent to participating in this survey
- No, I do not consent to participating in this survey

Questionnaire

I am worried about my school becoming a target of gun violence
I view gun violence as a real threat to my safety and well-being

Strongly Disagree

Disagree  Agree

Strongly Agree

I feel comfortable around firearms

Strongly Disagree

Disagree  Agree

Strongly Agree

I am afraid of my peers committing an act of gun violence

Strongly Disagree

Disagree  Agree

Strongly Agree
I am frequently exposed to reports/stories of gun violence in the news and/or on social media

Strongly Disagree  

Disagree  Agree  

Strongly Agree  

I think that gun violence affecting other school communities could reasonably affect me

Strongly Disagree  

Disagree  Agree  

Strongly Agree  

I feel anxious attending school due to the threat of gun violence

Strongly Disagree  

Disagree  Agree  

Strongly Agree  

I feel unsafe attending school due to the threat of gun violence
I feel tense at school due to the threat of gun violence

Strongly Disagree

Disagree  Agree

Strongly Agree

I would feel safer at school if teachers were armed

Strongly Disagree

Disagree  Agree

Strongly Agree

I would feel safer if there were armed security guards or police officers at school

Strongly Disagree

Disagree  Agree

Strongly Agree
I find my academic performance is negatively impacted after exposure to gun violence (direct or indirect)

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

I find it difficult to engage with others socially following exposure to gun violence (direct or indirect)

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

I believe that the United States government has appropriately addressed the issue of gun violence in schools

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

Dichotomous Qs

I have experienced gun violence first-hand
I know someone who has been directly affected by gun violence

Yes  No

Debriefing

You have participated in a class assignment to help develop a hypothetical psychological assessment. You may have been asked questions about harming yourself (or others), using substances, or experiencing/observing traumatic experiences. People who experience thoughts of harming themselves (or others) or consider their substance use problematic because it interferes with their daily functioning can benefit by seeking assistance and support. You may also be having other types of disturbing thoughts (e.g., re-experiencing a traumatic event in your mind, ruminating over sad thoughts) or actions (e.g., avoiding particular events/locations/people or verbal/physical outbursts) that is causing you distress.

Whether this applies to you or someone you know, a list of mental health resources is provided below. If an option, contact your psychologist/mental health counselor or primary care physician/psychiatrist.

National Suicide Prevention Lifeline
Phone Number: 1-800-273-8255 (speak to a live person; free referral service)
Website(s): www.suicidepreventionlifeline.org
Hours: 24 hours, 7 days a week
Languages: English & Spanish

Substance Abuse & Mental Health Services Administrations
Phone Number: 1-800-662-4357 (speak to a live person; free referral service)
Website(s): www.samhsa.gov
Hours: 24 hours, 7 days a week
Languages: English & Spanish

Cornerstone Behavioral Health
Address: 397 Grove St. Worcester, MA, 01605  
Phone number: 508-791-3677  
Website(s): http://www.cornerstonebehavioralhealth.com  
*Specialize in depression/anxiety and related disorders  
*Also locations in Westborough, MA and Fitchburg, MA

Grove Counseling Services  
Address: 324 Grove St. Worcester, MA, 01605  
Phone Number: 508-373-2774  
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Labyrinth Psychological Services  
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Phone Number: 508-797-7110  
Website(s): http://www.labyrinthpsych.com  
*Specialize in depression/anxiety and related disorders

Pathways to Wellness Associates  
Address: 50 Elm Street Suite 3B; 2nd Floor Worcester, MA, 01609  
Phone Number: 508-755-0536  
Website(s): http://www.pathways2wellnessllc.com  
*Also location in Holden, MA

Open Sky Community Services (formerly The Bridge of Central Massachusetts and Alternatives)  
Address: 4 Mann St. Worcester, MA, 01602  
Phone Number: 508-755-0333  
Website(s): http://www.thebridgecm.org  
*Multiple services and locations throughout central MA

New Beginnings Wellness Center  
Address: 1280 Main St. Worcester, MA, 01603  
Phone Number: 508-754-1141  
Website(s): https://www.newbeginningswc.com  
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Walden Behavioral Care  
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Phone Number: 508-796-5797
Website(s):
http://www.waldenbehavioralcare.com
https://www.waldeneatingdisorders.com*
*Specialize in eating disorders

Worcester Center for Cognitive Behavioral Therapy*
Address: 9 Cedar St. First Floor Worcester, MA, 01609
Phone Number(s):
508-210-0114 (Jennifer Lish, Ph.D.)
508-603-0139 (Will Davidson, LMHC)
508-735-4468 (Helen Turano, LICSW)
*Specialize in depression/anxiety and related disorders

☐ Select to proceed to the next page.

Feedback

Please provide any feedback on the experience of completing this survey. All suggestions are welcome!

Powered by Qualtrics
Distress in Academia Due to Gun Violence (DADGV)
Updated and Final Version
Intro

According to the National Center for Education Statistics, gun violence is a leading cause of injury and/or death on college campuses as evidenced by over 100 instances of armed violence between 2019 and 2020. Given the sharp increase in active shooter incidents in recent years (more than a 50% increase between 2020 and 2021), it is important to evaluate and understand how such violence affects students.

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Select to proceed to informed consent

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 Strongly Disagree
  
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 Strongly Agree

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 Disagree   Agree
  
 Strongly Agree

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- [ ] Strongly Disagree
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- [ ] Strongly Agree

I feel anxious attending school due to the threat of gun violence

- [ ] Strongly Disagree
- [ ] Disagree
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I feel unsafe attending school due to the threat of gun violence
My body feels tense at school due to the threat of gun violence

I've experienced one or more of the following symptoms due to direct or indirect gun violence exposure (e.g., fatigue, stomach problems, headaches)

I would feel safer at school if teachers were armed
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Feedback
If you could change one thing about this assessment, what would you change?

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