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The Anticipated Consequences of Legalizing Guns on College Campuses

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Abstract

Objective: We examined whether gun-ownership, and more importantly, the reason for owning a gun, is linked to expectations about what will happen if legislation allows guns on one's college campus. **Methods:** We sent a web-based survey to students, faculty, and staff at a single southeastern United States university in March 2016. We queried respondents about gun ownership and the potential effects of campus carry laws on personal safety and the educational environment. We grouped respondents ($N = 11,390$) into gun owners who own guns for protection (protection owners), gun owners who own guns for non-protection reasons (e.g., sport, collecting; non-protection owners), and non-owners. **Results:** Non-protection owners and non-owners responded similarly and were generally distinct from protection owners. However, all three groups reported that legalizing guns on campus would harm the academic atmosphere and diminish feelings of safety when having heated exchanges or evaluating student outcomes. Ironically, protection owners acknowledge these harms yet support legislation allowing guns on campus. **Conclusions:** Regardless of group, our participants anticipated that allowing guns on campus would largely produce undesirable downstream academic consequences. Lawmakers must find ways to mitigate the possible harmful effects on personal safety and the academic environment, and find solutions that satisfy the safety needs of groups who see guns as source versus a threat to safety.

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The Anticipated Consequences of Legalizing Guns on College Campuses

Legislation to allow licensed concealed weapons holders to carry guns on college campuses in the United States has increased over the last decade (Hultin, 2017). For example, Texas legislators legalized the concealed carry of handguns—defined as any firearm that is designed, made, or adapted to be fired with one hand (State of Texas Penal Code, 2017)—at all institutions of higher education effective in 2016 (State of Texas House Bill 11, 2015), although the legislation also prohibited handguns from some locations on campus (e.g., sports arenas, child care facilities, active polling places). Georgia legislators also legalized concealed carry of weapons (defined broadly to include things such as handguns, knives, knuckles, bats, clubs, nun chucks) on college campuses (State of Georgia HB 280, 2017), but differed in where on campuses weapons were excluded (e.g., student housing but not active polling places). Ironically, these laws were passed even though members of campus communities overwhelmingly oppose such legislation (Cavanaugh, Bouffard, Wells, & Nobles, 2012; Hemenway, Azrael, & Miller, 2001; Patten, Thomas, & Viotti, 2013; A. Thompson, Price, Dake, & Teeple, 2013; L. Thompson et al., 2005). The opposition presumably reflects concerns about the anticipated undesirable consequences for campus safety. Yet, little research has explored the anticipated consequences.

Investigations of concealed carry on college campuses have focused almost entirely on predicting who supports versus opposes legislation legalizing the carry of concealed weapons on campus. The findings are generally consistent. For example, supporters of the legislation are more likely to be male, politically conservative, younger, and perhaps most important, gun owners (Bennett, Kraft, & Grubb, 2012; Cavanaugh et al., 2012; Patten et al., 2013; A. Thompson, Price, Dake, Teeple, et al., 2013; A. Thompson, Price, Dake, & Teeple, 2013). With

one recent exception (DeAngelis, Benz, & Gillham, 2017), researchers have failed to investigate what people view as the potential consequences of legalizing concealed carry on college campuses. We examined whether gun-ownership, and more importantly, whether the reason for owning a gun, is associated with expectations about what will happen if legislation allows guns on one's college campus.

Distinguishing Gun-Ownership Groups

The traditional approach to exploring individual differences in gun attitudes is to distinguish between people who own versus do not own guns. This approach, however, ignores what guns mean to people and why some people staunchly support and others staunchly oppose gun restrictions. A more useful approach is to focus on the larger psychological need for safety (Maslow, 1943; Sagarin & Taylor, 2008) and the role that guns play in fulfilling that need. Attending to safety needs is centrally important to survival and reproduction goals, and the satisfaction of those safety needs strongly affects thoughts, feelings, behavior, and psychological well-being (Kenrick, Neuberg, Griskevicius, Vaughn Becker, & Schaller, 2010). Feelings of safety, however, can differ dramatically when it comes to guns.

For some gun owners (protection owners) feeling safe is contingent on carrying a gun. They feel safe when they are armed and unsafe when they are unarmed (Hassinger, 1985; Miller, Azrael, & Hemenway, 2000), and believe that gun regulations, such as gun bans on college campuses, represent a threat to their safety (Turner, Layton, & Simons, 1975). Conversely, for people who do not own guns (non-owners) and people who own guns exclusively for non-protection reasons, such as collecting or sport (non-protection owners), people carrying guns represent a threat to rather than a source of safety. They feel less safe when others are armed, believe that gun restrictions are essential to increasing safety (Hemenway et al., 2001;

Hemenway, Vrinotis, & Miller, 2006), and believe that guns on campus reduce safety. Evidence for this distinction comes from recent research showing that protection gun owners support legislation allowing guns on campus. They believe that gun crimes on campus would decline and that they and others would feel safer if they carried a gun on campus. Non-protection gun owners, who own guns hunting, sport or other non-protection reasons, feel the opposite and are largely indistinguishable from non-owners in their perceptions and attitudes (Shepperd, Pogge, Losee, Lipsey, & Redford, in press).

The Downstream Consequences of Guns on Campus

Legalizing guns on college campuses presents challenges for administrators and law enforcement officers responsible for assessing risk and managing threats on college campuses. These challenges include deciding where guns are and are not allowed on campus and where students who reside on campus store their guns. Beyond these policy challenges are the psychological dilemmas that loom large in the development and implementation of a campus gun policy. For example, white males undoubtedly hold the greatest social and economic power in the United States. They also represent the group statistically most likely to own a gun (Morin, 2014). To the extent that the power disparity creates feelings of intimidation or threat, guns on campus could serve to exacerbate the threat. In addition, a larger majority of students, faculty, and staff report that they would feel less safe if others carried concealed guns on campus (Shepperd et al., in press). They likely would feel particularly unsafe by the presence of others carrying guns in their immediate space (classrooms, offices, residence halls). Campus administrators and law enforcement officers must find a way to address the feelings of threat experienced by members of the campus community who oppose guns on campus.

Our concern in this paper, however, is with the more psychological, subjective

perceptions of consequences of legalizing guns on campus, in regard to the academic atmosphere and interpersonal interactions, and how those perceptions of the consequences might vary by gun-ownership group. We propose that protection owners will differ from non-protection owners and non-gun-owners in their perceptions of the downstream, safety-related consequences of having guns on campus for two reasons. The first reason arises from research on the desirability bias—the tendency to overestimate the likelihood that desired outcomes will occur. Protection owners may be motivated to perceive that guns on campus will generally be beneficial rather than harmful. This motivation may lead to inflated optimism about the downstream benefits of guns on campus (Zlatan & Windschitl, 2007), such as the possibility that guns on campus will deter a potential shooter or mitigate the harm of an active shooter (Henry, 2012). Conversely, non-protection owners and non-gun-owners may be motivated to believe that maintaining gun restrictions will be beneficial. Their motivation may produce inflated pessimism about the harm of guns on campus.

Second, protection owners may believe that they are less likely to suffer hostile interactions if other people know or suspect they are armed. Although data do not generally support this view (Hemenway et al., 2006; McDowall, Lizotte, & Wiersema, 1991), it is common among gun rights activists (e.g., Henry, 2012). Conversely, non-protection owners and non-gun-owners may reason that the presence of guns on campus will escalate violence (Berkowitz & LePage, 1967; Turner et al., 1975). They may reason that people experiencing heated interactions, grievances, or personal slights can and will use guns if they are available, and that the solution is to keep guns off campuses (Carlson, Marcus-Newhall, & Miller, 1990).

Overview & Hypotheses

We examined the anticipated consequences of allowing guns on campus for how safe

people feel having heated interactions on campus and evaluating student outcomes, and for the academic atmosphere (classroom debate, learning environment, and grades given by instructors). We tested three broad hypotheses. (1) In line with past research regarding safety perceptions on college campuses (Shepperd et al., in press), we predicted that all participants would report that they currently feel relatively safe having heated interactions, and that all instructors currently feel relatively safe when evaluating student outcomes. (2) For the two reasons just described (desirability bias; guns as escalating versus deterring violence), we predicted that non-owners and non-protection owners would report that guns on campus would lead people to feel less safe having heated interactions and evaluating student outcomes, would harm classroom debate and the campus learning environment, and would lead to grade inflation. (3) We predicted that protection owners would report no adverse consequences and may even report benefits to legalizing concealed carry of guns on campus.

This research is important for several reasons. It is the first to examine reports among the campus community of the expected consequences of legislation that would allow concealed guns weapons on college campuses that currently prohibit guns. Because the legislation in Florida (where we conducted the research) died in committee, we were unable to examine the actual consequences of concealed carry on our outcomes. Further, we are not aware of any studies that have examined the consequences of guns on college campuses. Nevertheless, expectations about consequences strongly guide behavior (Olson, Roese, & Zanna, 1996) and presumably correspond with support of versus opposition to the legislation. Moreover, the hypotheses are theoretically driven and move beyond merely classifying participants as owners and non-owners of guns. We identify why people own guns and propose that the reasons for ownership map on to different approaches to satisfying the fundamental need for safety and manifest as different

expectations about what will happen if legislation allows concealed guns on campus. Finally, we recruit a large sample, giving us sufficient power to test our hypotheses.

Method

Participants

In March 2016, we invited faculty, students, and staff at a large Southeastern American university to participate in a study of gun attitudes. Of the 62,465 people who received email invitations, 11,804 (18.9%) consented to participate and 11,390 provided sufficient responses to be included in the current report. The final sample (M age=31.9 years, SD =14.0, 46.3% women, 65.8% White) included 1,397 faculty, 2,285 staff, 6,575 students, and 1,133 who did not report their affiliation with the university. Demographic information about the sample appears in Table 1. Although the sample was generally representative of the campus community in terms of gender and race/ethnicity, faculty (28.0%) and staff (26.0%) responded at a notably higher rate than did students (12.6%).

Procedure & Measures

The items we report are part of a larger, 52-item survey assessing thoughts and attitudes about allowing guns on campus (see <https://osf.io/esj5f/> for the full survey). The study received IRB approval and participants were required to consent before they could proceed to the study. After consenting to participate, participants read a statement that said: *The Florida legislature is considering a law (SB 68, HB 4001) that would allow people with a Florida concealed carry license to carry their guns (on their person; not visible) on the campuses of public colleges and universities in Florida.* Participants responded to three groups of items regarding the possible consequences of guns on campus. Importantly, every item included an option of *choose not to respond*, thereby allowing participants a response option if they felt that none of the other

choices matched how they wished to respond.

First, we asked participants whether they have heated interactions with people on their college campus. We followed this question with two items for participants who responded “yes”: (1) “How safe do you feel when you have a heated interaction with people on your college campus?”, and (2) “How safe would you feel having a heated interaction on your college campus if people were legally allowed to carry guns on campus?” (1=*not at all safe*; 2=*somewhat unsafe*; 3=*neither safe nor unsafe*, 4=*somewhat safe*; 5=*very safe*). Second, we asked participants whether they were responsible for evaluating student outcomes (*...including, but not limited to, decisions about grades, dealing with academic misconduct, evaluating theses, dissertations and other student products, and allowing (or not allowing) students to redo assignments, take make-up exams, and receive extra credit opportunities*). Participants who responded “yes” responded to four additional items: (1) “In general, how safe do you currently feel evaluating student outcomes?”, (2) “How safe would you feel evaluating student outcomes if guns were allowed on campus?”, (3) “How safe would you feel evaluating student outcomes if you legally carried a gun on campus?”, and (4) “How safe would you feel evaluating a student outcome for a student who was legally carrying a gun?” (1=*not at all safe*; 2=*somewhat unsafe*; 3=*neither safe nor unsafe*, 4=*somewhat safe*; 5=*very safe*).

Third, we asked participants three items regarding the effect of allowing guns on campus on the academic atmosphere: “If people were allowed to carry guns on campus, what effect (if any) do you think it would have on... (1) “...class debate?”, (2) “...the classroom learning environment?”, and (3) “...grades given to students?” (1=*harm debate/harm the learning environment/lead to lower grades*; 4=*no effect*; 7=*facilitate debate/facilitate the learning environment/lead to higher grades*).

Finally, we asked participants to provide demographic information and to tell us whether they owned a gun. We asked participants who responded “yes” why they owned a gun. The responses allowed us to classify participants into three groups: (1) Do not own a gun (*non-owners*), (2) own a gun for protection reasons (*protection owners*), and (3) own a gun exclusively for non-protection reasons (*non-protection owners*). We classified any participant who indicated that they owned a gun for protection reasons as a “protection owner” even if they checked additional reasons for owning a gun. We omitted from analyses participants who provided insufficient information to classify them into one of these three groups.

Data Analysis

We tested hypothesis 1 by examining responses to the items asking how safe participants currently felt (1) having heated exchanges on campus, and (2) evaluating students. We compared responses to these two items to the scale midpoint (3 = *neither safe nor unsafe*) using a one-sample *t*-test. For the heated exchange and evaluating student items, we tested hypothesis 2 and 3 using a one-sample *t*-test in which we compared responses to the items asking how safe they felt currently with items asking how safe they would feel (1) having heated exchanges on campus, and (2) evaluating students if people were allowed to carry guns on campus. For the three items asking about the academic atmosphere, we tested hypothesis 2 and 3 by comparing responses to the scale midpoint (4 = *no effect on: debate / classroom learning environment / grades*) for each item using a one-sample test. We used the pooled error term and set alpha at .001 to reduce the Type I error. When analysis using the Mauchly’s test revealed unequal variance across conditions, we computed Welch’s adjusted *F*. In all analyses, in addition to reporting means (*M*) and standard deviations (*SD*), *F*- and *t*-ratios, and *p*-values, we also report effect sizes—either Cohen’s *d* or the partial eta-squares (η_p^2)—and the 95% confidence intervals (*CI*_{95%}) around the

effect sizes.

Results¹

Safety in Heated Interactions

Examination of the means in Table 2 reveals support for hypothesis 1 and 2, but not hypothesis 3. Comparing responses in the first data column of Table 2 to the scale midpoint (3 = *neither safe nor unsafe*) revealed that all three groups reported that they currently felt safe having heated interactions on their campus. For non-owners, $t(2,417) = 36.55, p < .0001, d=.75, CI_{95\%} [.70, .79]$; for non-protection owners, $t(181) = 9.31, p < .0001, d=.69, CI_{95\%} [.53, .85]$; for protection owners, $t(521) = 17.76, p < .0001, d=.78, CI_{95\%} [.68, .88]$. Comparing the second set of means to the first set revealed that non-owners and non-protection owners reported that they would feel less safe having heated interactions if legislation allowed guns on campus. Inconsistent with hypothesis 3, protection owners also reported that they would feel less safe having heated interactions if legislation allowed guns on campus: for non-owners, $F(1, 3,117)=6,848.54, p<.0001, \eta_p^2=.68, CI_{95\%} [.67, .70]$, for non-protection owners, $F(1, 3,117)=432.66, p<.0001, \eta_p^2=.12, CI_{95\%} [.10, .14]$, and for protection owners, $F(1, 3,117)=117.38, p<.0001, \eta_p^2=.03, CI_{95\%} [.02, .05]$.

For illustration purposes, we separated participants into three groups: we classified as “unsafe” anyone who responded 1 (not at all safe) or 2 (somewhat unsafe) to the item asking “How safe do you feel when you have a heated interaction on your college campus?” We then plotted the percent of participants in each gun group who selected these two responses (figure 1). Consistent with our prediction, relatively few participants reported currently feeling unsafe having heated interactions on campus. However, this number increased when participants

¹ A more detailed presentation of the statistical analyses appears at <https://osf.io/ntjg7/>.

reported how safe they would feel if legislation allowed guns on campus.

Safety Evaluating Students

Participants who reported that they were responsible for evaluating students ($n = 2,428$) responded to our four safety-related items: (1) current safety evaluating students, (2) safety evaluating students if guns allowed on campus, (3) safety evaluating students if one personally carried a gun, and (4) safety evaluating a student who legally carried a gun. As predicted, comparing responses in the first data column of Table 3 to the scale midpoint (3 = *neither safe nor unsafe*) revealed that all three groups reported that they currently feel safe evaluating students on their campus. For non-owners, $t(1,671)=78.69, p < .0001, d=1.97, CI_{95\%} [1.89, 2.05]$; for non-protection owners, $t(152)=28.26, p < .0001, d=2.26, CI_{95\%} [1.96, 2.55]$; for protection owners, $t(354)=35.65, p < .0001, d=1.92, CI_{95\%} [1.74, 2.10]$. Also as predicted, when we compared responses in the second column of means to the first column of means, non-owners, $F(1, 2,177)=3,510.49, p<.0001, \eta_p^2=.62, CI_{95\%} [.60, .64]$, and non-protection owners, $F(1, 2,177)=243.23, p<.0001, \eta_p^2=.10, CI_{95\%} [.08, .12]$, reported that they would feel less safe than they do now evaluating students if legislation allowed guns on campus. Surprisingly, protection owners also reported that they would feel less safe than they do now evaluating students if legislation allowed guns on campus, $F(1, 2,177)=11.22, p<.0008, \eta_p^2=.01, CI_{95\%} [.00, .01]$.

Comparing column 3 means and column 4 means to column 1 means in Table 3 also offers a test of hypotheses 2 and 3. In both instances, the results support hypothesis 2 but not hypothesis 3. Regarding column 3 means, all three groups also reported that they would feel less safe than they do now evaluating a student if they (i.e., the participants) carried a gun on campus: for non-owners, $M=1.85, SD=1.24, F(1, 2,177)=6,170.50, p<.0001, \eta_p^2=.74, CI_{95\%} [.72, .75]$; for non-protection owners, $M=2.14, SD=1.45, F(1, 2,177)=490.19, p<.0001, \eta_p^2=.18, CI_{95\%} [.16,$

.21]; for protection owners, $M=3.93$, $SD=1.47$, $F(1, 2,177)=67.16$, $p<.0001$, $\eta_p^2=.03$, $CI_{95\%}$ [.01, .05]. Regarding column 4 means, all three groups reported that they would feel less safe than they do now evaluating a student who had a gun: for non-owners, $M=2.20$, $SD=1.31$, $F(1, 2,177)=4,981.58$, $p<.0001$, $\eta_p^2=.70$, $CI_{95\%}$ [.68, .71]; for non-protection owners, $M=2.61$, $SD=1.45$, $F(1, 2,177)=346.14$, $p<.0001$, $\eta_p^2=.14$, $CI_{95\%}$ [.11, .16]; for protection owners, $M=4.06$, $SD=1.33$, $F(1, 2,177)=44.19$, $p<.0001$, $\eta_p^2=.02$, $CI_{95\%}$ [.01, .03].

Once again, for illustration purposes, we computed the percentage of participants by gun group who reported feeling unsafe, safe, or neither in response to these four safety items (see Table 4). As predicted, most participants reported that they currently felt safe evaluating students (89.2%). Also as predicted, a notable proportion of non-owners (55.1%) and non-protection owners (47.7%) reported that they would feel unsafe evaluating students if guns were allowed on campus. In contrast, yet consistent with hypothesis 3, the majority of protection owners (81.2%) report that they would continue to feel safe evaluating students if legislation allowed guns on campus. We found a similar pattern when examining reports of how safe participants would feel if they carried a gun on campus and if they evaluated a student with a gun. These findings revealed that non-owners and non-protection owners felt that allowing guns on campus would jeopardize their safety evaluating student outcomes, whereas protection owners did not.

Consequences for the Academic Atmosphere

Responses to the three items addressing the effect of allowing guns on campus on the academic atmosphere appear in Table 5. We tested hypotheses 2 and 3 by comparing responses to the scale midpoint of 4.0. As predicted, non-owners and non-protection owners reported that guns on campus would harm classroom debate and harm the classroom learning environment. Non-protection owners reported that guns on campus would lead to grade inflation. Surprisingly,

non-owners did not report that guns would lead to grade inflation. Also surprisingly, protection owners reported that allowing guns on campus would harm classroom debate, harm the classroom learning environment, and lead to grade inflation.

Statistical analysis yielded the following results. Classroom debate: for non-owners, $t(7,251)=-110.38$, $p<.0001$; for non-protection owners, $t(502)=-24.06$, $p<.0001$; for protection owners, $t(2,104)=-13.41$, $p<.0001$. Classroom learning environment: for non-owners, $t(7,251)=-110.38$, $p<.0001$; for non-protection owners, $t(502)=-24.06$, $p<.0001$; for protection owners, $t(2,104)=-13.41$, $p<.0001$. Grades given to students: for non-protection owners, $t(486)=3.64$, $p<.0001$; for non-owners, $t(6,905)=0.17$, $p=.87$; for protection owners, $t(2,083)=5.87$, $p<.0001$.

For illustration purposes we again separated participants into three groups: participants who reported that guns on campus would increase harm, decrease harm, and have no effect. As evident in Figure 2, the majority of non-owners (78.4%) and non-protection owners (65.4%) reported that allowing guns on campus would harm class debate and the classroom learning environment. In contrast, the majority of protection owners reported that allowing guns on campus would have no effect on class debate or the classroom learning environment. Regarding grades given to students, the majority of participants in all three groups reported that allowing guns on campus would have no effect.

Faculty (and graduate students who serve as instructors) are perhaps in a better position to predict the consequences of guns on campus on the academic atmosphere. We thus reexamined responses to these three items after restricting our analyses to participants who reported that they are responsible for evaluating student outcomes ($n=2,484$). The findings were identical with one exception: when we compared the mean responses to the scale midpoint, all three groups reported that allowing guns on campus would lead to higher grades: for non-

owners, $M=4.47$, $SD = 1.38$, $t(1,735)=12.53$, $p<.0001$, for non-protection owners, $M=4.48$, $SD = 1.08$, $t(150)=4.96$, $p<.0001$, and for protection owners, $M=4.25$, $SD = 0.68$, $t(353)=5.48$, $p<.0001$. In short, limiting our analyses to instructors resulted in support for hypothesis 2, but not hypothesis 3.

Discussion

Consistent with hypothesis 1, few participants reported currently feeling unsafe having heated exchanges on campus or evaluating student outcomes. Consistent with hypothesis 2, non-owners and non-protection owners expected that guns on campus would harm the learning environment and debate in the classroom, decrease feelings of safety during heated exchanges, and decrease feelings of safety evaluating student outcomes, particularly the outcomes of students who are armed.

The surprising finding was that protection owners reported that guns on campus would harm classroom debate and the learning environment, and would decrease feelings of safety during heated exchanges and when evaluating students who carry a gun. To be sure, protection owners differed from the other two groups on most of the outcomes we examined. Nevertheless, the responses of protection owners were largely contrary to hypothesis 3 and are particularly ironic in light of other findings based on this sample. Specifically, protection owners reported that they support allowing guns on campus, that they would feel safer if they and others carried guns on campus, and that they expected gun crimes to decrease if legislation allowed guns on campus (Shepperd et al., in press).

One possible reconciliation of these seemingly opposing findings is that protection owners want the greater sense of safety that comes with carrying a gun, but acknowledge that the means to their safety will adversely affect the academic atmosphere and diminish their feelings

of safety when they engage in certain activities. They may view these undesirable consequences as an unfortunate cost of achieving greater safety more generally. Put simply, protection owners may see certain specific experiences and interactions on campus as becoming less safe, but not unsafe enough to outweigh the broader safety benefits of allowing guns on campus. They may base their safety judgments on a global gist (Brainerd & Reyna, 1992) about their safety feelings or on salient possible consequences (Tversky & Kahneman, 1973). For example, the potential of guns to harm classroom debate may not be as salient to protection owners as the potential to intervene on a school shooting. Or, protection owners may recognize that the campus environment may be less safe overall, but view this cost as unimportant when compared with their personal feelings of personal safety.

Also unexpected, the three groups agreed on how guns on campus would influence grades given to students. Participants, both on average and across groups, felt that allowing guns on campus would not lead to instructors giving higher grades. This null effect likely arose from the responses of participants in our sample who do not have responsibility for grading students and may be thus insensitive to how external pressures can influence grading. When we limited our analysis only to participants responsible for evaluating students, all three gun groups reported that guns on campus would lead to instructors giving higher grades. Importantly, the predicted effects that emerged with participants who evaluated students were relatively small, particularly relative to other effects we found.

Limitations

Our study had several limitations. We drew our sample from a single, Southeastern university and our response rate was under 20%. It is possible that people who responded to our survey held more extreme views and thus are not representative of the campus community. It

also is unknown how well our findings will replicate at other universities. Yet, our sample was sizable and generally representative demographically of the campus at large. Moreover, the campus where we conducted our research is typical of other large, land-grant universities in the United States. Nevertheless, the responses of our sample may differ from the responses of people from other university communities.

We limited this investigation primarily to academic consequences of legalizing guns on college campus and omitted potential non-academic consequences. The non-academic consequences could be positive or negative. Some members of the campus community may feel unsafe walking on campus at night and having a gun could offer protection. Conversely, a distinct possibility of harm emerges to the extent that guns on campus become accessible to others. Students who live on campus must store their guns somewhere when their guns are not physically in their possession. Storing guns in dormitory rooms may increase their availability to others who may lack gun training or the ability to discriminate between when using a gun is or is not wise. Moreover, college campuses often have elevated rates of suicide and suicidal ideation (American College Health Association, 2009). The availability of guns in student dormitories may provide students intent on self-harm easier access to particularly lethal means.

It is noteworthy that all participants reported that they would feel less safe having heated exchanges if legislation allowed guns on campus. We characterized this consequence as negative, but one could spin it as positive. Heated exchanges are generally unpleasant for all parties and reducing their occurrence may increase courtesy and civility. Yet we wonder if the campus community, which overwhelmingly opposes guns on campus, would prefer a gun-free campus to the unsubstantiated possibility of greater civility.

We acknowledge that other variables associated with support for concealed carry on

college campuses (A. Thompson, Price, Dake, & Teeple, 2013) may also predict expectations about the consequences of legalizing concealed guns on college campuses. However, we expect that the predictive power of these other variables may arise from their association with safety concerns. For example, women or political liberals, who more often oppose guns on college campuses (Bennett et al., 2012; Cavanaugh et al., 2012; Patten et al., 2013; A. Thompson, Price, Dake, Teeple, et al., 2013; A. Thompson, Price, Dake, & Teeple, 2013), may be more inclined to perceive guns as threat to rather than a source of safety.

Finally, we examined anticipated consequences rather than actual consequences of legalizing concealed carry on college campuses. The proposed legislation died in committee, and thus we could not collect data from our sample on the actual consequences of allowing guns on college campuses. This issue remains an important direction for future research. Nevertheless, expectations are important to behavior. The expectation that carrying a gun offers protection likely influences the decision to obtain a concealed carry license and to carry a concealed firearm.

Research Implications

The limitations suggest directions for future research. First, this is but one study and we urge researchers to replicate this study at other institutions. Although we believe our findings will likely replicate elsewhere, the outcome remains unknown. Second, we call for researchers to investigate perceptions of the effects of legalizing guns on campus on non-academic outcomes such as safety walking on campus at nights and suicide rates.

Finally, now that concealed carry is legal on some college campuses, researchers can examine how guns on campus have affected general feelings of safety, as well as the various outcomes we investigated in this study. The potential consequences that we examined (and

others that we did not examine, such as suicide, accidental discharge, and violent crimes) may never transpire. Alternatively, they may occur at rates equal to or greater than predicted by participants. Careful pre-post research will illuminate how well the expectations of our participants map on to reality. The data we present are clearly limited, but we recommend that policy makers consider these data until better data that bear on the actual, rather than anticipated, consequences of allowing concealed guns on campus, are available.

Clinical and Policy Implications

Our findings have implications for threat assessment and risk management on college campuses. When guns become legal on college campuses, school administrators must develop policies and procedures for managing the accompanying threat. Such policies and procedures include rules about where on campus guns are allowed and where and how gun owners store guns on campus. In addition, university counseling services and campus safety officers need to provide clear procedures for reporting concerning or threatening behavior without fear of retaliation, and assurances that they will treat all reports seriously (Hollister & Scalora, 2015; Mrad, Hanigan, & Bateman, 2015; Perloe & Pollard, 2016). And of course, campus police must develop policies and procedures for addressing active shooter events. Such policies might include publishing steps that people who legally carry guns on campus for self-protection can take to avoid being misidentified by law enforcement officers. Creating specialized teams on campus to identify potential threats, performing safety audits, and establishing a rapid response procedure to student concerns may decrease stress and anxiety on campus, which may in turn decrease the perceived threat that is the impetus for campus carry policies (Regehr, Glancy, Carter, & Ramshaw, 2017).

When promoting legislation affecting college campuses, supporters of gun rights often

focus on a limited number of concerns, such as protecting second amendment rights, deterring gun violence, or mitigating the harm of an active shooter (Birnbaum, 2013). The downstream consequences, such as the effect of guns on the academic atmosphere, likely receive scant attention. Our findings suggest that members of the academic community—both opponents and proponents of gun restrictions—anticipate a number of negative consequences if legislation allows guns on college campuses. If lawmakers opt to legislate in favor of gun rights advocates over the desires of the majority of campus community members, who across the country have consistently and overwhelmingly voiced opposition to guns on campus (Cavanaugh et al., 2012; Hemenway et al., 2001; Patten et al., 2013; L. Thompson et al., 2005), then they must find ways to mitigate the possible harm.

Yet beyond these downstream potential harms, our findings suggest that addressing the seemingly intractable positions of people who favor more versus less gun rights requires recognizing the opposing means to satisfying safety needs that underlie the positions. It is noteworthy that some legislation has tried to balance the concerns of opponents and proponents of the legislation. For example, it is common for states to include restrictions on who can carry a concealed gun (e.g., permit holders over age 21) and where guns are and are not allowed on campus (e.g., Sate of Georgia HB 280, 2017; State of Texas House Bill 11, 2015). Yet, is unclear what legislators can do to address the consequences of allowing guns on campus that we examined—feelings of safety having heated exchanges or evaluating students, and the effects on the academic atmosphere (classroom debate, the classroom learning environment, and grades given to students). Policy makers clearly face a difficult challenge working toward solutions that satisfy the safety needs of different groups.

Author Note

Parts of these data were presented at the *Society for Psychological Study of Social Issues* in 2017. Address correspondence concerning this article to James A. Shepperd at shepperd@ufl.edu.

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Table 1. Demographic Information

Status	Demographic Category	Campus Wide		Sample		
		Number	%	Number	%	
Faculty	Race/Ethnicity					
		Native American, Eskimo, Aleut	4	.1%	7	.5%
		Asian/Pacific Islander	658	13.2%	80	5.7%
		Black/African American	190	3.8%	23	1.6%
		Hispanic/Latino	326	6.5%	50	3.6%
		Two or More Races	44	.9%	31	2.2%
		White	3,578	71.6%	1,115	79.8%
		Unknown (not reported)	198	3.9%	92	6.6%
		Gender				
		Female	2,004	40.1%	603	43.1%
		Male	2,994	59.9%	778	55.7%
		Unknown (not reported)	0	0%	17	1.2%
		<i>N</i>	4,998		1,398	
	Staff	Race/Ethnicity				
		Native American, Eskimo, Aleut	29	.3%	8	.4%
		Asian/Pacific Islander	379	4.3%	64	2.7%
		Black/African American	1,254	14.3%	87	3.8%
		Hispanic/Latino	687	7.8%	102	4.5%
		Two or More Races	114	1.3%	73	3.2%
		White	6,182	70.5%	1,804	78.9%
		Unknown (not reported)	123	.6%	148	6.5%
		Gender				
		Female	5,411	61.7%	1,404	61.4%
		Male	3,357	38.3%	840	36.7%
		Unknown (not reported)	0	0%	42	1.8%
		<i>N</i>	8,768		2,286	
Students		Race/Ethnicity				
		Native American,	144	.3%	13	.2%

Eskimo, Aleut				
Asian/Pacific Islander	3,686	7.5%	687	10.4%
Black/African American	3,224	6.2%	250	3.8%
Hispanic/Latino	8,876	16.9%	549	8.3%
Two or More Races	1,196	2.3%	661	10.0%
White	28,553	54.5%	4,096	62.2%
Unknown, N/A	6,470	3.2%	324	4.9%
Gender				
Female	28,404	54.21%	3,439	52.3%
Male	23,970	45.75%	3,049	46.3%
Unknown	0	0%	92	1.4%
<i>N</i>	52,374		6,580	

Table 2. Mean Judgments of Safety When Having a Heated Interaction on Campus

	Currently		If guns allowed on campus	
	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)
Gun Ownership Group (<i>n</i> ; % of total sample)				
Do Not Own a Gun (2,417-2,418, 74.7%)	3.82 ^a	(1.10)	1.55 ^c	(0.99)
Own Exclusively for Non-Protection Reasons (182, 5.6%)	3.83 ^a	(1.20)	1.75 ^c	(1.22)
Own for Protection Reason (521-522, 16.0%)	3.87 ^a	(1.11)	3.23 ^b	(1.48)
All Participants (3,212 to 3,213)	3.70	(1.13)	1.99	(1.35)

Note. For the first three rows of data, means within rows and columns with different superscripts differ at $p < .001$. For all items, 1 = *not at all safe*; 5 = *very safe*. The bottom row of data includes all participants regardless of whether they responded to the item about gun ownership.

Table 3. Judgments of Safety When Evaluating Student Outcomes (Means)

Gun Ownership Group (<i>n</i> ; % of total sample)	How safe do you currently feel evaluating a student?		How safe would you feel evaluating a student if guns allowed on campus?		How safe would you feel evaluating a student if you carried a gun?		How safe would you feel evaluating a student who carried a gun?	
	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)
Do Not Own a Gun (1,672; 76.7%)	4.49 ^a	(.78)	2.45 ^c	(1.40)	1.85 ^e	(1.24)	2.20 ^d	(1.31)
Own Exclusively for Non-Protection Reasons (153; 7%)	4.60 ^a	(.70)	2.82 ^c	(1.48)	2.14 ^{de}	(1.45)	2.61 ^c	(1.45)
Own for Protection Reason (355; 16.3%)	4.53 ^a	(.81)	4.28 ^a	(1.20)	3.93 ^b	(1.47)	4.06 ^b	(1.33)
All Participants (2,275 to 2,484)	4.51	(.77)	2.79	(1.54)	2.22	(1.50)	2.56	(1.48)

Note. For the first three rows of data, means within rows and columns with different superscripts differ at $p < .001$. For all items, 1 = *not at all safe*; 5 = *very safe*. The bottom row of data includes all participants who evaluate students regardless of whether they responded to the item about gun ownership or to all four safety items.

Table 4. Judgments of Safety When Evaluating Student Outcomes (Percentages)

Gun Ownership Group	How safe do you currently feel evaluating a student?	How safe would you feel evaluating a student if guns on campus?	How safe would you feel evaluating a student if you carried a gun?	How safe would you feel evaluating a student with a gun?
<i>Do Not Own a Gun (n = 1,675 to 1,859)</i>				
% Unsafe	2.2%	55.1%	76.8%	65.1%
% Neither	8.6%	22.4%	10.0%	15.1%
% Safe	89.2%	22.5%	13.2%	19.7%
<i>Own Exclusively for Non-Protection Reasons (n = 153 to 159)</i>				
% Unsafe	1.2%	47.7%	71.1%	60.4%
% Neither	6.9%	17.6%	7.5%	11.3%
% Safe	91.8%	34.6%	21.4%	18.3%
<i>Own for Protection Reason (n = 357 to 364)</i>				
% Unsafe	3.0%	12.1%	21.6%	17.9%
% Neither	8.8%	6.7%	7.5%	8.3%
% Safe	89.2%	81.2%	70.9%	73.8%
<i>All participants (n = 2,185 to 2,382)</i>				
% Unsafe	2.3%	47.5%	68.0%	57.6%
% Neither	8.5%	19.5%	9.4%	13.8%
% Safe	89.2%	33.9%	24.6%	28.6%

Table 5. The Anticipated Effect of Guns on the Academic Atmosphere

Gun Ownership Group	Effect on class debate			Effect on classroom learning environment			Effect on grades given to students		
	<i>n</i>	<i>M</i>	(<i>SD</i>)	<i>n</i>	<i>M</i>	(<i>SD</i>)	<i>n</i>	<i>M</i>	(<i>SD</i>)
Do Not Own a Gun	7,252	2.27 ^a	(1.34)	7,314	2.11 ^a	(1.22)	6,906	4.00 ^a	(1.38)
Own Exclusively for Non-Protection Reasons	503	2.54 ^b	(1.36)	508	2.45 ^b	(1.32)	487	4.18 ^a	(1.08)
Own for Protection Reason	2,105	3.67 ^c	(1.14)	2,115	3.68 ^c	(1.07)	2,084	4.09 ^a	(0.68)
All Participants	10,289	2.60	(1.42)	10,369	2.49	(1.36)	9,876	4.03	(1.24)

Note. For the first three rows of data, means within columns with different superscripts differ at $p < .001$. For all items, 1 = *greatly harm debate/greatly harm the classroom learning environment/lead to much lower grades*; 4 = *no effect*; 7 = *greatly facilitate debate/greatly facilitate the classroom learning environment/lead to much higher grades*. The bottom row of data includes all participants regardless of whether they responded to the item about gun ownership or to the three academic atmosphere items. With the exception of responses of non-owners to the grade item, all means differ significantly from the scale midpoint of 4 at $p < .0001$.

Figure 1. Percent of Participants Who Feel Unsafe Having Heated Interactions on Campus

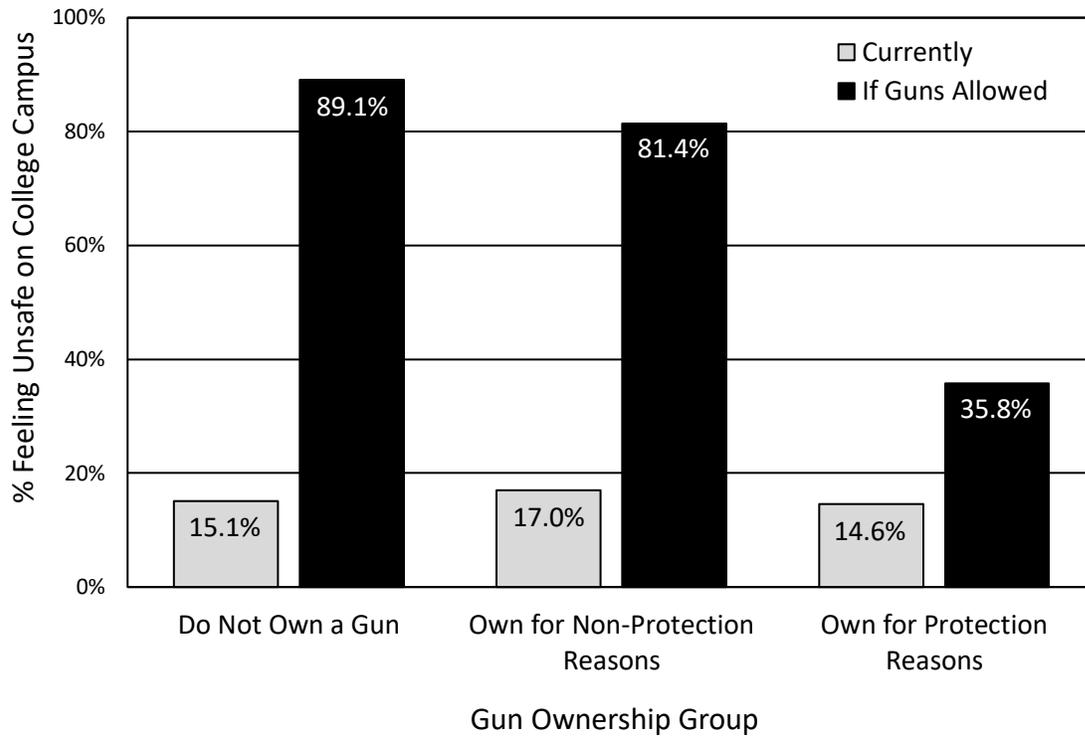


Figure 2. Percent of Participants Who Report that Guns Will Have Harmful Consequences

