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Academic Consequences of Legal Handgun Carrying on College Campuses

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Academic Consequences of Legal Handgun Carrying on College Campuses

By

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Academic Consequences of Legal Handgun Carrying on College Campuses

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ABSTRACT

Many states have discussed allowing concealed handguns on college campuses, known colloquially as campus carry. It is crucial to gauge whether allowing campus carry affects more than just crime rates. Previous research indicated overwhelmingly negative attitudes towards allowing campus carry. The purpose of the current study was to determine whether knowledge of someone carrying a concealed handgun in class would affect students' ability to perform well on an exam. Across two studies, evidence and theoretical rationale suggested that knowledge of someone carrying a concealed handgun in class negatively impacted learning, although non-significantly. Individuals who were told that others (i.e., the professor and/or fellow students) were carrying a concealed handgun did worse on a post-lecture exam than those who are not led to this belief, but this finding was not significant. This work should be important to legislators and the general public because of the social and academic consequences of allowing campus carry.

Keywords: campus carry, handguns, learning, safety

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ACADEMIC CONSEQUENCES OF LEGAL HANDGUN CARRYING ON COLLEGE CAMPUSES

As of 2018, all 50 states of the United States (U.S.) allowed in some form for residents to legally carry a concealed handgun. The laws regarding the legal carrying of a handgun differ from state to state, and the rules related to carrying a handgun on college campuses, which is commonly referred to as campus carry, are also vastly different. As of 2017, there were 16 states that had legislative or judicative bans on campus carry, including California, Florida, Louisiana, and New York. Conversely, 10 states allowed campus carry on their public institutions, including Georgia, Oregon, and Texas. Tennessee allowed only faculty members, not students or campus visitors, to carry concealed handguns on campus. The remaining 23 states left the decision for banning or allowing campus carry up to individual institutions (ncsl.org, 2018). In the 2013 and 2014 legislative sessions, at least 33 pieces of legislation regarding the allowance of campus carry were introduced in state legislatures across the U.S. (ncsl.org, 2018). Because there is ongoing conversation about allowing the concealed carry of handguns on college campuses in the U.S., it is important to understand the consequences of having these handguns on campuses and in learning environments. In particular, it is important to gauge whether campus carry has an

effect on learning in college classrooms where campus carry is legal.

Overview of Firearms

Effect of Firearm Ownership of College Students

From 1996-2018, legislative limits were placed on funding of firearm violence research (H.R. 3610, 1996; H.R. 1625, 2018). Because of this, a lack of research exists examining the effect of gun ownership on violent and non-violent crime in the U.S. One of the overarching arguments for the allowance of the concealed carry of handguns is the perception that the presence of guns in a community deters possible assailants from committing crimes (Fortunato, 2015; Kahan & Braman, 2003). Fortunato (2015) reported no significant difference in perceived number of firearms between communities that did and did not allow concealed carry of handguns in their communities. Likewise, one study found no significant relationship or difference on Part I Index crimes, which include, but are not limited to, murder, rape, robbery, aggravated assault, and burglary, between colleges and universities that allowed and banned campus carry (Jensen, 2016). In other words, the allowance of handguns on campus was not related to changes in violent crimes on campuses. Another study reported that handgun ownership of college students was positively related to binge drinking, arrests for driving under the influence, and damaging property while under the influence of alcohol (Miller, Hemenway, & Wechsler, 1999). In addition, those with handguns were reportedly more likely to put themselves and others at risk for injury (Miller

et al., 1999). This research suggest that there may be no direct benefit to having guns on campus.

Little research has studied the potential consequences of gun ownership, and the research that does exist paints an unclear picture. Some research suggests no link between gun ownership and reduced crime rates (Jensen, 2016), whereas other research suggests gun owners have a higher propensity for binge drinking and property damage while under than influence of alcohol than non-gun owners (Miller et al., 1999). Although more research is needed to understand the relationship between firearm ownership and overall crime rates on college campuses, this paper focuses on the academic consequences of having concealed handguns in college classrooms, which has not been addressed to date.

Perceptions of Campus Carry

Although many legislative bodies debate whether the carrying of concealed handguns should be permitted on college campuses, it is important to note the perceptions of those who would be most affected by such legislation—students, faculty, school administrators, and the communities surrounding college campuses.

Community-based police chiefs and county sheriffs tend to disagree on the need for gun control advocacy (Thompson, Price, Dake, & Tatchell, 2006; Thompson, Price, Khubchandani, & Dowling, 2011). Thompson and colleagues

(2006) reported that police chiefs were generally in favor of some gun-control policies, such as laws that would limit the access to guns by children and mandatory registration of handguns, rifles, and shotguns. These community-based police chiefs were in favor of making it harder for everyone to procure firearms, if it meant keeping handguns out of the hands of criminals (Thompson et al., 2006). Conversely, county sheriffs were generally not in favor of most gun-control policies, although their favorability for these policies was negatively related to whether they were a member of the National Rifle Association (NRA; Thompson et al., 2011). Although many police chiefs were in favor of supporting at least some gun-control advocacy activities, like meeting with or writing to state legislators to discuss gun control, the majority of county sheriffs reported not being in favor of any such activities (Thompson et al., 2011; Thompson et al., 2006). Although it is not known why this discrepancy exists, it is speculated that because community-based police chiefs generally deal with higher crime rates in cities, they may believe more gun-control is needed to combat exposure to gun-related crimes. This is contrasted with the relatively low-crime, rural settings, which typically fall under the jurisdiction county sheriffs (Glaeser & Sacerdote, 1999). In other words, police chiefs may be more likely than county sheriffs to encounter gun-related crimes (Glaeser & Sacerdote, 1999), which may in turn affect their view about the need for gun control.

When it comes to handguns in campus communities, many campus police

chiefs reported that individuals on college campuses believed that firearm violence was not an issue, but college presidents seemed to be unsupportive of campus-carry laws (Thompson, Price, Mrdjenovich, & Khubchandani, 2009; Price et al., 2014). Regarding the implementation of laws to legalize the carrying of concealed handguns in their state, research has also reported that college presidents and faculty believed there would be more negative outcomes than positive ones, if concealed handguns were permitted on college campuses (Price et al., 2014; Thompson, Price, Dake, & Teeple, 2013). Likewise, faculty were largely not supportive of campus-carry laws in their state (Thompson, Price, Dake, & Teeple, 2013). Faculty believed they would feel less safe on campus, if campus carry was permitted (Thompson, Price, Dake, & Teeple, 2013). Additionally, if campus carry were allowed, faculty thought students would also feel unsafe (Thompson, Price, Dake, & Teeple, 2013).

Recent research has focused on college students' perceptions about the concealed carrying of handguns on college campuses. Like college presidents and faculty, college students reported not being in favor of the passage of laws allowing for concealed carry of handguns on college campuses in their state (Thompson, Price, Dake, Teeple, Bassler et al., 2013). Only a small minority of students thought they would obtain a license to carry a handgun and carry that handgun on campus, if it were allowed in their state (Thompson, Price, Dake, Teeple, Bassler et al., 2013). Students' apprehension toward legalization of the

concealed carrying of handguns was not simply due to fear or victimization, but it was related to political factors and exposure to firearms (Jang, Dierenfeldt, & Lee, 2014).

Students reported that they would feel less safe on campus, if campus carry was allowed on their campus (Thompson, Price, Dake, Teeple, Bassler et al., 2013). Because the state of Texas legalized the concealed carrying of handguns on campus in 2016, research by Holmes, Brewer, and Kerr (2018) empirically tested whether students would actually feel less safe when interacting with a concealed handgun-carrying student. Participants did not report feeling significantly less safe around a confederate who led participants to believe he was carrying a concealed handgun compared to when the same confederate did not mention carrying a concealed handgun. Although participants reported no difference in their perceived level of safety, participants did report being less likely to interact with someone who they were led to believe was carrying a handgun compared to students who were not led to that belief (Holmes et al., 2018). Together, the results from this study suggest that although students did not report feeling unsafe when interacting with a concealed handgun-carrying peer, they exhibited a clear preference to avoid interpersonal interactions with this person. It is possible that there are other consequences of having concealed handguns on campus beyond interpersonal ones that have not been explored.

Most research has found that people are generally unsupportive of

permitting concealed handguns to be carried on college campuses, especially when current law prohibits the carrying of concealed handguns on campus (Holmes et al., 2018; Jang et al., 2014; Price et al., 2014; Thompson et al., 2006, 2009, 2011; Thompson, Price, Dake, & Teeple, 2013; Thompson, Price, Dake, Teeple, Bassler et al., 2013). Because at the time of this writing the concealed carrying of handguns is legal in several states, including Texas, it is possible to empirically test how handguns on campus affect a host of factors. Past research has examined the effect of the presence of handguns on college campuses on perceived safety and interpersonal consequences (Holmes et al., 2018), but it has not looked at how the presence of handguns affects attention and, in turn, learning. Because the presence of handguns in the classroom may draw attention away from the lecture content presented (Kramer, Buckhout, & Eugenio, 1990), the presence of handguns in the classroom may inhibit learning. The aim of this paper was to see how the carrying of concealed handgun in classrooms affected students' learning through a lack of attention.

OVERVIEW OF CURRENT STUDIES

Previous research has suggested that the predominate attitudes of administrators, faculty, and students toward the legal carry of concealed handguns on college campuses are negative. Perhaps these campus constituents are unsupportive of campus carry because they are concerned that campus carry may affect learning, the primary purpose of a university student. It is believed that students may focus their attention on the concern that someone in the classroom (e.g., a fellow classmate and/or the professor) might be carrying a concealed firearm rather than focusing on the course material, therefore inhibiting classroom learning. Study 1 was designed as an exploratory test of this hypothesis.

STUDY 1

Method

Participants

Participants (*N* = 241) were recruited for an online study at a public university in Texas, where campus carry was legal. The sample included 205 (85.1%) female and 32 (13.3%) male participants. These participants were 72.2% White, 14.9% Black, and 11.1% other races. Additionally, 23.7% of participants identified as Hispanic or Latino. Some participants opted not to answer these questions.

Materials

An online survey was created using the online, survey-creation software Qualtrics. The survey included a consent form, questions regarding participants' attitudes and practices toward firearm ownership, a demographics questionnaire, and a debriefing. A question regarding participants' attitudes toward the campus-carry law enacted in Texas in 2016 was assessed using a single item that read, "do you agree with this legislation?" with anchors of 1 (*Definitely not*) to 4 (*Definitely yes*). Higher scores indicated greater agreement with the law permitting the legal carrying of handguns on campus. Two separate questions regarding anticipated attention in class, if a professor or a fellow student were

known to carry a handgun on campus, were also included in the survey. Responses were assessed using two Likert-type questions that read, “if you found out a student in one of your classes is carrying a handgun, how well do you think you will be able to pay attention to the lecture?” and “if you found out the professor/instructor in one of your classes is carrying a handgun, how well do you think you will be able to pay attention to the lecture?” with anchors of 1 (*Not well at all*) to 5 (*Extremely well*). Higher scores indicated greater attention to lecture. Other questions not pertinent to the current research were also included (see Appendix A). The demographics questionnaire, which ended the study, assessed participants’ sex, race, ethnicity, age, academic standing, and major.

Procedure

Introductory psychology students were invited to participate in the online, Qualtrics survey described above. Participants were told the ostensible purpose of the study was to gauge people’s feelings on students, faculty, and staff being allowed to carry handguns on campus. Participants were asked to provide their consent to participate. After consenting, participants answered the questions regarding their attitudes toward and practices of firearm ownership, completed the demographics questionnaire and were thanked and debriefed. Participants were compensated with partial course credit or extra credit.

Results and Discussion

Exploratory analysis showed, on average, students indicated they

anticipated only being able to pay attention between slightly and moderately well in class with the knowledge that someone - either a professor or student - in the class was carrying a firearm (M = 2.85, SD = 1.27 on a 1-to-5 scale).

To test whether participants significantly differed in their anticipated ability to attend to a professor carrying a concealed handgun in class versus a student carrying a concealed handgun in class, a paired-samples t-test was conducted. Analysis showed a significant difference in the participants' anticipated ability to pay attention in class when a professor was known to carry a concealed handgun (M = 2.96, SE = .09) as opposed to a student being known to carry a concealed handgun (M = 2.74, SE = .08), $t(238) = 4.69$, $p < .001$. Specifically, participants anticipated being less able to pay attention when a student rather than the professor was carrying a concealed handgun.

These results showed that students believed their ability to pay attention in class would be relatively poor, if they knew someone in the class was carrying a concealed handgun. Additionally, students indicated that their anticipated attention would be worse if the known handgun-carrier were a fellow student as opposed to the professor. This may be due to the fact that students are exceptionally more likely to be the perpetrators of crime than instructors (Siegel & Raymond, 1992) as well as the argument that arming instructors would be a good deterrent and line-of-defense in the event of an active shooter situation (Staff, 2019; Weatherby, 2015).

It should be noted that Study 1 neglected to include a baseline measure of anticipated attention in a class in which the knowledge of someone carrying a concealed handgun was not present. Study 2 capitalized on this and included the necessary control groups in order to gauge whether participants' ability to pay attention in class was negatively affected if it was known that someone in class was carrying a concealed handgun. Additionally, Study 2 included a behavioral measure, learning, in order to gauge the behavioral responses of students rather than estimates of ability to pay attention.

STUDY 2

Results from Study 1 suggested that students believed their ability to pay attention in class would be relatively poor, if they thought either a student or the professor was carrying a handgun. They also indicated that their anticipated attention would be significantly worse if a fellow student were known to be carrying a handgun when compared to a professor carrying a handgun. Because of this, the current study aimed to see whether this anticipated effect holds true experimentally and with the appropriate control groups. It was predicted that there would be a main effect of belief that the instructor was carrying a concealed handgun such that those who were led to believe the instructor was carrying would score significantly lower on a post-lecture exam than those that were not led to this belief.[1] Additionally, it was predicted that there would be a main effect of belief that fellow students were carrying a concealed handgun such that those who were led to believe that students were carrying would score significantly lower on a post-lecture exam than those who were not led to this belief. An interaction was also predicted such that those who were led to believe that both students and the instructor were carrying would have significantly lower scores on a post-lecture exam than all other conditions.

Method

Participants

Participants included 99 undergraduate students from Stephen F. Austin State University (SFA). Data were collected from participants who were recruited through the SONA systems website. In total, 23 participants were assigned to the no-carry condition, 24 were assigned to the only the professor carrying condition, 25 were assigned to the only the student carrying condition, and 26 were assigned to the both the professor and student carrying condition. Attrition included 1 participant that elected to leave the study during the lecture bringing the final participant count to 98.

The sample included 77 (76.5%) females and 21 (23.5%) males who were 73.2% White, 17.5% Black, and 9.3 % other races. Additionally, the sample included 71 (72.4%) Non-Hispanic/Latino and 27 (27.6%) Hispanic/Latino participants with an age range of 18 to 36 (M = 19.46, SD = 2.41).

Materials

Informed Consent Form. An informed consent form containing the necessary information about the study, such as purpose, risks, and benefits of the study, was used at both initial sign-up for the online portion of the study (Appendix A) and at the beginning of the in-class portion of the study (Appendix B). Participants were told the purpose of the study was to gauge the effectiveness of a new teacher. Participants were told that they needed to fill out

a pre-lecture demographics questionnaire and then attend a 50-minute lecture. Because many semester-long courses begin with individual student introductions (Lang, 2008), this study had participants fill out a pre-lecture demographics form in the online portion of the study, and the results were shared with all participants at the beginning of the lecture portion of the study to increase a feeling of closeness and simulate additional knowledge gained throughout a semester-long course. Anonymity was ensured.

Pre-Lecture Demographics Questionnaire. An online questionnaire (Appendix C), created using Qualtrics, was used to ostensibly ascertain participants' age, sex, race, and ethnicity, among other individual differences. One question within this questionnaire asked participants whether they carry a legally concealed handgun on campus. This questionnaire was not used in data analysis but was instead used to further the cover story. As previously mentioned, the information garnered from this pre-lecture demographics questionnaire was used in a demographic disclosure at the beginning of the in-class lecture portion of the study to simulate knowledge gained about those in a class throughout a given semester.

Demographic Disclosure Conditions. Based on the two independent variables, knowledge of instructor carrying a concealed handgun (carrying or not) and knowledge of a student carrying a concealed handgun (carrying or not), participants were randomly assigned to one of four disclosure conditions. Those

conditions included no knowledge of anyone carrying a concealed handgun (Appendix D), knowledge that only the instructor was carrying (Appendix E), knowledge that only 14% of the students were carrying (Appendix F),[2] and knowledge that both the instructor and 14% of the students were carrying (Appendix G). This information was presented on a demographics disclosure sheet that was handed out at the beginning of the in-class portion of the study. This was designed so that participants believed the presented information reflected the summary statistics of the pre-lecture demographics questionnaire they completed in the online potion of the study.

Note-Taking Packet and Pencil. Participants were provided with three pre-stapled, blank pieces of white copy paper and a pencil. These items were to be used to take notes throughout the lecture. Participants were informed that they would need to turn in these note pages and pencil at the conclusion of the study.

Lecture. The lecture included a PowerPoint presentation over the topic of Classical and Operant Conditioning (Appendix H). This presentation was taken from a general psychology course. The presentation lasted 50 minutes, the length of a thrice per week course. The lecture was presented by an adjunct faculty member from the Department of Psychology who has experience teaching this lecture.[3]

Exam. A 10-item exam (Appendix I) was administered to the students

after the in-class lecture. The items for the quiz were pulled from the test bank provided with the textbook from which the lecture was based (Comer & Gould, 2013). Two easy, two medium, and one hard question were gathered for each topic (i.e., classical and operant conditioning) to total ten exam items.

Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS is typically used to assess state affect, or emotion. For the purposes of this study, a single item, "safe," was added in order to assess perceived safety in a particular moment (Appendix J). This addition has been used in previous research (Holmes et al., 2018). Anchors for the scale were from 1 (*very slightly or not at all*) to 5 (*extremely*) with higher scores indicating higher perceived safety.

Trait Self-Control Scale (TSCS; Tangney, Baumeister, & Boone, 2004). The TSCS was used to assess participants' level of trait self-control. The 13-item self-report scale used Likert-type questions, which included items like "I have a hard time breaking bad habits," "I say inappropriate things," and "I refuse things that are bad for me" (see Appendix K). The anchors were 1 (*not at all like me*) and 5 (*very much like me*), and higher scores indicated higher levels of self-control. Scores on this questionnaire were used as a covariate as it was believed that those with low levels of self-control would be less likely to attend to the lecture.

Post-Lecture Questionnaire. A 5-item questionnaire (Appendix L) was

given in addition to the TSCS. It was used to assess participants' level of perceived effort put forth to understand the lecture and the amount of new knowledge gained from the lecture.

Post-Lecture Demographics Questionnaire. A post-lecture demographics questionnaire (Appendix M) was administered to the participants. It included the same demographics questions from the pre-lecture demographics and the questions from Study 1 regarding participants' attitudes and practices toward firearm ownership. It was important to repeat the administration of these demographics questions because responses to the online portion of the study could not be linked to response from the in-class portion of the study.

Manipulation Check. A single-item manipulation check was included with the demographics questions and read "please indicate which of the following was identified in the demographics questionnaire at the beginning of class." The answer options were as follows: it said the professor carries a handgun, it said 14% of the students carry a handgun, it said the professor and 14% of the students carry a handgun, it did not indicate whether someone carried a firearm, and unknown. If participants were aware of the manipulation, the answer to this question should have been different for each condition.

Debriefing Form. Upon completion, participants were handed a debriefing form (Appendix N) that informed the participants of the true nature of the study. The participants were assured that no person was known to carry a

concealed handgun, and this was simply the experimental manipulation. The debriefing form also included the on-campus counseling services information, and all the researchers' contact information.

Re-Consent Form. Due to the deceptive nature of this study, participants were given the option to exclude their data from the final analyses. To do this, participants were asked to sign and return a re-consent form at bottom of the debriefing form. They were instructed that providing their signature would indicate that they granted permission to have their data included in the final analyses.

Procedure

Upon signing up for the two-part study on the SONA Systems' website, participants were provided with a link directing them to a Qualtrics survey containing the initial informed consent form and pre-lecture demographics questionnaire. After consenting and completing the pre-lecture demographics questionnaire, participants were instructed to attend the in-class portion of the study. They were informed that failure to do so would result in forfeiture of the research credit prescribed to that portion of the study, which was intended to serve as a strong incentive to attend the in-class portion of the study. A reminder email was sent to participants two days in advance of the in-class portion of the study. Once participants attended the designated day and time for the in-class portion, they were reminded of the purpose of the study, ostensibly to get

feedback on the teaching style of a new instructor, and asked to provide secondary consent. Next, participants were handed the demographic disclosure sheet, which included information about whether the professor was carrying a concealed handgun, 14% of students were carrying a concealed handgun, both the professor and 14% of the students were carrying concealed handguns, or no information about either the professor or the students carrying a concealed handgun. Participants were told that this information was shared as a way to get to know those in the classroom and to simulate getting to know the class throughout the semester. The data presented in this demographic disclosure sheet ostensibly came from the pre-lecture demographics survey participants previously completed. The participants were randomly assigned to one of four conditions, based on the two independent variables previously described. Once all participants had ample time to read this demographic disclosure sheet, they were handed the note-taking packet and pencil to be used during the duration of the lecture. The lecture material was then presented to the students. After completion of the lecture presentation, participants were handed a packet of surveys containing the exam, PANAS (with embedded safety question), TSCS, post-lecture questionnaire, and post-lecture demographics questionnaire, in that order. Upon completion, participants were instructed to bring their demographics disclosure sheet, note-taking packet, and survey packet to the research assistants waiting in the hall. Each participant's materials were stapled to keep

data together. Upon doing this, participants were given the debriefing form and the opportunity to refuse to have their data excluded in the final analyses. Once completed, participants were dismissed. No participants refused to have their data included.

Results and Discussion

Data Screening

All data were screened for missing cases, skewness, and kurtosis before analyses were conducted. First, all participants answered all critical questions, such as the post-lecture exam, and turned in their demographics disclosure sheets. Thus there were no critical cases of missing data.

Next, each exam answer was recoded into dummy variables as either incorrect or correct. These new scores were added together to create a total score of correct answers with higher scores indicating a higher number of correct answers.

Finally, normality was assessed for the total number of correct answers. Skewness and kurtosis for exam scores were within acceptable ranges (-.471 and .451 respectively; $p > .05$).

Main Results

The present study employed a 2 (instructor carrying a concealed handgun condition: carrying or not carrying) x 2 (students carrying a concealed handgun condition: carrying or not carrying) between-groups design. A 2x2 factorial,

between-subjects analysis of variance (ANOVA) was implemented to test the effects that the knowledge of someone (e.g., the instructor, 14% of students, or both the instructor and 14% of students) carrying a concealed handgun in class had on learning as assessed by a post-lecture exam.

Analysis indicated a non-significant main effect of the instructor carrying condition on participants' scores on the post-lecture exam ($M_{NoCarry}$ = 7.229; M_{Carry} = 6.880; $F(1,96) = .858$, $p = .357$, $\eta_p^2 = .009$). Likewise, analysis indicated a non-significant main effect of the student carrying condition on participants' scores on the post-lecture exam ($M_{NoCarry}$ = 7.319; M_{Carry} = 6.804; $F(1,96) = 1.977$, $p = .163$, $\eta_p^2 = .021$). Additionally, results indicated a non-significant interaction between the instructor-carrying and the student-carrying conditions on scores on the post-lecture exam, $F(3,94) = 1.013$, $p = .317$, $\eta_p^2 = .011$.

Additional Analysis

A 2x2 factorial, between-subjects analysis of variance (ANOVA) was implemented to test the effects that the knowledge of someone (e.g., the instructor, 14% of students, or both the instructor and 14% of students) carrying a concealed handgun in class had on participants' perceived safety.

Analysis indicated a non-significant main effect of the instructor-carrying condition on perceived safety ($M_{NoCarry}$ = 3.60; M_{Carry} = 4.02; $F(1,96) = 3.160$, $p = .079$, $\eta_p^2 = .033$). Likewise, analysis indicated a non-significant main effect of the student-carrying condition on perceived safety ($M_{NoCarry}$ = 3.87; M_{Carry} = 3.76;

$F(1,96) = .219$, $p = .641$, $\eta_p^2 = .002$). Additionally, results indicated a non-significant interaction between the instructor-carrying and the student-carrying conditions on scores on the post-lecture exam, $F(3,94) = .083$, $p = .774$, $\eta_p^2 = .001$.

Discussion

These results did not show support for our hypothesis that the knowledge of someone carrying a concealed handgun in class would negatively affect learning, as assessed by scores on a post-lecture exam. It would be improper to make any implications based on the failure to reject our null hypothesis.

There are several possible reasons why this study failed to produce the expected results. Most importantly, although the sample size was within suggested statistical parameters (VanVoorhis & Morgan, 2007), it was lower than the desired total *N*. It is believed that this discrepancy in expected versus obtained sample size was due to the overall design of the study and the participant pool's unwillingness to participate in a study of this magnitude. Specifically, this study required a two-hour total time commitment, with an hour and a half of that commitment required to be in person. Because the majority of studies posted to SONA Systems can be completed online at home, it was believed that participants perceived that the compensation provided was not equivalent to the requirements of the study. Additionally, students spent large expanses of time each day in class and may not have been willing to sit through

another lecture on top of their normal course-load.

GENERAL DISCUSSION

This pair of studies attempted to do three things: replicate previous research showing that the presences of guns does not affect perceived safety, assess students' perceptions of the effect that the knowledge of someone carrying a firearm has in class and then apply those perceptions to an in-person, behavioral task. Study 1 gauged participants' perceived attention in class when it was known that either the instructor or a fellow student hypothetically carried a concealed handgun in class. Results indicated a general distaste for someone carrying a handgun in class. Additionally, a significant difference was found between whether a student or the instructor was known to carry a handgun, such that participants indicated higher perceived attentiveness when the thought the instructor was carrying as opposed to a fellow student. Study 2 attempted to build on the perceptual results from Study 1 and test them empirically within a classroom setting. This was done by manipulating whether it was known the lecture instructor was carrying a concealed handgun and whether it was known fellow students in the classroom carried concealed handguns. Participants were then asked to attend a lecture and take a post-lecture exam with scores on this exam indicating participants' level of learning from the lecture. Unfortunately, results for Study 2 failed to support our hypothesis, such that there were no

significant differences in exam scores between conditions. Additionally, Study 2 was designed as an extension of previous work (Holmes et al., 2018) showing that the presence of a gun did not affect perceived safety. Although implications are made with caution, it may be that the knowledge of someone carrying a firearm does not affect perceived safety or attention in the way proposed.

There were several possible reasons why the predicted results for Study 2 were not found. It is believed that potential participants may not have found the study particularly interesting and thus did not participate. Full-time students spend a minimum of 12 hours per week in a classroom and are regularly asked to evaluate the teaching of each of their professors. Thus potential participants may not have been willing to do this outside of what is required of them for their normal course-load. The compensation given to each participant for their time was within department standards of one credit per 30 minutes of participation. Participants may have perceived that the four credits provided were not sufficient to justify the two-hour time commitment, of which one and a half hours were in person.

Next, the introduction and salience of the manipulation may not have been strong enough to elicit the desired behavioral response. The manipulation (i.e., the ostensible demographic information about the instructor and fellow students) was artificially given, so participants may not have been particularly attentive to it. Additionally, it is believed the demographic knowledge received by the

participants may not have been salient throughout the course of the study as a substantial amount (28.57%) of students failed to properly identify the information about their condition, which had been previously presented in the demographic disclosure.

It is believed that many of the participants may have already received a lecture over the topic covered during the study. A number of students (7.14%) indicated they had just received a similar lecture over the topic in their respective introductory psychology courses. The true number of participants that had a similar lecture may be much higher than the one reported, as this given statistic is relying on the responses of an open-ended question not specifically about experience with the lecture option.

Lastly, it should be noted that a direct measure of attention was not used within Study 2. It was assumed that the redirection of attention that was proposed would affect learning, but without a direct measure of attention, it is unknown if attention was actually affected.

Although Study 2 failed to establish a causal relationship between the knowledge of someone carrying a concealed handgun in class and changes in learning due to the perceptions regarding the person carrying a handgun, Study 1 does still give initial support to the idea that the knowledge of someone carrying a handgun in class affects learning. Future studies could capitalize on the shortcomings of Study 2 by offering greater compensation to increase sample

size. Additionally, future studies could devise a manipulation that is more salient than the one used in Study 2. Finally, future studies could see whether the interpersonal effect described by previous research (Holmes et al., 2018) and the perceived effect found in Study 1 translate to other settings on campus, such as within student organizations or within residence halls. It is possible that the knowledge of someone carrying a concealed handgun within a student organization could have an effect on the cohesiveness of that organization. Additionally, it is possible that knowing someone within a dorm carries a concealed handgun could affect one's willingness to interact with that person or one's perceived safety within the dorm. The results of these studies suggest that the presence of handguns on campus have both interpersonal and potential academic consequences.

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FOOTNOTES

[1] Although the term professor was used in Study 1, the authors decided to switch to the term instructor for Study 2 to reflect the fact that not all instructors are professors.

[2] The percentage of students carrying is based on the finding that 14% of students indicated that they would carry a concealed handgun on campus if it were legal in their state (Thompson, Price, Dake, Teeple, Bassler et al., 2013).

[3] The author of this manuscript was also the lecturer for the data collection portion of Study 2.

APPENDIX A

INFORMED CONSENT FORM

Investigator's statement

Title: The Effectiveness of a New Teacher

PURPOSE: We are interested in college students' perceptions of the effectiveness of new teachers.

DURATION: The length of time you will be involved with the online portion of the online portion of this study is approximately 15-30 minutes. The in-class portion of this study will take approximately 60-90 minutes.

PROCEDURES: If you agree to be in this study, we will ask you to complete a short, online demographics questionnaire. Next, you will be asked to attend an in-class lecture in which you will watch a 50 minute lecture on a topic chosen by the instructor. Afterwards you will be asked to complete a short exam regarding what you learned from the lecture, your levels of attentiveness during the lecture, and the effectiveness of the instructor.

RISKS: Participation in this study involves no more than minimal risk. You may experience mild emotional discomfort, mild boredom, or fatigue as a result of completing surveys and attending a lecture. If you experience negative affect as a result of participating in this study, you may contact SFASU Counselling Services, located on the 3rd floor of the Rusk building, or contact their office at (936) 468-2401 or counseling@sfasu.edu.

CONFIDENTIALITY: The records of this study will be kept private. Your name will not be attached to answers you provide. The investigators will have access to the raw data. In any sort of report that is published or presentation that is given, we will not include any information that will make it possible to identify a participant. All participants will be issued a participant number, and this number will not be tied to any type of identifying information about you. Once collected, all data will be kept in secured files, in accord with the standards SFASU, federal regulations, and the American Psychological Association. In addition, please remember that the experimenters are not interested in any individual person's responses. We are interested in how people in general respond to the measures.

VOLUNTARY NATURE OF THE STUDY: Your participation in this study is voluntary. In addition, you may choose to not respond to individual items in the survey. Your decision whether or not to participate will not affect your current or future relations with SFASU nor any of its representatives. If you decide to participate in this study, you are free to withdraw from the study at any time without affecting those relationships.

CONTACTS AND QUESTIONS:
Hayden Holmes: holmeshl@jacks.sfasu.edu
Dr. Lauren Brewer: brewerle@sfasu.edu (936)468-1470

If you have questions or concerns regarding this study and would like to speak with someone other than the experimenters, you may contact The Office of Research and Sponsored Programs at (936) 468-6606.

BENEFITS: Students recruited from participating introductory psychology classes will receive 1 credit for every 30 minutes of research participation. This study is worth 4 research participant credits. Failure to attend the second portion of the study will result in forfeiture of the credit (3 points) for that portion. Students from other classes will receive credit in that class in an amount that is considered appropriate by the course instructor (e.g., 5 points extra credit or 1-2% of the overall points possible in the class).

STATEMENT OF CONSENT

The procedures of this study have been explained to me and my questions have been addressed. The information that I provide is confidential and will be used for research purposes only. I am at least 18 years of age. I understand that my participation is voluntary and that I may withdraw at any time without penalty. I have read the information in this consent form and I agree to be in the study. I will receive a copy of this consent form for my records upon my request.

I agree to participate in this study:

- ❍ Yes
- ❍ No

APPENDIX B

INFORMED CONSENT FORM

Investigator's statement

Title: The Effectiveness of a New Teacher

PURPOSE: We are interested in college students' perceptions of the effectiveness of new teachers.

DURATION: The length of time you will be involved with the online portion of the online portion of this study is approximately 15-30 minutes. The in-class portion of this study will take approximately 60-90 minutes.

PROCEDURES: If you agree to be in this study, we will ask you to complete a short, online demographics questionnaire. Next, you will be asked to attend an in-class lecture in which you will watch a 50 minute lecture on a topic chosen by the instructor. Afterwards you will be asked to complete a short exam regarding what you learned from the lecture, your levels of attentiveness during the lecture, and the effectiveness of the instructor.

RISKS: Participation in this study involves no more than minimal risk. You may experience mild emotional discomfort, mild boredom, or fatigue as a result of completing surveys and attending a lecture. If you experience negative affect as a result of participating in this study, you may contact SFASU Counselling Services, located on the 3rd floor of the Rusk building, or contact their office at (936) 468-2401 or counseling@sfasu.edu.

CONFIDENTIALITY: The records of this study will be kept private. Your name will not be attached to answers you provide. The investigators will have access to the raw data. In any sort of report that is published or presentation that is given, we will not include any information that will make it possible to identify a participant. All participants will be issued a participant number, and this number will not be tied to any type of identifying information about you. Once collected, all data will be kept in secured files, in accord with the standards SFASU, federal regulations, and the American Psychological Association. In addition, please remember that the experimenters are not interested in any individual person's responses. We are interested in how people in general respond to the measures.

VOLUNTARY NATURE OF THE STUDY: Your participation in this study is voluntary. In addition, you may choose to not respond to individual items in the survey. Your decision whether or not to participate will not affect your current or future relations with SFASU nor any of its representatives. If you decide to participate in this study, you are free to withdraw from the study at any time without affecting those relationships.

CONTACTS AND QUESTIONS:
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BENEFITS: Students recruited from participating introductory psychology classes will receive 1 credit for every 30 minutes of research participation. This study is worth 4 research participant credits. Failure to attend the second portion of the study will result in forfeiture of the credit (3 points) for that portion. Students from other classes will receive credit in that class in an amount that is considered appropriate by the course instructor (e.g., 5 points extra credit or 1-2% of the overall points possible in the class).

STATEMENT OF CONSENT

The procedures of this study have been explained to me and my questions have been addressed. The information that I provide is confidential and will be used for research purposes only. I am at least 18 years of age. I understand that my participation is voluntary and that I may withdraw at any time without penalty. I have read the information in this consent form and I agree to be in the study. I will receive a copy of this consent form for my records upon my request.

Signature of Participant: _____ **Date:** _____

Printed Name: _____

APPENDIX C

Pre-Lecture Demographics Questionnaire

Please provide the following information by indicating your answer for each question. The information provided will be used to simulate getting to know classmates throughout a semester. The information will remain entirely anonymous, so please answer truthfully and honestly.

Sex:

- ❍ Male
- ❍ Female
- ❍ Prefer not to answer

What is your gender?

- ❍ Man
- ❍ Woman
- ❍ Nonbinary/Third Gender
- ❍ Unsure/questioning
- ❍ Otherwise not listed
- ❍ Prefer not to answer

Age (in years):

_____

I would describe my ethnicity as:

- ❍ Hispanic or Latino
- ❍ Not Hispanic or Latino

I would describe my race as:

- ❍ American Indian/Alaska Native
- ❍ Asian
- ❍ Native Hawaiian or Other Pacific Islander
- ❍ Black or African American
- ❍ White or Caucasian
- ❍ More than one race
- ❍ Unknown or Not Reported

My academic standing is:

- ❍ Freshman
- ❍ Sophomore
- ❍ Junior
- ❍ Senior
- ❍ Graduate Student
- ❍ Other

Major:

_____

Current GPA

_____

What is your favorite pastime?

_____

Many use traveling as a fun pastime. To drive large RV's or trailers, one has to obtain a commercial driver's licence. Do you have CDL?

- ❍ Yes
- ❍ No
- ❍ No, but plan to get one

As of August 1, 2016, those with a licence to carry (LTC) a handgun can carry a concealed handgun on Texas public university campuses. Do you have a LTC?

- ❍ Yes
- ❍ No
- ❍ No, but plan to get one

If you had to guess the purpose of this study, what would you guess is the purpose?

_____

_____

_____

_____

Is there anything about you or your recent experiences that may have affected your responses in this study?

APPENDIX D

No Knowledge Disclosure

Facts about the Teacher

I am a second year graduate student at SFA. After obtaining my master's this May, I will be headed to a doctoral program in social psychology and will be working toward your PhD. I have taught a few classes before but am constantly wanting feedback to improve. In my free time, I enjoy playing video games and playing with my dog, Guinness. Additionally, I have a commercial driver's license, and I travel regularly.

Facts about the Students

Participants, within both sections, indicated that they are 57.5% White, 18.5% Black, and 17.6% Hispanic. Additionally, they indicated that they were 63.6% female and 36.4% male with an average age of 19.75 years. They like to play sports (16.9%), watch TV or movies (14.8%), and play video games (10.1%). Lastly, 14% of students have a commercial driver's license and use it to travel.

APPENDIX E

Professor Carrying Disclosure

Facts about the Teacher

I am a second year graduate student at SFA. After obtaining my master's this May, I will be headed to a doctoral program in social psychology and will be working toward your PhD. I have taught a few classes before but am constantly wanting feedback to improve. In my free time, I enjoy playing video games and playing with my dog, Guinness. Additionally, I have a commercial driver's license, and I travel regularly.

Facts about the Students

Participants, within both sections, indicated that they are 57.5% White, 18.5% Black, and 17.6% Hispanic. Additionally, they indicated that they were 63.6% female and 36.4% male with an average age of 19.75 years. They like to play sports (16.9%), watch TV or movies (14.8%), and play video games (10.1%). Lastly, 14% of students have a license to carry a handgun and use it to carry on campus.

APPENDIX F

Student Carrying Disclosure

Facts about the Teacher

I am a second year graduate student at SFA. After obtaining my master's this May, I will be headed to a doctoral program in social psychology and will be working toward your PhD. I have taught a few classes before but am constantly wanting feedback to improve. In my free time, I enjoy playing video games and playing with my dog, Guinness. Additionally, I have a license to carry a handgun, and I carry it regularly.

Facts about the Students

Participants, within both sections, indicated that they are 57.5% White, 18.5% Black, and 17.6% Hispanic. Additionally, they indicated that they were 63.6% female and 36.4% male with an average age of 19.75 years. They like to play sports (16.9%), watch TV or movies (14.8%), and play video games (10.1%). Lastly, 14% of students have a commercial driver's license and use it to travel.

APPENDIX G

Instructor and Student Carrying Disclosure

Facts about the Teacher

I am a second year graduate student at SFA. After obtaining my master's this May, I will be headed to a doctoral program in social psychology and will be working toward your PhD. I have taught a few classes before but am constantly wanting feedback to improve. In my free time, I enjoy playing video games and playing with my dog, Guinness. Additionally, I have a license to carry a handgun, and I carry it regularly.

Facts about the Students

Participants, within both sections, indicated that they are 57.5% White, 18.5% Black, and 17.6% Hispanic. Additionally, they indicated that they were 63.6% female and 36.4% male with an average age of 19.75 years. They like to play sports (16.9%), watch TV or movies (14.8%), and play video games (10.1%). Lastly, 14% of students have a license to carry a handgun and use it to carry on campus.

APPENDIX H

Lecture

Classical and Operant Conditioning

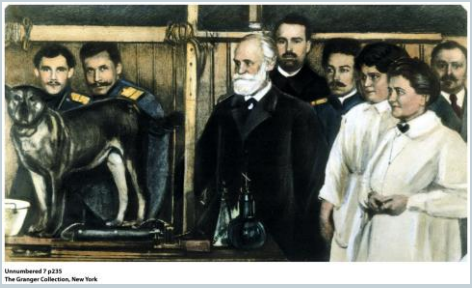
CHAPTER 7

Associative learning:

- Connections are formed between two or more stimuli
  - Classical conditioning
  - Operant conditioning

Classical Conditioning

- The association of two stimuli
- Ivan Pavlov



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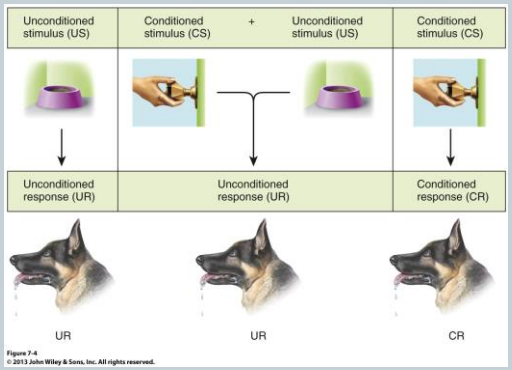
Components of Classical Conditioning

- Unconditioned Stimulus (UCS): A stimulus that naturally produces a response
  - Dog food
- Unconditioned Response (UCR): The natural physical response to the stimulus
  - Salivation
- Conditioned Stimulus (CS): The stimulus that is originally neutral but after pairings with an unconditioned stimulus becomes meaningful
  - Tone
- Conditioned Response (CR): The learned physical response to a previously neutral stimulus
  - Salivation

Pavlov's Dogs



Four Major Conditioning Processes

- Acquisition: The initial learning of the stimulus-response relationship
- Extinction: Diminished responding that happens when the CS (tone) no longer occurs right before UCS (food)
- Spontaneous Recovery: CR can recur after a time delay without need for further conditioning
- Stimulus generalization: The tendency of a new stimulus, one that is similar to the original CS, to elicit the CR
  - Implicated in fear conditioning

Classical Conditioning and Fear

- Watson conditioned Little Albert to be afraid of a white rat
  - He hit a steel bar making a loud, scary noise every time Little Albert reached for the animal
  - After repeated pairings, Albert would cry just at seeing the rat
  - Generalization: Albert came to fear other white things such as white beards
  - https://www.youtube.com/watch?v=FMnhyGozLyE

Classical Conditioning and Phobias

- Phobia
  - Exaggerated, irrational fears associated with a particular stimulus
    - Examples: Snakes, spiders, heights, dark, etc.
- Systematic Desensitization
  - Repeated introduction to feared stimuli without US

Classical Conditioning and Taste Aversion

- Conditioned Taste Aversion: Associating a specific food with subsequent illness
  - Unlike fear conditioning
    - Taste aversion can occur after only one pairing
    - Occurs even if several hours have passed between eating and becoming ill

Operant Conditioning

- AKA instrumental conditioning
- We learn by reinforcement and punishment
- Behaviorism: A branch of psychology insisting on investigating observable behavior
  - Edward Thorndike
    - Law of effect: Behaviors with pleasurable results are likely to continue and those with unpleasant results are less likely to continue
  - B.F. Skinner
    - Operant Conditioning: Similar to law of effect. Thorndike invented operant conditioning; Skinner popularized it and did TONS of research on it

Reinforcement

- Reinforcement increases future behavior
- Positive reinforcement
  - Praise, food, money, sex, or anything positive will *increase* the likelihood of the behavior happening again
    - Getting a good grade after studying for a test will increase the likelihood that someone will study for the next test.
- Negative reinforcement
  - Removing a constant painful stimulus (nagging, loud noises, pain, painful cravings) will *increase* the likelihood of the behavior happening again
    - If we put on a seatbelt and it stops the constant beeping, then we are more likely to put the seatbelt on again the next time.

Punishment

- Punishment decreases future behavior
- Positive punishment
  - Yelling, spanking, putdowns will discourage the behavior from happening again.
  - Punishment by application
- Negative punishment
  - Silent treatment, no car or phone privileges, timeout will discourage the behavior from happening again.
  - Punishment by removal

Types of Reinforcers

- Primary reinforcers
  - Stimulus reinforces behavior without experience or training.
    - e.g., food, water, comfort
- Secondary reinforcers
  - Stimulus reinforces behavior because it helps to attain a primary reinforcer.
    - Working earns money that can be used for food and comfort.

Schedules of Reinforcement

- Continuous reinforcement: Behavior is reinforced every time
- Intermittent reinforcement: Behavior is reinforced only some of the time

Using Operant Conditioning

- Behavior modification: A planned effort to change children's behaviors by reinforcing desirable behaviors and avoiding reinforcement of undesired behaviors
  - E.g., Caregivers not responding to a tantrum
- Shaping: Rewarding behaviors that are increasingly similar to the desired behavior
  - Used frequently with animals

Learned Helplessness

- Learned helplessness
  - Through conditioning, people learn that they cannot control their environment and fail to do so even when they are able

Learning and Thinking

- Latent learning occurs without reinforcement and is not used until called for.
  - Not a result of conditioning.
    - Spatial navigation learning
      - Gaining information about the environment while casually exploring
      - Information (latent learning) is later used to find quickest route
    - Insight learning
      - "Aha" moment

APPENDIX I

Exam

Instructions: Please answer the following questions to the best of your ability. Please refrain from using your notes while taking this exam.

1. _____ is credited with laying the foundation for the study of classical conditioning in psychology.
   A) Thorndike
   B) Skinner
   C) Pavlov
   D) Watson

2. Joy was startled into flinching when she heard thunder during a rain storm. Eventually, the sight of lighting made her flinch. What is the conditioned stimulus in this example?
   A) Sound of thunder
   B) Flinching from hearing thunder
   C) Sight of lightning
   D) Flinching from sight of lightning

3. Alexis uses cocaine, which activates her sympathetic nervous system. Expecting her dealer, her hands shake and her heart pounds. Which of the following correctly identifies the CS and the UCS?
   A) CS – cocaine; UCS -- cocaine
   B) CS – knock on the door; UCS – pounding heart
   C) CS – knock on the door; UCS -- cocaine
   D) CS – pounding heart; UCS -- cocaine

4. Mario ate leftover food on Saturday morning that had not been refrigerated properly the night before. Later that day, he became ill. To this day, many years later, Mario refuses to eat leftover food. Which term describes his condition?
   A) Sensitization
   B) Phobia
   C) Taste aversion
   D) Habituation

5. Often, a conditioned response may be elicited not only by the original CS, but also by a similar one. This is known as stimulus _____.
   A) control
   B) discrimination
   C) generalization
   D) diffusion

6. The process by which a stimulus increases the likelihood that a preceding behavior will be repeated is called _____.
   A) sensitization
   B) reinforcement
   C) conditioning
   D) association

7. Which of the following scenarios exemplifies negative reinforcement?
   A) Vanna fastens her seatbelt as soon as she gets in her car to stop the annoying alert sound.
   B) Drake no longer cuts class, now that his parents confiscated his iPod.
   C) Maria now buys a different brand of cigarettes to get two packs for the price of one.
   D) Nate no longer arrives late at work following a reprimand from his boss.

8. Three year-old Kate is an extremely finicky eater. Her mother is concerned that Kate's unwillingness to try new fruits and vegetables will negatively impact her growth and development. According to the textbook, which of the following techniques is the best motivator for behavioral change?
   A) positive punishment
   B) negative punishment
   C) positive reinforcement
   D) negative reinforcement

9. Punishment is more effective when _____.
   A) it occurs long after the misdeed
   B) it is a clear consequence of a specific behavior
   C) rewards of the misdeed outweigh the negativity of the punishment
   D) the negative consequences of the punishment are weak

10. Reinforcers that satisfy a biological need are called _____ reinforcers.
   A) positive
   B) unconditioned
   C) primary
   D) reflexive

APPENDIX J

Positive and Negative Affect Scale

This scale consists of a number of words that describe different feelings and emotions. Read each item and indicate to what extent you feel this way right now, that is, at the present moment. Use the provided scale.

1	2	3	4	5
Very slightly or not at all	A little	Moderately	Quite a bit	Extremely

____ Interested

____ Distressed

____ Excited

____ Upset

____ Strong

____ Guilty

____ Scared

____ Hostile

____ Enthusiastic

____ Proud

____ Safe

____ Irritable

____ Alert

____ Ashamed

____ Inspired

____ Nervous

____ Determined

____ Attentive

____ Jittery

____ Active

____ Afraid

APPENDIX K

Trait Self-Control Scale

Please answer the following items as they apply to you. Use the following scale to refer to how much each question is true about you.

Not at all like me		Sometimes like me		Very Much Like Me
1	2	3	4	5

_____ I have a hard time breaking bad habits.

_____ I am lazy.

_____ I say inappropriate things.

_____ I do certain things that are bad for me, if they are fun.

_____ I refuse things that are bad for me.

_____ I wish I had more self-discipline.

_____ I am good at resisting temptation.

_____ People would say that I have iron self-discipline.

_____ I have trouble concentrating.

_____ I am able to work effectively at long-term goals.

_____ Sometimes I can't stop myself from doing something, even if I know it is wrong.

_____ I often act without thinking through all the alternatives.

_____ Pleasure and fun sometimes keep me from getting work done.

APPENDIX L

Post-Lecture Questionnaire

Please answer the following questions to the best of your ability.

1. In general, how much effort do you put into your education? (Please be honest in your response)

None	Very little	Little	Moderate	A lot

2. How engaging did you find the material presented in the class?

Very Unengaging	Unengaging	Somewhat Unengaging	Neither Unengaging nor Engaging	Somewhat engaging	Engaging	Very Engaging

3. How engaging did you find the lecturer who presented the material?

Very Unengaging	Unengaging	Somewhat Unengaging	Neither Unengaging nor Engaging	Somewhat engaging	Engaging	Very Engaging

4. How much do you think you learned from the lecture?

None	Very little	Little	Moderate	A lot

5. How much effort did you put into learning the material in the lecture?

None	Very little	Little	Moderate	A lot

APPENDIX M

Post-Lecture Demographics Questionnaire

Please provide the following information by indicating your answer for each question.

Sex:

- ❍ Male
- ❍ Female
- ❍ Prefer not to answer

What is your gender?

- ❍ Man
- ❍ Woman
- ❍ Nonbinary/Third Gender
- ❍ Unsure/questioning
- ❍ Otherwise not listed
- ❍ Prefer not to answer

Age (in years):

_____

I would describe my ethnicity as:

- ❍ Hispanic or Latino
- ❍ Not Hispanic or Latino

I would describe my race as:

- ❍ American Indian/Alaska Native
- ❍ Asian
- ❍ Native Hawaiian or Other Pacific Islander
- ❍ Black or African American
- ❍ White or Caucasian
- ❍ More than one race
- ❍ Unknown or Not Reported

My academic standing is:

- ❍ Freshman
- ❍ Sophomore
- ❍ Junior
- ❍ Senior
- ❍ Graduate Student
- ❍ Other

Major:

_____

Current GPA

_____

. Prior to this study, how well did you know the teacher?

- ❍ Not well at all (e.g., I have never met him)
- ❍ Not very well
- ❍ Somewhat well
- ❍ Very well (e.g., I have had a class with him)

As of August 1, 2016, those with a licence to carry (LTC) a handgun can carry a concealed handgun on Texas public university campuses. Do you have a LTC?

- ❍ Yes
- ❍ No
- ❍ No, but plan to get one

How much experience would you say you have with firearms?

- ❍ A great deal
- ❍ A lot
- ❍ A moderate amount
- ❍ A little
- ❍ None at all

Are you a member of a firearm organization (National Rifle Association, gun club, etc.)?

- ❍ No
- ❍ Yes

How many firearms do you own? (Provide a number)

_____

If you do own a firearm, where do you keep it? (select all that apply)

- [ ] Parents' house
- [ ] My apartment
- [ ] Car
- [ ] Dorm
- [ ] Friend's house
- [ ] University Police Department
- [ ] Other

If you do own a firearm, what type(s) do you own? (select all that apply)

- [ ] Pistol
- [ ] Shotgun
- [ ] Rifle
- [ ] Other

Why do you own a firearm? (select all that apply)

- [ ] Hunting/Sport
- [ ] Personal Safety
- [ ] Gift
- [ ] Firearm collecting
- [ ] Other

Have you ever received formal firearms training for the use of a handgun?

- ❍ No
- ❍ Yes

Please indicate "Not at all like me"

- ❍ Very much like me
- ❍ A little like me
- ❍ Neither like me nor unlike me
- ❍ A little not like me
- ❍ Not at all like me

How accurate of a shooter are you with a handgun?

- ❍ Very accurate
- ❍ Accurate
- ❍ Somewhat accurate
- ❍ Not very accurate
- ❍ Not accurate at all
- ❍ Do not know

Which of these applies to the demographics disclosure presented at the beginning of class?

- ❍ It said the professor carries a handgun
- ❍ It said 14% of the students carry a handgun
- ❍ It said the professor and 14% of the students carry a handgun
- ❍ It did not indicate whether someone carried a firearm
- ❍ Unknown

If you had to guess the purpose of this study, what would you guess is the purpose?

_____

_____

_____

_____

_____

Is there anything about you or your recent experiences that may have affected your responses in this study?

_____

_____

_____

_____

_____

APPENDIX N

Stephen F Austin State University

Debriefing

Thank you for participating in the study entitled, "The Experience of a New Teacher," conducted by Hayden Holmes and Dr. Lauren Brewer in the Department of Psychology at SFASU. This study was designed to examine the effect of knowledge of a firearm in the classroom, whether carried by the professor or fellow students, on one's ability to attend to and learn from a lecture.

After consenting to participate, you were asked to fill out a short demographics questionnaire and were told the information you gave would help researchers simulate getting to know one's classmates throughout a semester. This was done through a demographics disclosure at the beginning of the in-class portion of the study. While most of this information was true to what fellow participants included, two pieces of information were manipulated in order to give you the impression that the professor and/or fellow students were carrying concealed handguns. You were randomly assigned to one of four conditions: no knowledge of anyone carrying a concealed handgun, knowledge that only the instructor was carrying a handgun, knowledge that 14% of the students were carrying a handgun, and knowledge that both the instructor and 14% of the students were carrying a handgun. After reading the demographic disclosure sheet, the instructor gave a 50-minute lecture on associative learning (Classical and Operant Conditioning). Once the lecture was completed, you completed an exam that gauged the degree to which you learned the material you were just taught. Next, you completed a self-control survey, a questionnaire related to your attentiveness in-class and in this seminar, and finally a demographics questionnaire that included questions regarding your attitudes and practices regarding firearm ownership.

We would like to assure you that at no point was it known to the research team that any particular person was carrying a handgun during the course of this study. Since it is required that one must be 21 years of age to obtain a license to carry and most of those in introductory psychology courses are 18-20 years old, it is highly unlikely that a full 14% of participants were carrying a handgun. If you experienced negative affect as a result of participating in this study, you may contact SFASU Counseling Services, located on the 3rd floor of the Rusk Building, or contact their office at (936) 468-2401 or counseling@sfasu.edu.

As a reminder, your participation in this study is confidential, and your name is not attached to any answers you provided. If you have any additional questions or wish to be informed of the results of the study, you may contact Hayden Holmes at holmeshl@jacks.sfasu.edu or Dr. Lauren Brewer at brewerle@sfasu.edu or (936) 468-1470. Additionally, you may also contact the SFASU Office of Research and Sponsored Programs at osrp@sfasu.edu or (936) 468-6606 if you would like more information regarding your rights as a research participant.

Thank you for your participation.

Due to the deceptive nature of this study, you are entitled to withdraw your results from the data analysis if you so choose. If you would like your data to be included, please sign below and return this form to the researcher:

Signature of Participant: _____ Date: _____

VITA

After completing high school at White Oak High School in White Oak, Texas, Hayden went on to study psychology and criminal justice at Stephen F. Austin State University in Nacogdoches, Texas. He completed his Bachelor of Science in Psychology in May 2017. Hayden then went on to study at Stephen F. Austin State University in June 2017, where he received his Masters of Arts in General Psychology in May 2019.

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This thesis was typed by Hayden L. Holmes