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Psychology and criminology students' attribution of factors contributing to criminal behaviors

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Abstract

The purpose of this study was to investigate the differences in the attribution of contributing factors to criminal behaviors between psychology and criminology majors. To gauge participant perception, a carefully crafted vignette was presented to participants accompanied by questions asking participants to what extent eight variables (conformation to labels, hostile attribution bias, rational choice based on circumstances, poor attachments, mental illness, upbringing, insufficient deterrence, and learned behavior through observation) contributed to the perpetrator's criminal behavior and for participants to rank-order these same variables from the largest contributors to the least. Participants were also asked to provide a sentencing recommendation for the perpetrator, their familiarity with the theories used, and for demographic information. Although it was hypothesized that students would rely on confirmation bias, most findings were not significant in demonstrating such bias. Instead, participants regardless of major favored specific theories. Poor attachments differed significantly from its fellow criminological factors while one's upbringing differed from the other joint factor based in both criminology and psychology. Additionally, notable, but not significant preferences for psychology to explain criminal behaviors and rehabilitate an offender were observed. These findings may prompt further research into the extent of academic bias and its influence in different settings.

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PSYCHOLOGY AND CRIMINOLOGY STUDENTS' ATTRIBUTION OF FACTORS
CONTRIBUTING TO CRIMINAL BEHAVIORS

By

Ava Marie Leahy

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Eastern Michigan University
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In Partial Fulfillment of the Requirements for Graduation
with Departmental Honors in Psychology and Criminology
and with Highest Honors

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Abstract

The purpose of this study was to investigate the differences in the attribution of contributing factors to criminal behaviors between psychology and criminology majors. To gauge participant perception, a carefully crafted vignette was presented to participants accompanied by questions asking participants to what extent eight variables (confirmation to labels, hostile attribution bias, rational choice based on circumstances, poor attachments, mental illness, upbringing, insufficient deterrence, and learned behavior through observation) contributed to the perpetrator's criminal behavior and for participants to rank-order these same variables from the largest contributors to the least. Participants were also asked to provide a sentencing recommendation for the perpetrator, their familiarity with the theories used, and for demographic information. Although it was hypothesized that students would rely on confirmation bias, most findings were not significant in demonstrating such bias. Instead, participants regardless of major favored specific theories. Poor attachments differed significantly from its fellow criminological factors while one's upbringing differed from the other joint factor based in both criminology and psychology. Additionally, notable, but not significant preferences for psychology to explain criminal behaviors and rehabilitate an offender were observed. These findings may prompt further research into the extent of academic bias and its influence in different settings.

Keywords: confirmation bias, criminal behavior, academic discipline, criminology, psychology

Psychology and Criminology Students' Attribution of Factors Contributing to Criminal Behaviors

Confirmation bias affects everyone, influencing the type of information one seeks out while also playing a role by filtering out information contrary to our beliefs. For example, if a manager sees an employee as being a lazy worker, they may view their brief conversations at the water cooler as highlighting their poor work ethic. What the manager didn't notice or possibly filtered out, was that this was the employee's only trip to the water cooler, lasting only a minute long, and was a conversation filled with questions about an ongoing company project. Thus, the manager viewed the employee's acts in a manner consistent with how they viewed them. While this is just one example, in many cases, people tend to judge others using preexisting or habitual beliefs. While the example used a modern-day workplace scenario, confirmation bias has been observed throughout history across a variety of contexts: in witch hunts conducted hundreds of years ago to the medical world with something known as the placebo effect (Nickerson, 1998). This phenomenon also colors the beliefs and actions of different college majors, and may even affect people acting as jurors, assessing the causes of a defendant's behavior.

Psychology Theories Related to Delinquency

I chose to analyze the extent to which participants believed mental illness, observational learning, and hostile attribution bias contribute to a perpetrator's criminal behaviors. Drawn from unique sub-disciplines of psychology, each variable represents an empirically supported facilitator of delinquency.

It was reasoned that one potential psychological cause for criminal behavior might be the mental illness of perpetrators. Mental illness is a pervasive and integral concept in the discipline of psychology, shown to correlate with delinquency via several mediating pathways (Teplin et.

al., 2002; Underwood & Washington, 2016). In an article addressing mental health in the criminal justice system (Williams, 2015), The Bureau of Justice Statistics (BJS) states that over half of individuals incarcerated in the United States have a mental illness, meaning that mental illness is an extremely relevant topic when discussing criminal behavior and incarceration. The BJS also states that these individuals are more likely to have prior convictions and serve lengthier sentences than offenders without mental health concerns. An interesting finding that seems to counter the claims by the BJS that those with mental health concerns have more prior convictions is that mental illness does not correlate to higher recidivism rates (Lippman, 2006). To further refute claims by the BJS, other studies have found that individuals with mental illness are more likely to be the victims of violence, rather than the perpetrators (Desmarais et. al, 2014). Overall, mental illness was included as a variable due to its pervasive presence in discussions surrounding incarceration. Furthermore, mental illness was included as a way to assess whether participants who generally attributed criminal behavior to mental illness would be more lenient in sentencing. Additionally, I wanted to observe whether those with an educational background in psychology were more likely to believe a perpetrator suffered from a disability based solely on the background information provided. Hence, this variable tested confirmation bias, attempting to observe if a psychology student's training led them to detect mental illness despite not being explicitly stated.

The second psychological variable was observational learning, which is a foundational psychological phenomenon taught early into a psychology major's career. The social and developmental construct dates back to an experiment conducted by Bandura, Ross, and Ross (1961). The experiment demonstrated that participants who observed an adult role model behaving aggressively toward a Bobo doll expressed similar acts of aggression (both physical

and verbal), whereas participants who viewed a non-aggressive adult role model displayed non-aggressive behaviors, and even disinterest toward the doll. The experiment illustrated that social behaviors can be learned through observation. Observational learning of aggressive or violent behaviors has since been tested and observed by various other experimenters (Huesmann & Eron, 1986; Li et. al, 2021; Onyskiw & Hayduk, 2004). Therefore, this variable was included to test the extent to which participants believed observing volatility at home contributed to later crime perpetration.

The third psychological construct to be measured was hostile attribution bias. Hostile attribution bias is a process through which individuals view otherwise neutral actions or situations as threatening or aggressive. The measurement of this social psychological construct will reveal the extent to which participants thought that the perpetrator's criminal behaviors were due to perceiving ambiguous actions as threats, and therefore reacting aggressively. Previous research has investigated the association between hostile attribution bias or deficiencies in interpretation, finding that they are more often associated with aggressive reactions (Dodge & Coie, 1987; Crick & Dodge, 1994; Klein Tunte, Bogaerts, & Veling, 2019).

Criminology Theories Related to Delinquency

Deterrence theory, rational choice theory, and social bond theory were chosen to represent a criminological interpretation of the perpetrator's case. These three theories offer diverse approaches to explaining criminal behaviors, representing classical or mainstream positivist ways of thinking. Additionally, most criminology students should be familiar with each theory as they are covered in most criminology courses, but students may possess a different level of understanding based on their course progress.

Deterrence theory is one of the most widely discussed criminological theories included in this study. Cesare Beccaria (1963 [1764]) is accredited with the modern notion of deterrence theory, which states that criminal punishments are intended to discourage both the perpetrator and others from committing similar future offenses. Severity, celerity, and certainty are the three components that influence the effectiveness of punishment as a successful deterrent. The principle of severity means that the punishment should fit the crime. If the perpetrator were to receive either too light or too harsh of a sentence, this would not deter people from committing a similar future crime. Celerity refers to the speed with which punishments are delivered. If punishments take too long to be delivered, then the perpetrator and larger society no longer effectively associate the crime and its subsequent punishment. The final principle is certainty, which states that without imminent punishment, individuals are more willing to risk committing crimes, as they do not foresee themselves getting caught. Researchers have come to mixed conclusions on the overall impact of deterrence theory on crime (Rupp, 2008), with many finding mixed results paired with a plethora of criticisms, meaning this field of study is ripe for more research. Thus, this variable was included to test the extent to which the participants believed the history of insufficient punishment failed to deter current criminal behaviors.

The second criminological theory included in our study was rational choice theory, which posits that people make choices guided by self-interest to achieve the greatest benefit. This theory is rooted in the idea that deliberate reasoning informs one's decision to engage in criminal behavior. Rational choice theory is included as a variable in our study because it complements deterrence theory, with both positing that individuals engage in criminal behaviors by free will, whereas all other theories are rooted in a deterministic school of thought. Thomas, Baumer, and Loughran (2022) provide an in-depth explanation on the roots of rational choice theory, illustrating that it has two components: perception of anticipated consequences and one's preference for the associated outcomes. Basically, they state that individuals consider and weigh both the potential consequences, such as risk of arrest or social sanctions, in addition to any rewards, such as financial gain. Secondly, they argue that rational choice theory considers a person's preference for such outcomes, as some people may view potential arrest as more damaging than other individuals. In their study, they found that one's social environment changed perceptions and preferences for risks, costs, and rewards associated with criminal behaviors, meaning that one's environment can shape what actions appear rational.

Lastly, social bond theory asserts that core values can play an essential role in one's criminal proclivity. Travis Hirschi (1969) demonstrated that individuals with poor bonds amongst their community or its values are more likely to commit criminal behaviors. Hirschi specifically references the type and strength of attachments one has with others; their belief in conventional goals; their involvement in conventional activities; and their belief in conventional values. Social bond theory was chosen as our last criminological variable of study as it makes sense to both psychology and criminology majors. However, despite its simplified explanation in the survey, I believe psychology majors will be deterred from choosing it and only pick the

theories they believe fit into the psychological category, demonstrating any biases. Furthermore, social bond theory has demonstrated a negative correlation to delinquency in diverse settings and populations (Özbay & Özcan, 2006; Norman & Ford, 2015; Morris et. al, 2011).

Overlapping Criminology and Psychology Measures Related to Delinquency

While the fields of psychology and criminology have their own theoretical orientations, many of their theories overlap conceptually despite going by different names. Labeling theory is one such theory, which states that individuals will conform to labels previously ascribed to them by internalizing that label and acting accordingly. In criminology courses, the theory is described as a lens through which people interpret everything they do, making it a self-fulfilling prophecy. While labeling theory has not been explicitly addressed in my psychology curriculum, the same idea has been discussed, highlighting the self-fulfilling prophecy concept.

The second variable that fell under both criminology and psychology was upbringing. Developmental psychologists have studied attachment theories, learning environments, and other factors that can leave lasting impacts on children. Mary Ainsworth tested these attachment styles through the Strange Situation Assessment in the 1970s (McLeod, 2018). Children with secure attachments explored new rooms separately from their parents, were upset when their parents left the room, and were happy on their return. Children with insecure attachments, due to lack of parental responsiveness, show ambivalence or anger when their parents return. These findings showed lasting impacts into adulthood, as individuals with secure attachments typically had strong social skills, good support networks, and higher self-esteem. Individuals with insecure attachments grew up to be reluctant in relationships or unable to express themselves appropriately, among other negative outcomes. Criminology ascribes similar merit to the lasting

impacts of one's upbringing, as the strength and type of early attachments represent one of the four main predictors of future criminality.

The overlapping variables served to further test for confirmation bias by providing theories that both majors should be familiar with. Additionally, they are both crucial explanations for criminal behavior, and without their inclusion, the study would be incomplete.

Study Domain Impacting Understanding

All eight of the theories included in my study are discussed in undergraduate level courses at my institution, Eastern Michigan University. In my experience, while some are more universally addressed, with mental illness being discussed in nearly every psychology course regardless of topic and deterrence theory being discussed in nearly every criminology course, some other theories are found to be more niche. Hostile attribution bias was only addressed in one course in my psychology curriculum, Social Psychology. While I expect that it may be taught in other courses, I cannot confirm this, meaning that psychology students may be more unaware of this theory than other theories such as mental illness. The same can be said for rational choice theory, which was discussed in a few criminology classes I had, but only briefly, whereas its counterpart of deterrence theory received numerous days dedicated to its explanation in lectures. Observational learning, poor attachments, and one's upbringing are in a similar position, being addressed briefly in many courses I had, but never in much detail. Finally, conforming to how one sees or labels them is discussed in decent detail in a few criminology and psychology courses spanning from an introductory level to higher-level electives. While these were my experiences as someone who specialized in these programs, there may be variability in how often each theory is taught, depending on the instructor and the course itself.

Study Domain and Bias

Although there appear to be few other studies that analyze the extent to which one's major may bias their interpretation of a situation in which both factors relevant and irrelevant to their respective academic discipline are tested. Aryadoust (2016), however, tested whether students would perceive presentations by their peers differently if they came from the same or different major. Interestingly, their findings demonstrated that students with chemistry majors overrated students with a different major in life sciences, but were in turn underrated by their life science peers. This meant that students of the same-major underestimated the scores of their peers. Aryadoust believed this could be explained partially by the empathy hypothesis, which is where students of a particular major may identify more closely with students of the same major, causing them to rate them based on a more lenient scale of what they could have accomplished if they were in a similar position. This finding may provide some form of insight into my study, such as when students are asked whether criminology or psychology is better at rehabilitation or more informative in explaining a perpetrator's criminal behaviors.

Knowledge Gap/Relevance

While it is important to understand the basis of the study itself, it is perhaps even more vital that one understands its relevance to daily life. Everyone comes from a different background, with their own life experiences and knowledge. Confirmation bias has been tested in many avenues of life, demonstrating that people will interpret information in the modality they have the most familiarity with. However, there is a lack of knowledge when it comes to how one's specific education may impact this. Therefore, this area of study is increasingly important as higher education and more specialized academic disciplines are becoming more common. Comprehending the extent of confirmation bias based on one's respective academic discipline

has the potential to impact society in many areas, such as by enhancing understanding of juror decisions and their consequences (Kassin, Dror, & Kukucka, 2013). Recently, Meterko and Cooper (2022) have found that confirmation bias is potentially a biasing process for law enforcement investigations as they conducted a literature review of 30 social sciences papers discussing cognitive biases in criminal case evaluations. In their analysis, they investigated various human factors that meddle with the supposedly objective and methodological processes of the criminal justice system, ranging from the broad notions of human nature such as confirmation bias and recency effects, all the way to case-specific elements such as the type of crime and severity. Therefore, I looked to investigate similar biases among students on the human nature level as they rationalize criminal behaviors and sentences differently based on their academic interests. Thus, I attempted to expand upon the currently limited literature.

The Current Study

As demonstrated, the influence of one's academic discipline and its relationship to confirmation bias in a variety of areas of life is an important area for further investigation, especially in the criminal justice system. Using the knowledge provided by the existing literature, the purpose of this study was to investigate the differences in the perception of contributing factors to criminal behaviors between psychology and criminology students.

There exist numerous psychological and criminological theories that explain the way one thinks and behaves. While some of them are used more frequently than others in the realm of criminal justice, all of them are capable of being strong explanations for such criminal behaviors. Therefore, the current study attempted to answer whether psychology and criminology students will rely on a form of confirmation bias, using theories from their respective academic disciplines to explain a perpetrator's criminal behaviors.

H1: Psychology students will attribute factors relevant to the academic discipline of psychology as playing a larger contribution to criminal behaviors than those of criminological theories.

H2: Criminology students will attribute factors relevant to the academic discipline of criminology as playing a larger contribution to criminal behaviors than those of psychological theories.

Methods

Participants

Participants (N = 155) were recruited from undergraduate level psychology and criminology courses at Eastern Michigan University. Psychology students were granted research participation credits which could be used for course credit, whereas criminology students received credit only if pre-approved by the instructor. The study was completed online by interested undergraduate students ages 18 and older, taking approximately 20 minutes to complete. Out of the 155 total participants, 44 were psychology majors, 14 were criminology majors, and 97 had other majors (see *Figure B1* in Appendix B for a visual representation of majors). The mean age of participants was 20.5 years old, with total ages ranging from 17 to 39 (see *Figure B2* in Appendix B for a more detailed age breakdown). Participants' gender and race/ethnicity are also represented in *Figure B3* and *Figure B4* of Appendix B.

Procedure

Participants had a variety of different ways in which they were informed of the study. The Psychology department at EMU often requires students to participate in some campus research studies, accruing a certain number of hours that count towards their grade, such as for PSY 103

General Psychology Laboratory, or for extra credit in other classes at the discretion of the teacher. A database of ongoing studies is available on SONA systems, where participants who have an account can click on and participate in whatever studies they find appealing. This recruitment method, while available in the Psychology department, gathers data from many other students other than psychology majors as the lab course that requests student participation in a research study is a popular General Education course.

While the Psychology department uses SONA systems to promote research participation, the Criminology department does not have an equivalent process. Therefore, a variety of different methods were used to recruit criminology students due to the difficulty of not being able to provide them with a similar incentive for participation. As such, criminology students were first informed about the study through a department-wide email to both majors and minors simply introducing the study. In addition to this, criminology professors who taught undergraduate sections on-campus allowed brief presentations of the study to their classes. As this proved to only gather a couple of participants, synchronous and asynchronous Criminology professors were asked if they could post an announcement on their Canvas courses accompanied by a brief study introduction video and recruitment flier. Criminology professors were also made aware of the incentives psychology students received to participate in hopes they offer similar benefits.

Regardless of the method students were recruited from, they were all directed to the same study link on Qualtrics to complete the study survey. They were allowed to take the survey at their own convenience, participating remotely as it was offered online exclusively and at whatever time suited them.

Participants began the online study by reading through an Informed Consent Waiver whereupon consent, they read a carefully crafted vignette detailing a series of crimes committed by an individual referred to as “Ackridge”. Information relating to the gender, age, or race/ethnicity of the offender was omitted in an attempt to create a more objective situation where participants’ interpretation of criminological and psychological theories contributing to criminal behaviors was more prevalent. The crimes committed in the vignette were violent assault crimes that took place in an area most likely familiar to students of Eastern Michigan University, but far enough away that it would not color their determinations of the crime. After explaining the crimes, the participant is given more information about Ackridge’s background and previous behaviors. Their childhood experiences, financial situation, social life, and mental/emotional states were detailed to give the participant greater insight into the perpetrator’s life. Each of the details was included as it would relate to a criminological or psychological theory later presented.

For example, the diagnosis of a hostile attribution bias is a psychologically-oriented theory one could use to explain Ackridge’s criminal behavior, meaning that they were more prone to interpreting the neutral actions of others as hostile or aggressive. The psychologically-oriented theory of mental illness could be used to explain Ackridge’s behavior if the participant believed Ackridge to have a mental illness causing them to not fully understand the consequences of their actions or lacking a clear intent to harm others, despite a diagnosis of a mental illness not being listed in the vignette. Observational learning is the final psychologically-oriented theory where it could be argued that Ackridge learned to behave criminally and more violently by watching others around him engage in similar acts, both in the past and present.

The criminologically-oriented theory of poor attachments means that Ackridge lacked positive influences around them and may have also felt removed from society, making it easier to commit criminal acts. The criminologically-oriented theory of insufficient deterrence despite an aggressive or criminal past means that Ackridge may have been more likely to commit a crime as they had not gotten a severe enough or certain punishment to deter future criminal behaviors. Rational choice theory is the final criminologically-oriented theory that could explain Ackridge's criminal behavior as they viewed their actions as a calculated risk, believing that the benefits at the moment outweighed the risk.

The overlapping measure of one's upbringing, which is discussed in both criminology and psychology courses as potentially influencing one's criminal proclivity as an unstable environment could contribute to one's criminal behaviors, which in this case could be Ackridge's unstable home life. The overlapping measure of one conforming to how others labeled or saw them was the final joint theory between criminology and psychology included in the study. Conformation to how others labeled and saw them may explain criminal behavior in the instance that if one labeled Ackridge as a "delinquent" or "thief", they would be more inclined to act according to that prescribed criminal identity.

Once participants read through the vignette, they were asked to complete a survey regarding their perception of the crime, culpability, and to report demographic information (see Appendix A for a more detailed participant view of the survey). First, participants were asked to what extent Ackridge's behavior was a result of eight different variables in which mental illness, cognition bias, and learning through observation were psychologically relevant contributors; rational choice considering the circumstances (rational choice theory), poor attachments (social bond theory), and an aggressive or criminal past without sufficient deterrence (deterrence theory)

were criminologically relevant contributors. The final two variables: their upbringing and conforming to how others saw and labeled them, had influences from both criminological and psychological schools of thought. Participants were asked to rate these variables on a Likert scale ranging from 1-10, with a value of 1 meaning that the variable contributed very little to Ackridge's criminal behavior, whereas a value of 10 meant a variable contributed very much to the subsequent criminal behavior. These eight variables were presented in different orders for each student, in an attempt to minimize sequencing effects. After marking which of these variables they believed contributed to the criminal behavior, participants were then asked to rank-order the variables from the greatest contributors to the least. Following this, questions to gauge ingroup bias were posed. Participants were asked whether they felt criminology or psychology was more informative in explaining Ackridge's criminal behavior and which of the fields was better at accomplishing rehabilitation by indicating their response on a 10-point bipolar scale with criminology on one side and psychology presented on the other. Participants were then asked to provide a sentencing recommendation for Ackridge. Lastly, participants rated their familiarity with the theoretical disciplines on a Likert scale with the options of not familiar, slightly familiar, moderately familiar, very familiar, and extremely familiar, in addition to filling out demographic information. After the study, participants were debriefed and informed of the slight deception being used regarding the scope of the study. Students were asked to provide their email address if they would like to be contacted at the conclusion of the study regarding the results and the nature of the study as data collection was still ongoing.

Results

All statistical analyses were conducted using JASP TEAM (2023). It was hypothesized that for the psychological theories for criminal actions, psychology majors would show stronger

attributions for these than would either criminology or other majors. To test this hypothesis, a one-way analysis of variance (ANOVA) was first conducted on each of the three psychological theories. For mental illness, that analysis was not significant, $F(2, 152) = 0.70, p = 0.50$ (see Table 1 for means across majors). For the psychological theory of hostile attribution bias, the ANOVA also was not significant, $F(2, 152) = 0.36, p = 0.70$ (see Table 1 for means across majors). For the final psychological theory of observational learning, the ANOVA was not significant, $F(2, 152) = 0.29, p = 0.75$ (see Table 1 for means across majors).

Table 1

Attribution of Psychological Theories Contributing to Criminal Behavior by Major

	Mental Illness	Hostile Attribution	Observational Learning
Psychology	5.59 (2.17) <i>44</i>	6.21 (2.66) <i>44</i>	6.00 (2.49) <i>44</i>
Criminology	5.36 (2.74) <i>14</i>	6.21 (2.46) <i>14</i>	5.93 (2.50) <i>14</i>
Other Major	5.99 (2.47) <i>97</i>	6.58 (2.63) <i>97</i>	5.63 (2.59) <i>97</i>

Note: Standard Deviations are in parentheses; N per group is in italics.

It was hypothesized that for the criminological theories for criminal actions, criminology majors would show stronger attributions for these than would either psychology or other majors. To test this hypothesis, a one-way ANOVA was conducted on each of the three criminological theories, similar to that of the psychological theories. For rational choice theory, that analysis was not significant, $F(2, 152) = 1.16, p = 0.32$ (see Table 2 for means across majors). For the criminological theory of poor attachments, the ANOVA was also not significant $F(2, 152) = 0.07, p = 0.93$ (see Table 2 for means across majors). For the final criminological theory of insufficient

deterrence, the ANOVA was not significant $F(2, 152) = 0.11, p = 0.90$ (see Table 2 for means across majors).

Table 2

Attribution of Criminological Theories Contributing to Criminal Behavior by Major

	Rational Choice	Poor Attachments	Deterrence
Psychology	4.82 (2.33) <i>44</i>	7.11 (2.55) <i>44</i>	6.07 (2.56) <i>44</i>
Criminology	5.50 (2.14) <i>14</i>	7.07 (2.59) <i>14</i>	6.29 (2.61) <i>14</i>
Other Major	4.47 (2.59) <i>97</i>	6.95 (2.39) <i>97</i>	6.28 (2.55) <i>97</i>

Note: Standard Deviations are in parentheses; N per group is in italics.

Overlapping measures with strong foundations in both psychology and criminology were also measured to gather more information to compare psychology, criminology, and other majors attribution of factors contributing to criminal behaviors. To test for any significant differences across majors, which I expected there would be none, a one-way ANOVA was used. For the joint measure of a perpetrator's upbringing, the analysis was not significant $F(2, 152) = 0.55, p = 0.58$ (see Table 3 for means across majors). For the joint measure of an individual conforming to how others label them, that analysis was also not significant $F(2, 152) = 0.21, p = 0.81$ (see Table 3 for means across majors).

Table 3*Attribution of Overlapping Theories Contributing to Criminal Behavior by Major*

	Upbringing	Conform to Labels
Psychology	6.91 (1.95) <i>44</i>	5.00 (2.61) <i>44</i>
Criminology	7.07 (2.61) <i>14</i>	5.50 (2.85) <i>14</i>
Other Major	7.30 (2.04) <i>97</i>	5.19 (2.55) <i>97</i>

Note: Standard Deviations are in parentheses; N per group is in italics.

Therefore, findings failed to support my hypotheses as psychology students did not demonstrate a reliance on psychological theories nor did criminology students demonstrate a reliance on criminological theories when asked to what extent they contributed to Ackridge's criminal behavior.

Another way to examine this data was to compare the different theories within the domain as multiple responses across the different students' majors. To do this, a mixed-model ANOVA was conducted with repeated measures on the three theoretical causes within criminology for different students by major as a between-measures variable. That analysis showed only a significant effect for the different criminological theories, $F(2, 304) = 17.55, p < .001$. That effect occurred because poor attachments were attributed as a greater contribution to the behavior of the defendant in the vignette than were either an aggressive past paired with insufficient deterrence, or rational choice, by post hoc tests, $p < .001$. Additionally, insufficient deterrence was attributed more than rational choice as a contributing factor, $p < .001$ (see Table 4). The effect by major was also not significant, $F(2, 152) = 0.38, p = 0.69$, nor was the criminological cause and student major interaction, $F(4, 304) = 0.49, p = 0.74$.

Table 4

Mean Attributions for Criminal Behavior as a Function of Criminological Theory Across Majors

Criminological Theory		
Rational Choice Theory	Poor Attachments	Insufficient Deterrence
4.83 (0.24)	6.95 (0.24)	6.11 (0.24)

Note: Standard Errors are in parentheses

A parallel mixed model ANOVA was conducted across the different student majors for the psychological theories, with those causes being the repeated measures, and one's major being the between-groups effect. For the parallel analysis, no significant difference was found for the psychological theories $F(2, 304) = 2.40, p = 0.09$. While this is a more marginal area of significance, it is worth noting that hostile attribution bias was attributed to the perpetrator's criminal acts more heavily than the other two psychological theories (see Table 5). The effect between majors was found to be not significant, $F(2, 152) = 0.16, p = 0.85$, in addition to the psychological cause and student major interaction, $F(4, 304) = 0.75, p = 0.56$.

Table 5

Mean Attributions for Criminal Behavior as a Function of Psychological Theory Across Majors

Psychological Theory		
Mental Illness	Hostile Attribution Bias	Observational Learning
5.71 (0.24)	6.40 (0.24)	5.90 (0.24)

Note: Standard Errors are in parentheses

The theories of upbringing and conformance to a prescribed label, which come from a joint foundation in both criminology and psychology, were compared in a mixed-model ANOVA with college major serving as a between-groups variable to gauge if there was a difference in the attribution of these theories. The findings showed a significant difference between the theories'

attribution with participants favoring upbringing as a stronger explanation $F(1, 152) = 36.58, p < .001$, but was not significant when viewed by major $F(2, 152) = 0.26, p = 0.78$ (see Table 6).

Table 6

Mean Attributions for Criminal Behavior as a Function of Overlapping Theory Across Majors

Overlapping Theory	
Upbringing	Conform to Labels
7.14 (0.19)	5.15 (0.19)

Note: Standard Errors are in parentheses

A final validity measure to see what participants viewed as the biggest contributing factors asked participants to rank order the criminological, psychological, and joint factors from 1-9 (with the ninth variable being labeled as other which many participants opted out of using, therefore it was omitted) with only one theory/explanation per number. A value closer to 1 meant participants found that theory to be a greater contributor to the perpetrator's behavior, whereas weaker contributing factors have values closer to 8. To gain insight into this matter, a repeated measures ANOVA was run, with the 8 different theories (excluding the other category) serving as the repeated measures and the different majors acting as the between-groups variable. By analyzing the marginal means for each theory, it can be observed that in order from the identified greatest contributing factor to least contributing factor is as follows: upbringing, poor attachments, observational learning, mental illness, insufficient deterrence, hostile attribution bias, rational choice, and lastly conforming to labels (see Table 7). These findings are similar to those observed when participants rated each variable on how they contributed to the perpetrator's behavior, but each theory is not ranked the exact same as this required them to rank one variable over another that could have previously tied.

Table 7

Means for Rank Ordering All Factors Contributing to Criminal Behavior Across Major

Criminology			Psychology			Overlapping	
Rational Choice	Poor Attachments	Insufficient Deterrence	Mental Illness	Hostile Attribution Bias	Observational Learning	Upbringing	Conform to Labels
5.70 (0.23)	3.57 (0.23)	4.66 (0.23)	4.63 (0.23)	5.13 (0.23)	4.46 (0.23)	2.60 (0.23)	6.38 (0.23)

Note: Standard Errors are in parentheses

Moving on from the attribution of specific theories, all students regardless of major leaned toward psychology being more informative in explaining Ackridge's behavior when assessing such measures on a Likert scale with 1 being associated with criminology and 10 being associated with psychology (Psychology Majors: $M = 6.55$, $SD = 2.37$; Criminology Majors $M = 5.43$, $SD = 2.85$; and Other Majors $M = 6.43$, $SD = 2.55$). While the difference is visible via looking at descriptive statistics, when measured using a one-way ANOVA, the preference for psychology is not significant $F(2, 152) = 1.11$, $p = 0.33$. There is also a consensus across majors that psychology is viewed as a better rehabilitative option when measured on the same Likert scale as described above (Psychology Majors: $M = 7.82$, $SD = 2.39$; Criminology Majors: $M = 7.43$, $SD = 2.68$; and Other Majors $M = 7.79$, $SD = 2.25$), but these findings are not significant $F(2, 152) = 0.17$, $p = 0.85$.

Discussion

My study findings demonstrate that students regardless of major perceive many of the contributing factors to a perpetrator's criminal behavior similarly, but do still favor some explanations as contributing factors as compared to others explanations. Thus, my hypotheses that students would demonstrate some sort of confirmation bias based on their academic

discipline were unsubstantiated. Overall, participants believed poor attachments or one's upbringing were the largest contributors to Ackridge's criminal behavior on average, whereas rational choice theory was seen as being the weakest contributing factor on average.

Additionally, it appeared that psychology was favored over criminology regardless of major for being more informative in explaining criminal behaviors and for rehabilitative purposes, although these findings were not significant.

While my findings were not significant, this may simply prompt a similar study to be conducted under slightly different conditions. As reported by Meterko and Cooper (2022), one's professional experience may affect perceptions of guilt or innocence, with those who have less experience relying on more criminal than non-criminal explanations for their behavior. This may have had some influence on my results, as my study population consisted largely of individuals who seemed to be either just entering the major, equating to a lesser familiarity with the field's associated thoughts and literature. Therefore, I would recommend altering participation requirements, potentially restricting participation eligibility to third-year students and above or those who are currently enrolled in any 300-level psychology or criminology course to ensure greater familiarity with the theoretical orientations of their respective majors.

Additionally, Aryadoust (2016) observed contrasting ratings when testing for academic bias among chemistry and life science, with students overrating students of another major while giving a more lenient response to students of the same major. Thus, they may have observed such findings as their situation was of a broader context. By asking participants to engage in the survey through the lens of a juror, this may have removed reliance on biases as jurors are typically thought of as needing to be unbiased and objective. Therefore, potentially removing this role from the participants' thoughts may cause them to demonstrate any biases more freely.

One limitation to note of this study was the difference in recruitment methods between psychology majors and criminology majors. Psychology students were motivated by course credit or extra credit to participate in the study whereas criminology majors often did not receive that same motivation. Therefore, these differences resulted in a noticeable difference in the number of participants from each major. In addition to the stark contrast in the number of participants per academic discipline, participants varied widely on the number of credits they had taken that were associated with their area of study, with 10 or fewer credits being common. This could impact the results as a criminology student who has not taken any criminology classes would therefore be less informed on the criminological theories, altering their perception of what contributed to the perpetrator's criminal behaviors. Furthermore, students may receive different exposure to the various theories based on what instructor is teaching the course, creating differing levels of familiarity of the theoretical explanations between participants. Additionally, it is important to note that many students at Eastern Michigan University may be trained in both disciplines, with one acting as a major and the other as a minor. Therefore, this could account for the more similar usage of the theories regardless of their listed major. Another point of consideration is that participants were requested to read the same vignette detailing a violent crime. Perhaps perceptions of non-violent criminal behavior would lead students to attribute different factors as contributing to the perpetrator's criminal behavior or that some theories may simply be more applicable to different types of crime. For example, rational choice theory has faced recent criticism as not every individual acts in a rational manner. The group most likely to commit criminal acts, youth ages 14-24, are developmentally immature and may lack the insight to weigh all consequences of their actions. With this being the case, criminologists have relied on

rational choice theory to explain the motives behind white collar crime more often than street crime (Friedrichs, 2010).

While my study demonstrated that criminology and psychology students attribute factors regardless of academic discipline fairly equally in regard to criminal behavior, this prompts further areas of study. As the population of the study consisted of undergraduate students from Eastern Michigan University, a more diverse demographic may produce different results that may generalize to a wider population. Furthermore, one could use different vignettes, changing the perpetrator's race, gender, crime, etc. to gauge whether this impacted the participants' views. One could also conduct a similar study without asking the participants to act as jurors to see if any biases are more prevalent, or attempt to observe different criminological and psychological theories, such as General Strain Theory.

References

- Aryadoust, V. (2016). Gender and academic major bias in peer assessment of oral presentations. *Language Assessment Quarterly*, 13(1), 1-24.
<https://doi.org/10.1080/15434303.2015.1133626>
- Bandura, A., Ross, D., & Ross, S. A. (1961). Transmission of aggression through imitation of aggressive models. *The Journal of Abnormal and Social Psychology*, 63(3), 575–582.
<https://doi.org/10.1037/h0045925>
- Beccaria, C. (1963. [1764]). *On Crimes and Punishment*. Indianapolis, IN: Bobbs-Merrill.
- Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychol. Bull.* 115, 74–101. <https://doi.org/10.1037/0033-2909.115.1.74>
- Desmarais, S. L., Van Dorn, R. A., Johnson K. L., Grimm, K. J., Douglas K. S., Swartz, M. S. (2014). Community Violence Perpetration and Victimization Among Adults With Mental Illnesses *American Journal of Public Health* 104 (12), 2342-2349,
<https://doi.org/10.2105/AJPH.2013.301680>
- Dodge, K. A., & Coie, J. D. (1987). Social-information-processing factors in reactive and proactive aggression in children's peer groups. *J. Pers. Soc. Psychol.* 53, 1146–1158.
<https://doi.org/10.1037//0022-3514.53.6.1146>
- Friedrichs, D. O. (2010). *Trusted Criminals: White Collar Crime in Contemporary Society* (4th ed.). Wadsworth.
- Hirschi, T. (1969). *Causes of delinquency*. Berkeley, CA: University of California Press.

- Kassin, S. M., Dror, I. E., & Kukucka, J. (2013). The forensic confirmation bias: Problems, perspectives, and proposed solutions. *Journal of Applied Research in Memory and Cognition*, 2(1), 42–52. <https://doi.org/10.1016/j.jarmac.2013.01.001>
- Klein Tuente, S., Bogaerts, S., & Veling, W. (2019). Hostile attribution bias and aggression in adults—A systematic review. *Aggression and Violent Behavior*, 46, 66-81. <https://doi.org/10.1016/j.avb.2019.01.009>
- Li, S.D., Xiong, R., Liang, M., Zhang, X., & Tang, W. (2021) Pathways From Family Violence to Adolescent Violence: Examining the Mediating Mechanisms. *Front. Psychol.* 12:611006. doi: 10.3389/fpsyg.2021.611006
- Lippman, K. R. (2006). *Retrospective analyses of relationships between nature of crime, mental illness, history of mental health treatment, and recidivism in a San Francisco city and county jail sample* (Doctoral Thesis, Alliant International University) ProQuest. <https://www.proquest.com/dissertations-theses/retrospective-analyses-relationships-between/docview/621588505/se-2>
- McLeod, S. A. (2018, August 05). *Mary ainsworth*. Simply Psychology. www.simplypsychology.org/mary-ainsworth.html
- Meterko, V., & Cooper, G. (2022). Cognitive Biases in Criminal Case Evaluation: A Review of the Research. *J Police Crim Psych* 37, 101–122. <https://doi.org/10.1007/s11896-020-09425-8>
- Morris, R. G., Gerber, J., & Menard, S. (2011). Social Bonds, Self-Control, and Adult Criminality: A Nationally Representative Assessment of Hirschi's Revised Self-Control Theory. *Criminal Justice and Behavior*, 38(6), 584–599. <https://doi-org.ezproxy.emich.edu/10.1177/0093854811402453>

- Nickerson, R. S. (1998). Confirmation bias: A ubiquitous phenomenon in many guises. *Review of General Psychology*, 2(2), 175–220. <https://doi.org/10.1037//1089-2680.2.2.175>
- Norman, L. B., & Ford, J. A. (2015). Adolescent Ecstasy Use: A Test of Social Bonds and Social Learning Theory. *Deviant Behavior*, 36:7, 527-538.
<https://doi.org/10.1080/01639625.2014.944072>
- Onyskiw, J. E., & Hayduk, L. A. (2004, February 19). Processes underlying children's adjustment in Families Characterized by Physical Aggression. *Family Relations*, 50(4), 376-385. <https://doi.org/10.1111/j.1741-3729.2001.00376.x>
- Özbay, Ö., & Özcan, Y. Z. (2006). A Test of Hirschi's Social Bonding Theory: Juvenile Delinquency in the High Schools of Ankara, Turkey. *International Journal of Offender Therapy and Comparative Criminology*, 50(6), 711–726.
<https://doi.org/10.1177/0306624X05283525>
- Rupp, T. (2008). *Meta Analysis of Crime and Deterrence: A Comprehensive Review of the Literature*. Germany: Books on Demand.
- Teplin, L.A., Abram, K.M., McClelland, G.M., Dulcan, M.K., & Mericle, A.A. (2002, December) Psychiatric disorders in youth in juvenile detention. *Arch Gen Psychiatry*. 2002 Dec;59(12):1133-43. <https://doi.org/10.1001/archpsyc.59.12.1133>
- Thomas, K. J., Baumer, E. P., & Loughran, T. A. (2022). Structural predictors of choice: Testing a multilevel rational choice theory of crime. *Criminology: An Interdisciplinary Journal*, 60(4), 606-636. <https://doi.org/10.1111/1745-9125.12314>
- Underwood, L., & Washington, A. (2016). Mental Illness and Juvenile Offenders. *International Journal of Environmental Research and Public Health*, 13(2), 228.
<https://doi.org/10.3390/ijerph13020228>

Williams, R. (2015). *Brief addressing mental health in the justice system*. National Conference of State Legislatures.

<https://www.ncsl.org/civil-and-criminal-justice/addressing-mental-health-in-the-justice-system>

Appendix A: Qualtrics Survey including Informed Consent Waiver

Consent Block

Participants will read a vignette and respond to survey questions that will further our understanding of how jurors come to a decision. The purpose of this study is to examine juror perceptions and recommendations for punishment and fault in the absence of persuasive defense and prosecuting attorneys. You will be asked to read a vignette reviewing a judicial synopsis of an individual who has completed violent assault crimes and to respond to the questions that follow to the best of your ability. This should only take approximately 10-15 minutes and all data collected will be anonymous, stored only in Qualtrics and for analysis purposes. Any significant new findings developed throughout the course of the study which could affect willingness to participate will be communicated if they occur. Benefits of participation include furthering research, otherwise, no incentives will be given to participants unless external incentives are provided through professors requiring SONA credit. There is no anticipation that participation should cause you physical or emotional harm, but if you find this to be a sensitive or triggering topic in which participating in this study has led to a decline in your mental health or well-being, please contact the resources below.

Counseling and Psychological Services (CAPS): 734-487-1118
Suicide and Crisis Lifeline: 988
Faculty Advisor- Rusty McIntyre: 734-487-2406
Principal Investigator- Ava Leahy: 708-937-8634

You must fully understand these terms before you sign this form and give your consent to participate.

You should know that: Participation in the research study is completely voluntary and may be rescinded or refused at any time without consequences to future medical care, education, or employment opportunities.

The lead investigator may withdraw you from participation in the study at their professional discretion.

Any significant and relevant new information developed during this study that may impact willingness to participate will be disclosed to participants by the investigator.

Any personally identifiable information will not be voluntarily released without your separate consent, except as specifically required by law.

Any questions pertaining to the study or your participation should be directed to the investigator or their assistants for answers.

If, at any time, you have comments or complaints relating to the conduct of this research or if you wish to discuss your rights as a research subject, you may contact the Human Research Administration at Eastern Michigan University.

For information about your rights as a participant in research, you can contact the Eastern Michigan University Office of Research Compliance at 734-487-3090 or human.subjects@emich.edu.

- I consent and wish to participate
- I do not consent, and wish to quit

Study Instructions

Jurors are often more sensitive to certain types of information or evidence when coming to a verdict. To complicate matters further, prosecuting and defense attorneys will present information in a specific manner to persuade jurors to reach the verdict that attorney values. In order to better understand jurors' perceptions and recommendations for punishment and fault in a crime, you will be tasked to read the following vignette and answer the subsequent questions. The vignette presents all information in an objective manner as to best determine how you, the juror, will weigh the information.

Ackridge perception questionnaire

In the summer of 2015 in Southgate Michigan there were four incidents of robbery that resulted in the arrest of A. Ackridge. The first of these happened on June 22nd at 11:15pm on Rosedale street where one victim (name withheld) was robbed of a cell-phone and wallet. The second robbery occurred on July 3rd at 10:40pm on Callender Street where one victim was robbed of a laptop and purse. The third robbery took place on July 17th at 11:05pm on Barberrry Street where 2 victims were robbed of their cell phones, wallets, and smart watches. The final robbery occurred on August 1st at 12:30am on Porter Avenue where one victim was robbed of their jewelry and cell phone. Each incident left a victim injured (although not critically). In each case, the assailant had used the same weapon, a Louisville Slugger wooden baseball bat. There were splinters left at each crime scene linking the four incidents together. The splinters matched a bat found in the possession of F. Oliver, who implicated Ackridge as the perpetrator and stated that they were merely an acquaintance or the getaway driver.

Ackridge grew up in an unstable environment. Ackridge's parents divorced following a volatile relationship that lasted throughout the early years of their time as a family. Ackridge's father left, leaving their mother as the sole provider. Due to this change and financial strain, Ackridge was forced to move around a lot to accommodate the financial situation, whether it be for career purposes for their mother or to find more affordable living. Moving often led Ackridge to switch schools frequently, causing them to be able to keep up academically and to struggle when making lasting friendships. Ackridge also has a history of aggressive behavior dating back to their youth which has prevented them from keeping stable employment. After multiple accounts of aggression, Ackridge had to report to a court-ordered psychologist who found them to be prone to a hostile cognition bias, meaning they construe the ambiguous actions of others as a threat to themselves.

Ackridge is set to receive 18-41 years for their crimes.

To what extent was Ackridge's behavior a result of...

	Very Little 1	2	3	4	5	6	7	8	9	Very Much 10
hostile cognition bias (interpret neutral actions as hostile)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
their upbringing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
conforming to how others saw and labeled them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
learning behavior by observing those around them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
aggressive or criminal past without sufficient deterrence or punishment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
poor attachments/relationships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
rational choice considering their circumstances	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
mental illness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Rank Order Variables

The Vignette of Ackridge is repeated here for ease of reference.

In the summer of 2015 in Southgate Michigan there were four incidents of robbery that resulted in the arrest of A. Ackridge. The first of these happened on June 22nd at 11:15pm on Rosedale street where one victim (name withheld) was robbed of a cell-phone and wallet. The second robbery occurred on July 3rd at 10:40pm on Callender Street

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where one victim was robbed of a laptop and purse. The third robbery took place on July 17th at 11:05pm on Barberry Street where 2 victims were robbed of their cell phones, wallets, and smart watches. The final robbery occurred on August 1st at 12:30am on Porter Avenue where one victim was robbed of their jewelry and cell phone. Each incident left a victim injured (although not critically). In each case, the assailant had used the same weapon, a Louisville Slugger wooden baseball bat. There were splinters left at each crime scene linking the four incidents together. The splinters matched a bat found in the possession of F. Oliver, who implicated Ackridge as the perpetrator and stated that they were merely an acquaintance or the getaway driver.

Ackridge grew up in an unstable environment. Ackridge's parents divorced following a volatile relationship that lasted throughout the early years of their time as a family. Ackridge's father left, leaving their mother as the sole provider. Due to this change and financial strain, Ackridge was forced to move around a lot to accommodate the financial situation, whether it be for career purposes for their mother or to find more affordable living. Moving often led Ackridge to switch schools frequently, hindering their ability to keep up academically and to struggle when making lasting friendships. Ackridge also has a history of aggressive behavior dating back to their youth which has prevented them from keeping stable employment. After multiple accounts of aggression, Ackridge had to report to a court-ordered psychologist who found them to be prone to a hostile cognition bias, meaning they construe the ambiguous actions of others as a threat to themselves.

Ackridge is set to receive 18-41 years for their crimes.

Rank the variables in order from those you believe contributed most to Ackridge's behavior (1) to least (9). You can move these around by dragging and dropping the items.

Rational Choice based on Circumstances

Learned Behavior through Observation

Hostile Cognition Bias

Mental Illness

Poor Attachments/Relationships

Other

Upbringing

Insufficient Deterrence/Punishment

Conform to Labels

Block 4

To what extent do you feel that one of the fields below is more informative in explaining the behavior of Ackridge?

Criminology | | Psychology

To what extent do you feel that one of the fields below is better at rehabilitating the behaviors of Ackridge?

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Criminology



Psychology

What approximate number of years would you sentence Ackridge?

Block 5

Please rate your familiarity with the topics below.

	Not familiar at all	Slightly familiar	Moderately familiar	Very familiar	Extremely familiar
Mental illness and problematic behavior	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rational Choice Theory and problematic behavior	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deterrence Theory and problematic behavior	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Observational learning and problematic behavior	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Demographics

Please answer the questions below as they pertain to you.

Which of the following best describes you?

- Asian or Pacific Islander
- Black or African American
- Hispanic or Latino/x
- Native American or Alaskan Native
- White or Caucasian
- Other
- Prefer not to answer

Gender

- Male

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- Female
- Non-binary
- Other
- Prefer not to answer

Age

Major

- Psychology
- Criminology
- Other

Minor

- Psychology
- Criminology
- Other
- Not applicable

What is the number of college credits you have currently completed at EMU (does not include credits in progress)? If uncertain, reference your academic transcript and UDegree Audit.

What are the number of credit hours you have completed in PSY classes?

What are the number of credit hours you have completed in CRM classes?

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Block 8

Project Title: Psychology vs. Criminology Students Attribution of Factors Contributing to Criminal Behaviors

Principal Investigator: Ava Leahy, Psychology/Criminology, aleahy1@emich.edu

Faculty Advisor: 734-487-2406

Thank you for participating in this study. In order to get the information we were looking for, we withheld some information/or provided you with incorrect information about some aspects of this study. Given that data collection is still ongoing and to ensure integrity of our results, we will not disclose the full intent of the study at this moment. Please enter your email below if you'd like us to reach out to you at the study's conclusion to learn more information, or direct any pertinent questions to the email above.

Please provide your email below only if you'd like to be contacted about the results of the study.

data use and credit questions

I would like to have my participation count as class credit (if my instructor allows for this to be credit)?

- Yes
 No

Appendix B: Demographic Breakdown

Figure B1. Breakdown of Participants' Majors

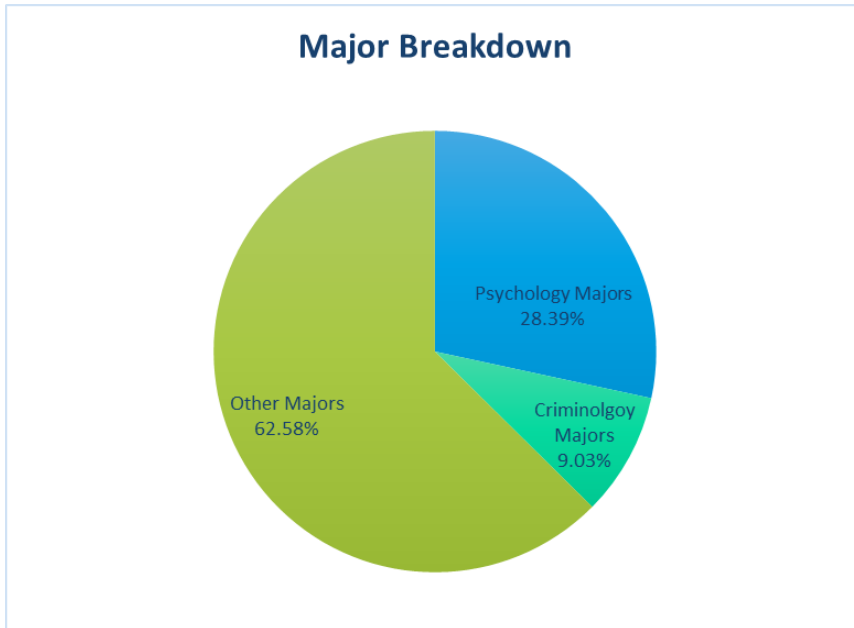


Figure B2. Breakdown of Participants' Ages

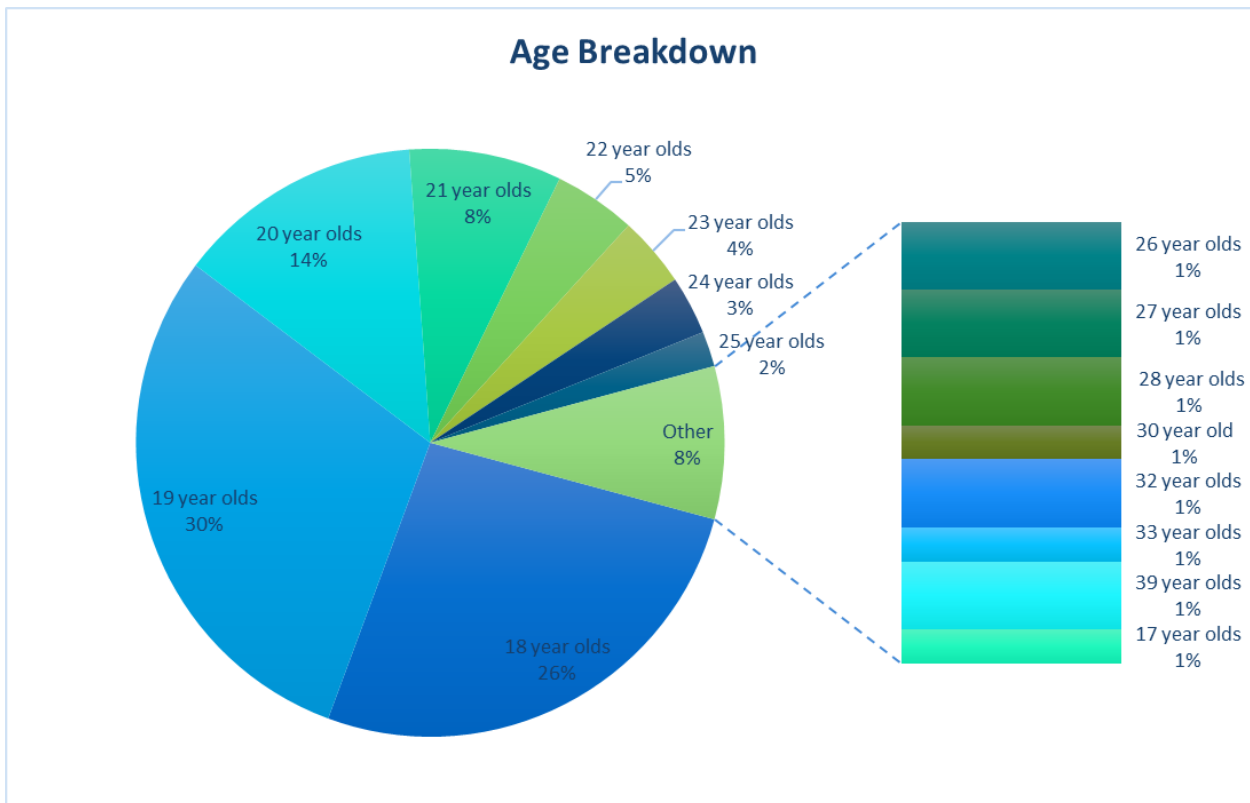


Figure B3. Breakdown of Participants' Gender

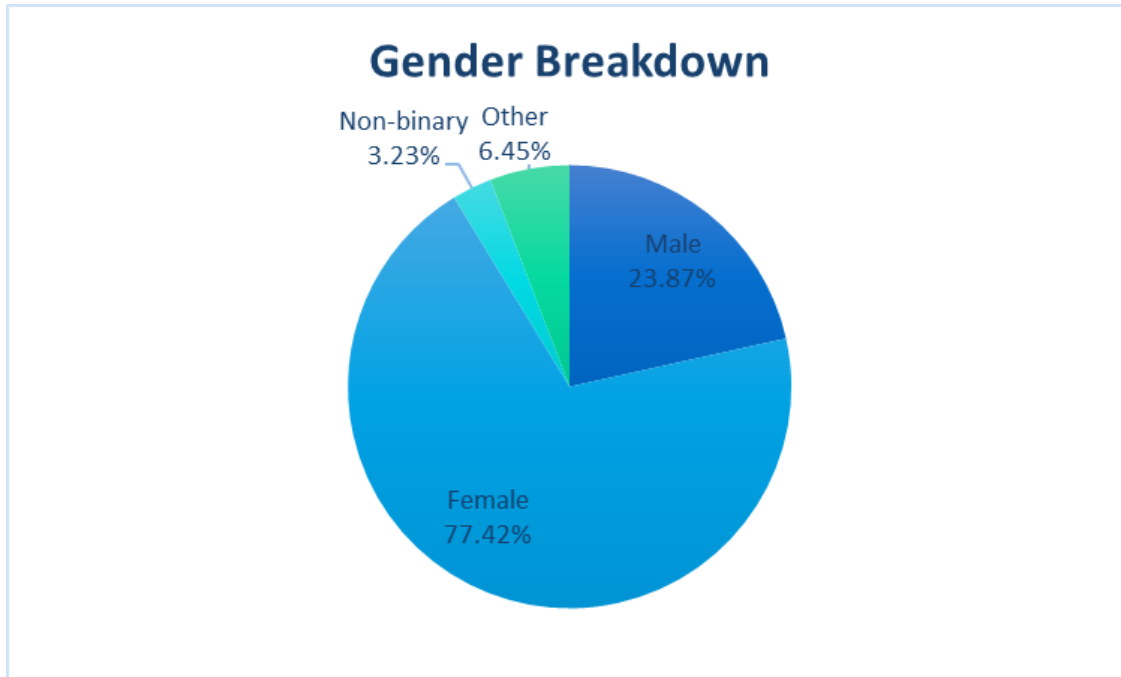
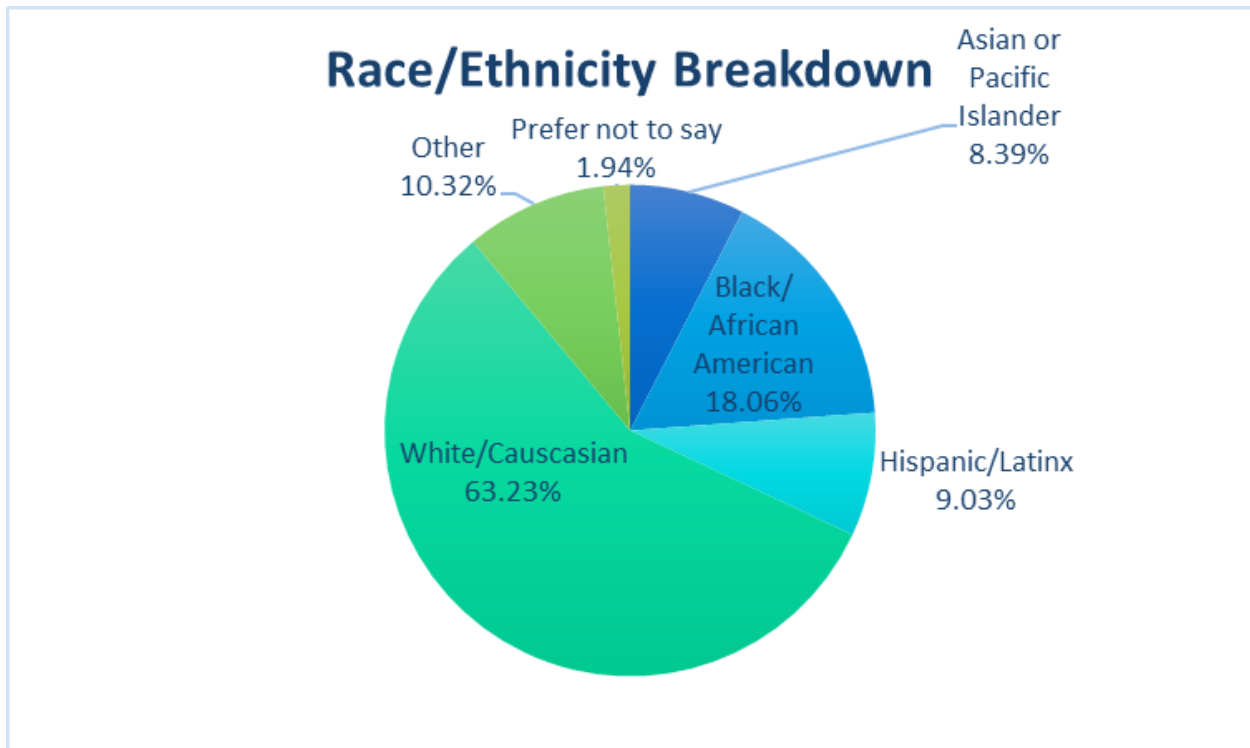


Figure B4. Breakdown of Participants' Race/Ethnicity



Appendix C: IRB Approval Letter

Nov 18, 2022 4:41:32 PM EST

Ava Leahy
Eastern Michigan University, Psychology

Re: Expedited Review - Initial - UHSRC-FY22-23-47 Psychology vs. Criminology Students Attribution of Factors Contributing to Criminal Behaviors

Dear Dr. Ava Leahy:

The Eastern Michigan University Human Subjects Review Committee has rendered the decision below for Psychology vs. Criminology Students Attribution of Factors Contributing to Criminal Behaviors . You are approved to conduct your research.

Decision: Approved

Selected Category: 7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Findings: You must use stamped copies of your recruitment and consent forms.

To access your stamped documents, follow these steps: 1. Open up the Dashboard; 2. Scroll down to the Approved Studies box; 3. Click on your study ID link; 4. "Study Details" will be highlighted in blue. Click on the "Submission Details" tab next to the "Study Details" tab; 5. Click Initial; 6. Click on "Attachments" in the bottom box next to "Key Contacts"; 7. Click on the three dots next to the attachment filename; 8. Select Download.

Renewals: This approval will not expire. Once you have completed data collection and all data are de-identified, please submit a Closure form.

Modifications: All changes to this study must be approved prior to implementation. If you plan to make any changes, submit a modification request application in [Cayuse IRB](#) for review and approval. You may not implement your changes until you receive a modification approval letter.

Problems: All deviations from the approved protocol, unanticipated problems, adverse events, subject complaints, or other problems that may affect risk to human subjects or alter their willingness to participate must be reported to the UHSRC. Complete the incident report application in [Cayuse IRB](#).

Please contact human.subjects@emich.edu with any questions or concerns.

Sincerely,

Eastern Michigan University Human Subjects Review Committee