Pandemic Plea Bargaining: COVID-19 Mitigation Strategies and Plea Decision Making

by

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ABSTRACT

Despite the constitutional right to trial, the vast majority of defendants waive this right and enter a guilty plea. There are many factors defendants consider when entering a plea, with the coronavirus (COVID-19) pandemic being the newest factor that may impact defendant decision making. Previous research has found that both innocent and guilty participant defendants were more likely to plead guilty when provided information on COVID-19 outbreaks. Additionally, innocent defendants ranked concerns related to COVID-19 higher than guilty defendants in driving their plea decisions. As the pandemic continues to evolve, so do the various policies and tactics used to reduce transmission rates. This thesis expands on previous work by employing an experimental plea simulation on a college sample to see how varying levels of COVID-19 mitigation strategies in a jail setting impact plea decision making. Varying levels of COVID-19 mitigation efforts on their own did not significantly impact plea decision making; however, presenting COVID-19 related information did increase the willingness to accept a guilty plea more generally. Given the possibility of innocent defendants pleading guilty, this thesis demonstrates the importance of reforming the application of pretrial detention and calls for more oversight into plea negotiations.

DEDICATION

I dedicate this thesis to my amazing family. You gave me the opportunity to thrive and have cheered for me every step of the way. I would not be writing this today without your love and support. Thank you for believing in me. I also want to dedicate this to all of my friends who have been there for me throughout this journey. Thank you for having patience with me, and for reminding me of the importance of finding moments to live and laugh. Lastly, to my doggos Cody, Max, and Lulu: Thank you for stepping in as the best bunch of emotional support dogs and thank you for all the cuddles.

"Long story short, I survived" - Taylor Swift

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CHAPTER 1

INTRODUCTION

The Sixth Amendment of the United States Constitution offers several protections to defendants in criminal cases, including the right to a speedy trial, a trial by jury, and the right to know the charges and evidence supporting these charges. Despite the constitutional spotlight on these elements, the overwhelming majority of criminal defendants waive these rights by entering a guilty plea. As of 2018, the most common form of case disposition in the federal criminal justice system was a guilty plea (90%), followed by charge dismissal (8%), and with only two percent of federal criminal cases resolved by jury trial (Gramlich, 2019). While estimates in the state court may vary depending on reporting practices, available data from 2017 suggests that state courts have roughly the same, if not lower, trial rates compared to the federal system (Gramlich, 2019). This shift away from trials was best illustrated in *Lafler v. Cooper* (2012) when Justice Anthony Kennedy stated, "criminal justice today is, for the most part, a system of pleas, not a system of trials" (p. 11).

Plea bargaining has undoubtedly changed how the criminal justice system processes cases. While some scholars have applauded plea bargaining because of the efficiency and flexibility it brings (Easterbrook, 1992; Scott & Stuntz, 1992), others have voiced concerns over the informal nature of the process and the potentially coercive properties contained within negotiated pleas (Bibas, 2004; Hessick, 2021; Schulhofer, 1992; Wilford & Redlich, 2018). The coercive nature of negotiated pleas largely centers around the differences in sentence outcomes depending on the method of case disposition. More specifically, cases resolved via trial often involve longer sentences as

well as more punitive forms of punishment (Ulmer & Bradley, 2006). This coercive effect can also be amplified by the release status of the defendant. Especially if the prosecutor offers a sentence that does not involve jail time, defendants housed in pretrial detention may choose the immediate gratification of getting to leave jail, even though the guilty plea comes with the long-term consequences associated with a conviction, even if they are innocent (Edkins & Dervan, 2018).

Prior to March of 2020, defendants awaiting trial in jails already had clear incentives for wanting to end their stay in pretrial detention. Detained defendants have to put their freedom on hold for an undetermined amount of time as they wait for their trial (Kellough & Wortley, 2002; Sacks & Ackerman, 2012). The start of the novel coronavirus pandemic (COVID-19) in March 2020 became the newest factor defendants had to consider when deciding whether to accept a negotiated plea or go to trial. The early stages of the pandemic placed strains on the court system and added a new health risk to carceral spaces more generally (Piquero, 2021; Watson et al., 2021). However, later stages of the pandemic brought forth a sense of normalcy, especially as COVID-19 mitigation efforts were introduced to communities. This thesis examines how varying levels of COVID-19 mitigation efforts in a jail setting such as vaccine distribution, mask requirements, symptom screening and testing, as well as social distancing influence plea decision-making.

CHAPTER 2

LITERATURE REVIEW

History of Plea Bargaining

In contemporary America, imagining a criminal justice system without plea bargaining is nearly impossible. However, up until the early nineteenth century, plea bargaining was unheard of and any attempt to dispose of a case via guilty plea was discouraged by the court and legislators (Fisher, 2000; Hessick, 2021). In fact, when a defendant tried to waive their right to trial, judges would reject the request and recommend that the defendant reconsider their decision for a later date (Hessick, 2021). In an effort to identify the earliest versions of plea bargaining, Fisher reviewed records from trial courts in Middlesex County, Massachusetts. Fisher identified clear efforts toward plea bargaining, specifically for liquor law violations and cases involving capital offenses. While pleas of no contest were continually used in the late 18th century, the first concrete example of the practice was seen in 1807. More specifically, the prosecutor would charge the defendant with four separate crimes. The four crimes included the act of selling alcohol, two charges related to selling alcohol without a liquor license, and a charge relating to the consumption of alcohol on the defendant's property. In exchange for a plea of no contest, the prosecutor would agree to drop three of the four charges. This left the defendant only having to pay the fine related to the offense and the costs associated with prosecution. These practices set the stage for what would later be referred to as charge bargaining, in terms of both the reduction of the number of charges and the severity of the charges.

While for centuries jury trials used to be the mainstay of resolving criminal cases, the criminal justice system in its current state would be unable to handle every charge brought before the court. In addition to an ever-expanding list of criminalized behaviors, improvements in policing, and improvements in technology, the actual process for conducting trials has become much more formalized and complex compared to the trials several centuries ago (Alschuler, 1979). Essentially, Alschuler describes how the formalization of the court process offers more protection to defendants, but these safeguards extend the amount of time it takes to conduct the trial. Thus, the criminal justice system became more dependent on negotiated pleas. To illustrate this, Fisher (2000) described how it was common for a felony court in a single jurisdiction to process several felony trials on a single day. In comparison, Alschuler described how a felony jury trial in Los Angeles would take just over a week to conduct. While this formalization ensured necessary protections were given to defendants, it also ensured that prosecutors and the courts would go to great lengths to avoid trials because of the complex process associated with contemporary jury trials.

Constitutionality of Plea Bargaining

Given how common it is for a case to be resolved by plea bargaining, it is important to understand the legal precedence that has simultaneously allowed for plea bargaining while also placing some limitations and requirements to ensure a guilty plea is constitutional. The Supreme Court considered guilty pleas in the context of the death penalty in both *United States v. Jackson* (1968) and *Brady v. United States* (1970). These cases ruled that a statute cannot automatically attach the death penalty as the maximum penalty if convicted by a jury, but that entering a guilty plea to avoid the possibility of the

death penalty is allowable. A similar outcome also occurred in *Bordenkircher v. Hayes* (1978), which essentially affirmed the practice of charge bargaining. In this case, if the defendant did not accept the plea offer for a five-year sentence, the prosecutor planned to charge a defendant under a habitual offender act which carried a life sentence. Of particular relevance to the study of pleas more generally is that these decisions authorize the use of trial penalties in their most extreme form (i.e., the death penalty or life sentence) as part of the plea negotiation process. Applying the decisions of *Jackson* and *Brady*, the Supreme Court held in *North Carolina v. Alford* (1970) that defendants can plead guilty while also still maintaining their innocence in order to avoid the death penalty. This case raises concerns about the accuracy of plea bargaining. While it is not known what proportion of defendants who enter an Alford plea are factually innocent, imposing punishment on someone who wishes to maintain their innocence but sees the value of pleading guilty signals a clear concern about the practice of plea bargaining.

Theoretical Basis of Plea Bargaining

As mentioned above, plea bargaining has become an essential part of the criminal justice system and is the primary method for resolving criminal cases. Knowing the emphasis that is placed on the constitutional rights to trial as well as self-incrimination protections, legal scholars have explored the theoretical mechanism surrounding plea bargaining and whether this mechanism exerts pressure on defendants, particularly innocent defendants, to plead guilty. Both Scott and Stuntz (1992) and Easterbrook (1992) are generally in agreement that plea bargaining can be an efficient way to resolve criminal disputes. However, adjustments should be made to protect innocent defendants from entering a guilty plea. When considering individual risk tolerance, Scott and Stuntz

propose that factually innocent defendants may be more risk averse to the possibility of facing the maximum sentence if found guilty at trial. Prosecutors do not have absolute certainty over the defendant's guilt, and in pursuit of a conviction, prosecutors may offer deals that are too good for both innocent and guilty defendants alike to pass up. While this may give theoretical insights into why factually innocent defendants enter a guilty plea, Bjerk (2007) suggests that plea bargaining in its current state does not adequately parse out guilty and innocent defendants. If the prosecutor offers large plea discounts such that every factually guilty defendant pleads guilty, some innocent defendants will inevitably plead guilty as well (see Bjerk, 2021 for a more recent update).

The salient mechanism driving plea bargains for both the prosecutor and the defendant is the possible outcome of trial, which later became known as the shadow of the trial theory (Bibas, 2004; Mnookin & Kornhauser, 1979). Shadow of the trial theory posits that the decisions made in plea negotiations are rooted in the perceived potential outcome of the trial (Scott & Stuntz, 1992). That is, the strength of the evidence influences the probability of conviction, and the potential sentence if found guilty at trial influences the plea offer and the decision itself. The main component that is critical to the application of the shadow of the trial theory in their view is the alleviation of risk for both parties. Trials present clear risks for both prosecutors and defendants. For prosecutors, going to trial requires arguably the most important commodities in their profession: time and resources. Prosecutors risk wasting time and resources if the jury acquits the defendant rather than convicts. Defendants who agree to the process of proving their innocence also risk the uncertainty of not knowing what the sentence would be if convicted, even with the chance of acquittal. Put differently, negotiations reduce the costs

associated with a more formal legal process and can reduce the risk of uncertain outcomes for both parties.

Innocence and the Shadow of the Trial Theory

The major concern relating to plea bargaining involves the number of tools available to prosecutors in order to maximize the chance of a plea acceptance (Hessick, 2021). For example, as was evident in the earliest documented cases of plea bargaining involving liquor licenses, the number of charges brought forth during the indictment can impact the chosen sanction. Prosecutors have the discretion to drop or reduce charges during the negotiation process, sometimes meaning the difference between a felony or a misdemeanor. Again, with these negotiations comes different types of consequences, such as the difference between a period of incarceration or a period of probation. In summary, prosecutors are given the creative flexibility to bring forth charges that maximize the possibility of pleading guilty, even if that means that the plea offers are too good for innocent defendants to pass up.

Outside of charge bargaining, prosecutors can also leverage the length of the sentence within the sentencing range of the indictable charges, with those found guilty at trial facing more severe sentence lengths (Ulmer & Bradley, 2006). Innocent defendants offered sizable plea discounts have a stronger incentive for entering a guilty plea, especially when the alternative is the maximum allowable sentence length if convicted at trial (Caldwell, 2011; Schneider & Zottoli, 2019). The difference in outcomes can be difficult to measure given plea offers with alternative sanctions, but the largest sentence reductions can range upwards of sixty percent of the length of the original sentence (Yan, 2022; Yan & Bushway, 2018).

While the central tenets of the shadow of the trial theory are theoretically stimulating, there are concerns that the theory is overly simplistic because it fails to consider individual and systemic factors that may influence the decision to accept a guilty plea other than the probability of conviction (Bibas, 2004). Despite this, the basic premise of the shadow of the trial model has empirical grounds, especially relating to the notion that individuals respond differently when plea conditions vary (Bartlett & Zottoli, 2021; Bushway et al., 2014; K. Petersen, Redlich, & Norris, 2020). If anything, K. Petersen and colleagues (2020) found that the shadow of the trial model may be underestimating how sensitive defendants are to the risk of going to trial, meaning that the baseline of guilty pleas are higher than anticipated under the model. This suggests that overall, defendants are more likely to plead guilty than originally predicted by the shadow of the trial model.

Pretrial Detention and Guilty Pleas

Another source of pressure that may increase the likelihood of innocent defendants pleading guilty is their release status (Edkins & Dervan, 2018; Kellough & Wortley, 2002; N.Petersen, 2020; Sacks & Ackerman, 2012). Defendants housed in pretrial detention forfeit their freedom until their trial date, and the effects of this are amplified when considering the unpleasant conditions of jails (May et al., 2014; Toman et al., 2018). When interviewing defendants remanded to pretrial detention in Canada, Kellough & Wortley found that these defendants were over two times more likely to enter a guilty plea compared to their released counterparts. In an experimental setting manipulating release status, Edkins and Dervan found that innocent defendants housed in pretrial detention were over twice as likely to enter a guilty plea compared to innocent defendants in the community. One glaring concern especially relating to false guilty pleas

is that being detained pretrial is not synonymous with guilt. However, the above research demonstrates that the influences of pretrial detention can still invoke additional pressures to plead for both innocent and guilty defendants.

Understanding the Decision to Plead Guilty

Understanding the totality of the circumstances that influence the decision to enter a guilty plea from court records and administrative data is incredibly difficult because most plea negotiations occur beyond the scope of public record (Caldwell, 2011). As such, the majority of what is known about plea decision making has primarily come from experiments utilizing hypothetical vignette criminal scenarios or experiments with simulated real-stakes consequences. Bordens and Bassett (1985) conducted a qualitative study interviewing defendants who pleaded guilty to a felony. The overarching theme defendants described was the pressure to plead guilty from a variety of sources, including pressure from the prosecutor, pressure from the defense attorney, and internal pressures to resolve their situation as quickly as possible (Bordens & Bassett, 1985). While factual innocence was not a main focus of this research, the pressure to plead guilty may manifest for guilty and innocent defendants alike.

While defendants on their own may have a sense of how they would respond to a negotiated plea, research also suggests that the perceptions and advice of the defense attorney is also a critical factor in how a defendant responds to a negotiated plea (Henderson & Levett, 2018; Henderson & Shteynberg, 2020; Lee et al., 2021; Redlich & Shteynberg, 2016). How much weight a defendant gives their attorney's advice may also depend on guilt status, with Henderson and Levett (2018) finding that innocent defendants were much more influenced by their attorney's recommendation for both

pleading guilty or going to trial. Again, this is an important consideration for innocent defendants in particular because as mentioned above, defense attorneys may be incentivized to avoid going to trial for financial reasons as well as to maintain order within the courtroom workgroup (Bibas, 2004; Heumann, 1978).

Much of what is known about plea decision making has been the result of vignette-style research in which a participant is presented with a hypothetical scenario (Redlich, Wilford, & Bushway, 2017). While this style of research does allow for the isolation of specific information presented to the participant, one limitation involves whether the participant would make the same decision in real life if they actually had to face the outcomes described in the scenario. To alleviate this concern, Dervan and Edkins (2013) adapted the cheating paradigm, in which researchers would recruit college students to a lab and ask them to perform a test, and then accused the participants of cheating on the test. The researcher would then offer the student a "plea deal" where they signed a document and confessed to cheating, or offer a more formal hearing with the ethics review board and potentially face a more severe consequence. The researcher would manipulate the guilt status of student subjects through an accomplice – a fellow student (research team member) who would sometimes invite the student subject to cheat.

Several studies have utilized the cheating paradigm to better understand plea decision making (Dervan & Edkins, 2013; Henderson & Levett, 2018; Wilford, Wells, & Frazier, 2021) finding that the cheating paradigm yields results similar to studies employing vignette designs. One way the findings of the cheating paradigm vary compared to strictly vignette designs is higher rates of false guilty pleas (Bordens, 1984;

Tor et al., 2010).The cheating paradigm may be the most authentic option in simulating the pressures defendants face when making a plea decision. However, the cheating paradigm may not be the most viable option when considering the time needed to carry out the experiment and the deception needed to ensure participants feel the pressure associated with a plea decision. To bridge this gap, Wilford, Sutherland, et al. (2021) created innovative plea simulation software that is designed to give participants a more immersive version of vignette-style research. This thesis will use this same simulation technology so participants may be able to better imagine themselves in this situation as well as be more engaged with the scenario itself.

COVID-19 and the Criminal Justice System

In the first months of 2020, the novel coronavirus began to ravage the United States in addition to the entire world, signaling the start of a viral pandemic unlike anything that has been seen before (Gates, 2020). To make matters worse, it became quite clear that the United States in particular was not in the best position to handle a global pandemic (Barrett & Yaffe, 2020). The initial response to COVID-19 in the United States was fragmented and chaotic. As time went on and the pandemic continued to rage, some states were able to garner some relief via various initiatives such as mask policies, capacity restrictions, and eventually vaccine rollouts in the spring of 2021 (Hallas et al., 2021). However, these eventual COVID-19 mitigation efforts were distributed rather unequally, meaning that the effects and experiences of COVID-19 may be variable depending on jurisdiction.

The early stages of the pandemic also created stressors for the criminal justice system, particularly the court system and carceral facilities (Piquero, 2021). Many courts

began to halt non-essential operations such as jury trials to better prioritize more time-sensitive court proceedings such as first appearances (Baldwin et al., 2021). These impacts have also trickled down to individual courtroom actors, with the majority of defense attorneys expressing hardships in being able to effectively consult with clients and concerns about prosecutors wielding greater sentence reductions to avoid having to add to the growing number of pending jury trials (Daftary-Kapur et al., 2021).

Carceral facilities have been disproportionately affected by COVID-19 compared to the general population (Charles et al., 2021; Watson et al., 2021). As mentioned in previous sections, pretrial detention may play a role in plea decision making. In addition to the other unpleasant aspects of pretrial detention, defendants now have to factor in the likelihood of catching a potentially life-altering disease, which may result in more defendants pleading guilty to get out of pretrial detention as soon as possible (Cannon, 2020). Using the animated simulation tool discussed above, Wilford, Zimmerman, et al. (2021) found that defendants who were made aware of the potential consequences of the pandemic by their defense attorney were more willing to plead guilty. Moreover, innocent participants ranked concerns related to COVID-19 higher than guilty participants in their plea decision considerations.

While Wilford, Zimmerman, et al (2021) was able to capture the effects of the earlier stages of the pandemic when few mitigation efforts were available, this thesis will assess how COVID-19 closer to the end of the pandemic may impact plea decision making. This is particularly relevant given the variety of preventive measures jails may be able to implement. For example, the distribution of vaccinations varied from state to state and recent research has shown that incarcerated individuals may be more hesitant to

take vaccines more generally (Geana et al., 2021; Herring & Widra, 2021). Another important consideration is the vaccination status of correctional officers, with Wallace et al. (2021) finding that prison staff were the main drivers bringing coronavirus into the institutional setting. However, correctional officers also demonstrated a great deal of resistance relating to vaccine uptake (Bertman & Sawyer, 2021).

Contextualizing COVID-19 in the period in which data collection for this study occurred, much of the country has moved into post-pandemic operations, with the removal of mask mandates at the state level and new guidance from the Centers for Disease Control (Hersher, 2022; Mandavilli, 2022). Within the criminal justice system, mitigation efforts have allowed for operations to return to a sense of normalcy. Currently, jail populations have returned to pre-pandemic levels and court operations are returning to normal functions (Widra, 2022). Importantly, although the reduction of COVID-19 related safety measures may signal the end of the pandemic, COVID-19 is still posing a risk; albeit, a lower risk to incarcerated populations and the community more generally.

CHAPTER 3

CURRENT STUDY

Motivations and Relevance

I first became interested in the study of plea bargaining when I heard about the story of Kalief Browder. Browder was accused of stealing a backpack, pleaded not guilty, and was ultimately held in pretrial detention at Rikers Island for over three years (Gonnerman, 2014). Browder was offered several plea deals during his time awaiting trial, with the final offer being immediate release with time-served in exchange for a guilty plea. Despite the attractive offer, Browder refused, and the charges were ultimately dropped later that year. Browder never recovered from the emotional trauma of spending several years in custody and died of suicide roughly a year after his release. This was the first time I had considered what simply being held in a jail could do to those who wanted to proceed with a trial, but would ultimately face hardships similar to if not worse than the punishment associated with a conviction.

There is also the clearly established concern that a guilty plea may not actually signal guilt, especially when considering the pressures exerted through the trial penalty and pretrial detention. Despite how common guilty pleas are, the National Registry of Exonerations (2015) shows that only fifteen percent of all exonerations stem from guilty pleas. This does not suggest that the plea system is more successful at ensuring guilt, but rather, is likely the result of the numerous rights a defendant waives when entering a guilty plea including the right to appeal (Hessick, 2021). This makes understanding what influences the decision to enter a guilty plea that much more important. As established by Wilford, Zimmerman, et al. (2021), the pandemic became the newest factor that

defendants would have to weigh when making a plea decision. However, as the pandemic begins to wane with the assistance of mitigation efforts, this study expands the plea knowledge base by evaluating hypothetical plea decision making with the now omnipresent public health threat that is COVID-19.

Current Study

This study uses a two-group between-subjects design. One of the key findings of Wilford, Zimmerman, et al. (2021) was that the pandemic was considered more influential in the decision to plead guilty for innocent defendants. This suggests that factually-innocent defendants may view the possibility of catching COVID-19 in pretrial detention as more of a hindrance given their innocence. To further the understanding of pandemic plea decision making for innocent defendants, all participants in this study were presented with a scenario where they were formally charged with larceny, but it was illustrated that they were factually innocent (see Appendix E for the full script).

Hypothesis 1:

Participant defendants assigned to the more stringent mitigation scenario will have a lower guilty plea acceptance rate.

Hypothesis 2:

When asked to assess their willingness to accept a plea (WTAP) on a numeric scale following exposure to the mitigation efforts, participant defendants assigned to the more stringent mitigation scenario will be less willing to enter a guilty plea.

CHAPTER 4

METHODOLOGY

Plea Simulation

The simulation begins with a scene where the participant is trying on sunglasses in a shopping mall but realizes they are running late to a movie with their friends. The next scene involves the defendant being in a courtroom in which they are accused by the prosecutor for the theft of the sunglasses and video evidence of the participant walking towards the exit with the sunglasses is presented. The participant, while waiting in a jail cell, engages in a flashback sequence where the sunglasses are put down on the counter prior to walking out of the store, thus signaling the innocence of the participant. The next scenes involve the participants meeting with the defense attorney who gives information about the negotiated plea offer, and subsequently information about either the high or low mitigation efforts used in the jail setting. The sentence outcome was not manipulated, meaning that all participants were offered the same plea deal of six months of probation if accepting the guilty plea or nine months of county jail time if found guilty at trial. Prior to redirecting back to the survey, participants would choose if they would accept or reject the presented plea offer (see Wilford, Sutherland, et al., 2021 for more information and illustrations of the simulation).

Four mitigation strategies were considered based on how jails and prisons were operating during the pandemic. First, the availability of vaccines for incarcerated individuals varied state by state and the proportion of incarcerated individuals and correctional staff willing to take the vaccine also varied (Tyagi &Manson, 2021). In the high-mitigation scenario, participant-defendants were told that the vaccination rate for

incarcerated individuals and correctional staff was well above the state average. In the low mitigation effort, participant-defendants were told that the vaccination rate was well below the state average for incarcerated individuals and correctional officers.

The next mitigation effort that was crucial during the peak stages of the pandemic was the use of masks. This was another source of variation state-to-state, with just over half of states requiring masks to be worn by correctional staff and less than a third of states extending this requirement to incarcerated individuals (Widra & Herring, 2020). In the high-mitigation scenario, participant-defendants were told that jails were providing and requiring masks. Alternatively, participant-defendants in the low-mitigation condition were told that jails were not requiring or providing masks.

Another mitigation effort that was included was the availability of a screening process that could identify COVID-19 positive individuals in order to isolate them from the general population. This was largely reflected in official jail policies and the availability and commitment to testing protocols, which again varied greatly depending on the jurisdiction. A handful of states were able to offer comprehensive testing throughout the facility, but many states were unable to fully adopt testing protocols, or their screening process existed on the books but not in practice (Widra & Hayre, 2020). Participant-defendants in the high mitigation condition were told that jails had a screening process in place to detect and isolate individuals displaying symptoms of COVID-19. In the low-mitigation condition, participant-defendants were told that jails did not have a screening process in place to detect and isolate symptomatic individuals.

The last-mitigation effort that was considered is the ability for facilities to allow for social distancing, which is arguably the most difficult for facilities to implement

(Widra, 2022). Jail rates across the country dropped an average of thirty-eight percent at the start of the pandemic, but eventually rose back to pre-pandemic levels. Additionally, the degree of pandemic-related decarceration varied from state to state. For example, Texas only saw a single percentage change in the number of incarcerated individuals whereas Washington saw a thirty-three percent reduction in the total number of incarcerated individuals (Widra, 2022). As such, participant defendants in the high-mitigation condition were told that the jail had reduced capacity so it was unlikely that they would have to share a cell with another individual. Participant-defendants in the low-mitigation condition were told that the jail had not reduced capacity, so it was likely that they would have to share a cell with another individual.

Survey

The Qualtrics platform was used to connect participants to the simulation in addition to carrying over vital information both to and from the simulation. Participants were asked a series of demographic questions both before and after viewing the simulation such as age, political affiliation, gender identity, race, ethnicity, and how familiar the participant was with the plea and trial process. Participants were also asked to rate their perceived probability of conviction based on what they saw in the simulation. The survey also incorporated pre- and post- measures where participants were asked to estimate the likelihood of entering a guilty plea both before and after the defense attorney provided them with information about either of the COVID-19 mitigation efforts.

Participants were also asked a series of questions that ascertained what factors influenced their plea decision. These factors included case evidence, risk of jail sentence, COVID-19 related risks, attorney advice, and the avoidance of pretrial detention. These

questions were presented to defendants using a Likert scale with some questions asking individuals to rank a specific factor, whereas others asked participants to rank a set of factors against each other. Lastly, participants were asked a series of questions about their personal experiences with the legal system as well as their personal experiences and perceptions of COVID-19 and COVID-19 related measures. This included questions such as vaccination status, perceptions of government mandates, and effectiveness of various mitigation efforts.

Procedure

Recruitment materials and study instruments including the animation script and survey were approved by the Institutional Review Board at Arizona State University (see Appendix F). The sampling frame for this study was all 200- and 300- level criminal justice students enrolled on-campus and in online courses. The sampling method was a non-probability convenience sample. In other words, a selection of in-person and online eligible and available classes were used for recruitment. Both in-person and online recruitment involved the instructor posting the recruitment message and survey link to the Canvas platform; however, I also had the opportunity to verbally recruit from four in-person classes. Upon clicking the link, participants were shown the informed consent page where implicit consent was obtained by continuing to the survey itself. While there may be concerns about utilizing a student sample to examine defendant decision making, this is a relatively common practice in the experimental setting (Garnier-Dkystra & Wilson, 2019; Henderson & Levett, 2018). The crime presented in the simulation is both serious yet common enough for the participant to imagine themselves in this situation. Additionally, defendant decision making does not require previous training or experience

to be able to make decisions, compared to research focusing on the decision making of courtroom actors.

Once in the survey, participants were randomly assigned to the experimental conditions (either low or high COVID-19 mitigation efforts) and the participants were directed to the simulation. The survey was active from January 26th, 2022 through March 1st, 2022. The survey was visible to 579 students in eleven in-person classes and 1,242 twenty-five online classes, for a total of 1,821 students. The survey received a total of 241 responses, yielding a response rate of 13.23%. One limitation to this sample is that information relating to student type was not collected, meaning separate response rates could not be generated for students taking in-person classes and for students taking online classes. Contextualizing this response rate compared to other experimental plea decision-making studies is difficult given that many studies utilize crowdsourcing platforms such as Amazon's MTurk, Prolific Academic, or Qualtrics. Moreover, it is common for participants on these platforms to receive compensation for participating in these studies, which was not provided in this study. Plea decision making studies that use student samples are often able to recruit via university participant pools, which would again increase the response rate compared to the survey link being distributed in the course shell. Additionally, since this survey was administered across many 200- and 300- level courses, it is likely that eligible students may have been offered the survey in multiple classes, thus making the overall sampling frame slightly less accurate.

Variables

There are three primary dependent variables that were obtained from the survey and simulation. The first dependent variable is a binary variable of whether the

participant accepted or rejected the plea deal. To expand beyond the dichotomous variable of accepting or rejecting the plea, the next dependent variable is the participant's post-COVID-19-condition willingness to accept a plea (WTAP), measured on a scale between 0 (completely unwilling) and 100 (completely willing). In the simulation, participants were asked to provide their WTAP score before and after the defense attorney avatar talked about the mitigation efforts. Thus, the final dependent variable is the difference in WTAP, which is the post-mitigation-info WTAP minus the pre-mitigation-info WTAP. This score ranged from -100 to 100, with -100 indicating a sizeable decrease between the pre and post WTAP score, and 100 indicating a sizeable increase between the pre and post WTAP score. Having a pre-test/post-test variable allowed for an understanding of the baseline likelihood of pleading guilty regardless of experimental condition.

The independent variable of interest is which experimental condition the participant was randomly assigned to. Beyond the independent variable, several control variables were included. The first control variable that was included was gender. As will be discussed later in the demographic information, there were two participants who identified as non-binary, and female was the dominant gender identity within the sample. Given the small number of participants who identified as non-binary, the decision was made to include the two non-binary participants in the *t*-tests, but to exclude them in the regression analysis. Since females were the dominant group, males served as the reference group and were assigned a value of 0, whereas females were assigned a value of 1. Participant race and ethnicity was also considered a control variable. Participants could select all race and ethnicity options that applied, including White, Black,

Indigenous, Asian, Native Hawaiian/Pacific Islander, Hispanic, or a short response option for other races and ethnicities. Overall, White and Hispanic were the largest groups so the race variable was collapsed so White was assigned a value of 0, Hispanic was assigned a value of 1, and all other categories were assigned a value of 2. Political ideologically, more specifically, the level of conservatism was created as a continuous variable ranging from 0 to 100, with a value of 0 indicating extremely liberal and 100 indicating extremely conservative. Prior experience with the legal system was measured as a dichotomous variable. Perceived probability of conviction was a continuous variable ranging from 0 to 100.

The last control variable relates to the level of compliance to COVID-19 mitigation measures. This variable is the summation of several COVID-19 related variables, including vaccination status (dichotomous), whether the participant still wore masks in areas where masks are not required (dichotomous), as well as the perceived effectiveness of mandates as a public health measure (0 to 100). Perceived mandate effectiveness was transformed into a dichotomous variable based on whether the perceived effectiveness score was at or higher than 40 (the median score for the sample). The COVID-19 mitigation compliance variable combined the values of these three variables to create an additive scale ranging from 0 to 3, based on whether the participant had received any COVID-19 vaccination, wore a mask, and perceived mandates to be effective.

Analytic Plan

Given the experimental design, it will be necessary to check that both condition groups are similar in terms of the demographic statistics described above relating to the

full sample. This will be accomplished by comparing the median score for continuous demographic variables using the Wilcoxon Rank Sum Test. Especially given that survey data can be skewed, only focusing on the median changes may provide a better understanding of how balanced the groups are (Ford, 2017). For dichotomous demographic variables, Pearson's Chi-Squared test will be conducted to evaluate similarity between both conditions. Any variables that signal being unbalanced will be investigated further to ensure those features are not impacting the final analysis.

The main portion of the analysis will consist of a series of *t*-tests between the condition and the three dependent variables: the decision, the post-simulation WTAP score, and the difference between the two WTAP scores. In addition to the *t*-test for the dichotomous decision variable, a chi-square test will also be conducted given the categorical nature of the independent and dependent variable.

In addition to the *t*-tests and the chi-squared test, regression analyses will also be performed. This serves two primary purposes. First, the experimental design and the random assignment component made both groups balanced on many of the variables. However, one of the variables was unbalanced (detailed below in the results) and including that variable will allow for the identification and control of the effect that this particular may bring on the mitigation-condition coefficient. Some other variables are uncorrelated with the experimental condition, and thus, will not impact the mitigation-condition coefficient itself. However, if those variables affect the plea decision, the standard error for all variables included in the model will be reduced when they are included (Wooldridge, 2020 pp. 200-201). A logistic regression will be conducted using the decision variable as the dependent variable, with the condition variable being the

primary independent variable and gender identity, race, conservatism, perceived conviction probability, prior experience with the legal system, and compliance to COVID-19 mitigation efforts serving as statistically controlled variables. The final models will be linear regressions using the post condition exposure WTAP score as well as the difference between the pre and post condition exposure WTAP scores as the dependent variable, and the same independent and control variables.

CHAPTER 5

RESULTS

Participant Exclusions

Given the experimental design of this study, it was necessary to ensure that the manipulations were effective and that participants were paying attention to both the simulation and the survey questions. As such, participants were asked to recall whether they actually committed the crime of larceny, the sentence length for both the plea and trial outcome, as well as questions related to the manipulations for the specified condition. In total, six manipulation checks were administered, and participants needed to successfully complete four in order to remain in the analytical sample. In addition to correctly responding to four out of the six manipulation checks, participants also had to answer the survey questions relating to all three dependent variables to remain in the sample. Lastly, two attention checks were given to ensure the participant was actually taking the time to read each of the questions. Participants who responded incorrectly were also excluded from the analysis. I removed 27 participants for not answering all three questions relating to the dependent variable. I also removed 14 participants because they were below the manipulation check passing rate of four out of six. Lastly, I removed seven individuals for not responding correctly to either of the attention checks. After excluding participants who either did not respond to questions related to the dependent variables as well as failing the manipulation and attention checks, the final analytical sample was 193 participants.

Descriptive Statistics

Appendix A contains the demographic information for the full sample, as well as the demographic information and balancing test results from within each condition. For the full sample, the average age of participants in the sample was 22.55 years old. For gender identity, 72.54% of the sample identified as female, 26.42% of participants identified as male, and 1.04% identifying as non-binary or other. In terms of race and ethnicity, 45.55% of the sample identified as White, 6.81% identified as Black or African American, 0.52% identified as Indigenous or Native American, 3.14% identified as Asian, no individuals identified as Native Hawaiian or Pacific Islander, 32.46% identified as Hispanic, 9.52% identified as multiracial, and 2.0% identified as other. Nearly a quarter (23.32%) of participants identified having some prior contact with the legal system. Of those 23.90% with prior contact with the legal system, 27.78% have been arrested for a crime and 44.44% have accepted a plea deal for a crime. Turning to COVID-related information, 77.96% of participants indicated being vaccinated for COVID-19 with 22.04% indicating that they have not been vaccinated. 10.00% of participants reported being immunocompromised. Lastly, descriptive statistics were conducted for the three dependent variables. For the full sample, 52.85% of participant defendants entered a guilty plea, the average WTAP score following the simulation was 58.39, and the average difference between the pre and post condition exposure WTAP scores was 6.29.

Balance Tests

Before moving on to the primary analysis, it is necessary to ensure that both groups are similar to ensure successful randomization. As mentioned above, Appendix A

also presents the balancing tables that serve as a comparison between groups on a variety of demographic factors. Overall, both groups were similar on the majority of the personal factors. Vaccination status was the only variable that was unbalanced,[1] with an associated *p*-value of .003. There were more vaccinated individuals in the low-mitigation condition compared to the high-mitigation condition.

Main Analysis

Appendix B presents the *t*-test results for all three dependent variables. Participants in the low-mitigation condition entered a guilty plea 56.88% of the time and participants in the high-mitigation condition entered a guilty plea 47.61% of the time. In other words, defendants who were given information related to the lack of COVID-19 mitigation strategies in a jail had a higher plea acceptance rate by 9.27 percentage points. However, this difference was not statistically significant at the $p < .05$ level, with an associated *p*-value of .203. A similar outcome occurred with the chi-squared test, with an associated *p*-value of .201.

The next *t*-test considered the relationship between the post-animation WTAP score and the experimental condition. Defendants in the low-mitigation condition had an average WTAP score of 60.55 and defendants in the high-mitigation condition had an average WTAP score 55.58. This shows a marginal increase in the WTAP score for those

[1] Several comparisons were conducted to ensure vaccination status was not impacting the three dependent variables. Overall, introducing vaccination status as a control marginally decreased the coefficients for the independent variable for the dichotomous decision variable as well as the post-simulation WTAP score. Introducing vaccination status as a control variable did have a larger effect on the difference in the independent variable coefficient (difference of 1.44 points) When testing all three regression models with all control variables (minus the COVID-19 compliance since vaccination status was contained within that) vaccination status did not significantly affect the decision variable or the post-simulation WTAP variable. However, even with the additional control variables, vaccination status was still significant to the difference in WTAP score ($p = .041$).

in the low-mitigation effort condition by 4.97 points; however, this difference was not statistically significant with a *p*-value of .313.

The final *t*-test expands the analysis, by considering the difference between the pre-and post-condition WTAP scores. Defendants in the low-mitigation condition had an average WTAP score change of 8.17 and participants in the high-mitigation condition had an average percent change of 3.86. The WTAP score for both groups increased following exposure to the mitigation information, but the difference between WTAP scores is greater for those in the low-mitigation group by 4.32 points, meaning that disclosure of the levels of COVID-19 mitigation strategies led to a larger increase in the WTAP score for the low-mitigation condition. This was also not a significant difference between groups, with a *p*-value of .190.

Regression with Control Variables

The full results for the decision variable using the logistic regression will be presented in Appendix C. Additionally, the full results for the post-simulation WTAP score variable as well as the pre and post mitigation exposure change in WTAP score variable using the linear regression will be presented in Appendix C.

Overall, the logistic regression model adding control variables of gender identity, race, conservatism, prior experience with the legal system, conviction probability, and the level of compliance to COVID-19 mitigation measures to the binary decision variable showed statistical significance ($p < .001$). Participant-defendants assigned to the low-mitigation condition were more likely to accept a guilty plea ($OR = 2.40$, $p = .035$). Females were more likely to accept a guilty plea than Males ($OR = 1.49$, $p = .421$). Hispanic individuals were less likely to enter a guilty plea compared to White individuals

(*OR* = 0.95, *p* = .911). Non-Hispanic and Non-White individuals were less likely to enter a guilty plea compared to White individuals (*OR* = 0.67, *p* = .431). For political ideology, as conservatism increased, there was a slight increase in the acceptance of a guilty plea (*OR* = 1.01, *p* = .115). Individuals with prior experience with the legal system were less likely to enter a guilty plea (*OR* = .25, *p* = .007). For every point increase in the perceived conviction probability, there was an associated increase in the likelihood of accepting a plea (*OR* = 1.08, *p* < 0.001). As compliance with COVID-19 mitigation efforts increased, the likelihood of entering a guilty plea increased (*OR* = 1.31, *p* = .293).

The linear regression model using the post-simulation WTAP score as the dependent variable, mitigation condition as the independent variable, and the control variables discussed above showed significance (*p* < .001). Participant-defendants assigned to the low-mitigation condition were expected to have a WTAP score that was 6.08 points higher than the high mitigation condition (*p* = .127). Females were estimated to have a WTAP score that was 8.68 higher compared to Males (*p* = .078). Hispanic individuals were estimated to have a WTAP score that was 6.70 points lower compared to White individuals (*p* = .144). Non-Hispanic and Non-White individuals were expected to have a WTAP score that was 1.66 points lower compared to White individual (*p* = .745). For every unit increase towards conservatism, it was estimated that the WTAP score would increase by 0.06 points (*p* = .528). Individuals with prior legal system experience were estimated to have a WTAP score that was lower by 5.66 points (.244). For every unit increase in perceived conviction probability, it was estimated that the WTAP score would decrease by .81 points (*p* < .001). Lastly, for every unit increase in COVID-19 compliance, the WTAP score was estimated to be higher by 2.61 points (*p* =

.301). The r-squared value for this model was 0.434, meaning that nearly half of the variance in the dependent variable can be explained by the variables in the model.

Introducing statistical control to the WTAP score-change variable did help to offer an explanation to the main findings of the initial *t*-test, with a *p*-value of .042. However, the only control variable that reached significance at the $p < .05$ level was conviction probability. Individuals in the low-mitigation condition were estimated to see a 5.35-point increase in their willingness to plead guilty compared to individuals in the high mitigation condition ($p = .124$). Females were estimated to see a 5.51-point increase in their willingness to plead guilty compared to Males ($p = .199$). Hispanic individuals were estimated to see a 4.71-point decrease in their willingness to enter a guilty plea compared to White individuals ($p = .238$). Non-Hispanic and Non-White individuals were estimated to see a 2.22 point-increase in their willingness to enter a guilty plea compared to White individuals ($p = .618$). For every one unit increase towards conservatism, it was estimated that a 0.03-point increase in the WTAP score would occur ($p = .686$). Individuals with prior experience with the legal system were estimated to see a 3.83-point decrease in their willingness to accept a plea ($p = .365$). For every one unit increase in the perceived conviction probability, there was an estimated .16-point increase in the change in WTAP score ($p = .021$). Lastly, for every unit increase in COVID-19 compliance, the WTAP score was estimated to increase by 2.11 points ($p = .337$). This model had an r-squared value of .087, meaning that roughly eight percent of the variation in the dependent variable could be explained by the regressors in the model.

Main Effects Diagnostics

One important consideration relating to these results is the time period in which the data was collected. Especially given the ever-changing nature of the COVID-19 pandemic, it is necessary to contextualize both the threat posed by the pandemic, as well as the status of government regulations and reports by the media. Throughout the data collection period, the Omicron variant was largely retreating, with news outlets reporting that the daily COVID-19 cases had fallen below the peak of the Delta variant (Cheng et al., 2022; Shammas et al., 2022). Specifically in Arizona, data relating to the COVID-19 case count from the Arizona Department of Health Services (2022) shows that data collection for this study began just after the peak of the Omicron variant and that the case count has been drastically declining ever since then. These changes have resulted in a move to end COVID-19 related restrictions across the nation, with many of these changes coming on the heels of the Omicron variant (Hersher, 2022). This has also resulted in the CDC announcing new recommendations relating to masks and the level of COVID-19 transmissibility (Mandavilli, 2022).

Since data collection occurred during this unique period of the pandemic, the *t*-tests relating to the main effects were re-analyzed based on when an individual completed the survey. To account for the timing of COVID-19 restrictions lifting, the CDC guideline announcement, trends with Arizona daily COVID-19 cases, as well as the general halfway point during data collection, February 15th was used to split the data into different time groups. This would allow for a comparison of dependent variable average scores between both conditions while also considering the timing of the data collection.

The first re-analysis involves the decision to accept or reject the plea by condition for both the time period before and after February 15th (see Appendix D). For individuals who completed the survey before February 15th, the average plea acceptance rate for individuals in the low-mitigation condition was 55.26% and 42.37% in the high-mitigation condition. Individuals who completed the survey after February 15th had an average plea acceptance rate of 60.60% for individuals in the low-mitigation condition and 60.00% for individuals in the high-mitigation condition. The difference between the means before February 15th was 12.89 percentage points and the difference between means after February 15th was 0.60 percentage points.

This can also be illustrated by the difference between the pre-and post-condition WTAP score (see Appendix D). Prior to February 15th, the average difference in WTAP scores was 8.62 for those in the low mitigation condition and 3.59 for those in the high mitigation condition. After February 15th, the WTAP score change for those in the low mitigation condition was 7.15, and for those in the high mitigation condition, 4.48. When looking at the two time periods, the WTAP score change between conditions was 5.03 for those who took the survey prior to February 15th, and 2.67 for those who took the survey after February 15th. Again, this demonstrates a reduction in the size difference between conditions based on the time period in which the study was completed. This reduction in the size difference between conditions based on the time period may help to explain why the main effects did not materialize.

Lastly, defendants who entered a guilty plea were asked to rank a series of five factors as to how much that factor influenced their decision. One of those factors was the risk posed by COVID-19. This was reverse-coded so a value of 1 would indicate being

least influential and a value of 5 being the most influential. Individuals who pleaded guilty and participated before February 15th had an average COVID-19 ranking of 2.65 and after February 15th the average ranking for COVID-19 was 2.32. In other words, after February 15th COVID-19, became less influential as a factor for individuals who plead guilty. All of these changes based on the two time periods may be reflective of the trends relating to the Omicron variant and the subsequent policy changes relating to the decrease in COVID-19 concerns during the data collection period.

CHAPTER 6

DISCUSSION

This thesis sought to examine the effects of COVID-19 mitigation efforts in a jail setting on plea decision making. I hypothesized that individuals in the condition with less stringent COVID-19 mitigation measures would be more likely to enter a guilty plea and would also be more willing to accept a guilty plea. Findings from this thesis indicate that COVID-19 mitigation efforts on their own were not enough to significantly impact plea decision-making. While the main hypotheses did not reach statistical significance, there are several implications and explanations that can be offered to better understand plea decision making at the later stage of the COVID-19 pandemic.

COVID-19 and Plea Decision Making

Although the influence of COVID-19 mitigation efforts did not reach statistical significance in the main analysis, it is still worth discussing the trends in decision-making following exposure to either COVID mitigation effort. First, the difference in the WTAP score before and after exposure to the condition showed an increase in WTAP for both groups. One potential reason as to why the main effects did not reach significance is because introducing COVID-19 information may have influenced both groups regardless of the mitigation efforts. Previous research has illustrated that jail has the reputation for being unpleasant (May et al., 2014) and that many defendants see entering a guilty plea as a way to escape the immediate unpleasantness of jail (Edkins & Dervan; 2018; Sacks & Ackerman, 2012).Regardless of the mitigation level described by the defense attorney, COVID-19 may amplify an already unpleasant environment. This finding echoes the findings of Wilford, Zimmerman, et al. (2021), who discovered that presenting

information relating to the pandemic to participant defendants made it significantly more likely to increase their probability of entering a guilty plea.

Another finding worth highlighting is the relationship between the tiered COVID-19 compliance variable and the decision to enter a guilty plea. When introduced as a control variable, higher levels of COVID-19 compliance resulted into higher levels of accepting guilty pleas or being willing to accept guilty pleas. While initially complying with COVID-19 mitigation efforts, especially vaccination status, was thought to decrease the changes of pleading guilty because of the protections associated with being vaccinated and wearing masks, there is the possibility that individuals who complied with COVID-19 mitigation efforts may be more risk-averse and may also be generally be more compliant. Future research examining public health and the criminal justice system should consider how compliance and risk aversion specifically in the health context may translate to plea decisions.

Since the beginning of the pandemic, both epidemiologists and policy-makers have cautioned of its ever-changing nature, especially with the potential of new variants and surges (Lonas, 2022; Sun, 2020). The Omicron variant, which was much more contagious yet seemingly less severe, has led to changes in both COVID mitigation strategies and the behaviors and perceptions of the general public (Lonas, 2022). For example, medical experts recommended that individuals upgrade to KN-95 or N-95 masks because cloth masks would not protect from the Omicron variant (Rogers, 2021) and because of the possibility of breakthrough cases for vaccinated individuals (Le Page, 2022). To put the effects of the Omicron variant into perspective, data from the Centers for Disease Control (CDC, 2022) show that the highest daily case count before the

Omicron variant was in January 2021 with 293,325 reported cases. The daily case count for the peak of the Omicron variant was quite literally off the charts, with 1,259,946 reported cases. Following the peak, cases began to decline rapidly, signaling that the worst of Omicron had passed. At the time the data was collected (between late January and early March 2022), the pandemic was becoming less of a concern and the majority of states were lifting COVID-19 restrictions (Mandavilli, 2022; Shammas et al., 2022).

Although purely exploratory, splitting the data into two time periods shows some support for the explanation that COVID-19 was perceived as less of a concern as the Omicron variant continued to wane. The pandemic is incredibly dynamic, meaning that the influence of COVID-19 on an individual's decision making may fluctuate. Many Americans have expressed the desire to return to normal, with new data suggesting that people are feeling more comfortable resuming normal activities such as going to a grocery store, dining at a restaurant, and attending an indoor concert – all activities that would have been considered high risk at earlier stages of the pandemic (Gramlich, 2022).

Another consideration involves what the response to COVID-19 in correctional facilities looked like during Omicron. For example, in response to the combined effects of the Omicron variant and correctional facilities returning to pre-pandemic capacities, many facilities have resorted to periods of lockdowns to reduce the possibility of COVID-19 spreading (Schwartzapfel & Blankinger, 2022). While not the best indicator of jail practices, the Bureau of Prisons (BOP, 2022) has taken a tiered approach to deciding what COVID-19 preventative measures are still needed depending on the vaccination rate of the facility, the rate of incarcerated individuals in medical isolation, as well as the level of community spread. While the majority of federal facilities have

resumed near normal operations, masks are still required while indoors regardless of COVID-19 risk level (BOP, 2022). Looking beyond the Omicron variant, this is likely the closest the pandemic jail experience will be to the jail experience prior to the pandemic.

This is not to suggest that COVID-19 mitigation efforts should not be implemented or that implementing mitigation efforts is more harmful than not having mitigation efforts. Detention facilities have a duty to keep individuals relatively safe and healthy. The findings of this thesis indicate that the jail is still perceived as an experience worth avoiding by way of a guilty plea, regardless of what COVID-19 measures are in place. In other words, jail is still perceived as an equally harsh experience with or without COVID-19 mitigation conditions. This is unsurprising given the previous literature highlighting the effect pretrial detention has on plea decision making. Ultimately, what this thesis reiterates is the importance for practitioners to be increasingly aware that decisions made about who will be held in pretrial detention can affect case outcomes, especially relating to how the case will be resolved.

False Guilty Pleas

When considering that all participant-defendants in the study were assigned to be factually innocent, participant defendants in both conditions still pleaded guilty at a startlingly high rate. This plea acceptance rate among innocent participant defendants is consistent with the findings of Wilford, Zimmerman, et al. (2021), with 56% of the innocent defendants presented with COVID-19 information in their study entering a guilty plea and 53% of defendants in this thesis pleading guilty. Both of these studies

were able to capture a high false plea rate during a pandemic, which potentially opens up public health considerations as a new factor for individual plea decision making.

One important consideration with the rate of high false guilty pleas in both of these studies relates to the perceived probability of conviction. In this study, participant defendants had a median conviction probability of 70%, even though the participant defendants were innocent. The prosecutor avatar in the simulation presented video evidence of the defendant avatar walking towards the store exit with the allegedly stolen sunglasses. Participants may either perceive themselves as guilty based on the video evidence or see that the video evidence itself would lend well to a conviction regardless of their actual guilt. The elevated perceived conviction probability is worth considering because findings from the regression models indicated the conviction probability was the strongest predictor of plea decision making.

One interesting aspect of the data and the sample was the prevalence of participants who indicated having prior experience with the criminal legal system. Consistent with prior research, individual in this study with prior research were less willing to enter a guilty plea (Kutateladze & Lawson, 2018). Future analyses should explore how prior experience with the legal system affected plea decision at a more granular level, specifically when considering differences in regards to accepting a plea offer compared to being arrested but not charged with a crime.

When the perceived conviction probability was incorporated as a control variable, the COVID-19 mitigation condition became statistically significant within the dichotomous decision outcome. However, this finding did not materialize in either of the WTAP outcomes. This demonstrates the importance of having various ways of measuring

plea decision making. As discussed by Bordens (1984) and Bordens and Bassett (1985), factors such as minimizing suffering, pressures from courtroom actors, as well as indirect pressures may result in an individual pleading guilty even if they are not necessarily willing to do so. Especially for factually-innocent defendants, their willingness to plead guilty may be rightfully lower than factually-guilty defendants, but the factors described above may result in a guilty plea. Including both versions as plea decision making outcomes provides a more holistic understanding of plea decision making beyond accepting or rejecting an offer. This discrepancy has important implications when considering situations where an individual is largely unwilling to plead guilty yet eventually does so. While the Supreme Court has not recognized the pressures to plead guilty as coercive (*Bordenkircher v. Hayes*, 1978; *Brady v. United States*,1970), the discrepancy between the willingness to plead and the actual decision to enter a guilty plea raises questions as to how voluntary a guilty plea can be when considering all of the factors that are taken into account.

Limitations

There are several limitations that are worth discussing. The first limitation involves the sample itself. This sample consisted of college students attending Arizona State University, meaning the findings should be considered within those parameters. This is particularly important for this study because university policies relating to COVID-19 may influence how college students perceive COVID-19 and COVID-19 mitigation efforts. Another concern relating to a strictly student sample is the possibility that the college sample may not have the same levels of risk tolerance compared to a

defendant sample, although the rates of participants with prior legal system contact helps to alleviate this concern.

Beyond the sample characteristics, there are also concerns relating to the size of the sample. While similar studies had more experimental manipulations making a larger sample size necessary, the most comparable study to this thesis is Wilford, Zimmerman, et al. (2021), with a final sample of 704 individuals for their 2x2 factorial design. Using this previous study as a benchmark, even with only one manipulation, a sample size closer to 300 would have been ideal. A larger sample size would have allowed for a guilt status condition to be incorporated so the effects of COVID-19 mitigation efforts on factually-guilty defendants could be examined. While the actual nature between the efforts to reduce the spread of COVID-19 is not necessarily known and may not have a true effect, a larger sample size may have provided more statistical power to detect a significant difference, if that true difference even exists.

There is also the limitation relating to the timing of data collection. Although collecting data as the Omicron variant became less prevalent was purely coincidental, there are concerns on how this impacted the findings. Issues relating to the presented manipulations may have also contributed to the lack of statistically significant findings. These scenarios were created based on information from various sources and jurisdictions about COVID-19 mitigation strategies in carceral spaces, which may not fully reflect the actual day-to-day operations within a jail setting. Additionally, future research assessing mitigation efforts should include a measure of how influential each mitigation effort was to the defendant to better understand how well the manipulation was implemented.

Lastly, while the plea simulation allowed for a more immersive experience for participants, it does present unique challenges in terms of visually disseminating information (Hillen et al., 2013). For example, the visual cues in the video evidence animation may have led some individuals to see themselves as guilty despite the allegedly stolen property not being taken out of the store. The use of a plea simulation is a clear advantage over purely vignette studies; however, simulation technologies do require a tremendous amount of pilot testing to ensure all of the visual aspects are being portrayed in a way that matches up with the experimental conditions.

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CHAPTER 7

CONCLUSION

Plea bargaining continues to be the backbone of the criminal justice system even though it has been criticized for many of the associated prosecutorial practices and due process shortcuts (Caldwell, 2011; Hessick, 2021). Although the assumption is that rational, innocent individuals should not accept guilty pleas, the current plea bargaining system puts a great deal of pressure on individuals to accept a guilty plea in lieu of a trial. COVID-19 is an additional factor that defendants now have to consider when making a plea decision. The criminal justice system was far from immune from the hardships relating to the pandemic. This thesis investigated the intersection of plea bargaining, pretrial detention, and COVID-19 mitigation strategies in the later stage of the pandemic. Although the strategies used to curb the spread of COVID-19 did not statistically impact plea decision making, the effects of COVID-19 more generally were present in the results.

The pandemic put defendants housed in pretrial detention in a position where they had to choose between the harmful consequences of potentially contracting COVID-19 or the harmful consequences of a guilty plea. Although for now, COVID-19 seems to be looming from a greater distance, the residual effects of having experienced a pandemic may still shape how individuals view high risk environments such as a jail. The pandemic has thrust many of the glaring issues related to the criminal justice system and plea bargaining into the spotlight. It took a pandemic for public leaders to reckon with the fact that jails and correctional spaces pose a risk to the health and safety of those inside, especially when operating at or above capacity (Widra, 2022). Many prosecutors kind-

heartedly showed more leniency when negotiating pleas during the pandemic, which inadvertently increased the pressure to plead guilty when a defendant otherwise may have considered trial (Daftary-Kapur, 2021). COVID-19 pressured the criminal justice system to change how it operates in a relatively short period of time. Now that the criminal justice system has demonstrated that it is capable of change, it is time to address the documented issues specifically related to plea bargaining and the implementation of pretrial detention.

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APPENDIX A

DESCRIPTIVE STATISTICS AND BALANCE TEST

	Full Sample			Low Mitigation			High Mitigation		
Variable	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD
Age	22.55	20	6.81	22.28	20	5.51	22.90	20	8.20
Conservatism	45.05	50	22.97	44.70	50	23.46	45.49	50	22.45
Plea Knowledge	3.50	3	0.92	3.40	3	0.88	3.64	4	0.96
Trial Knowledge	3.50	3	0.80	3.44	3	0.79	3.57	4	0.81
Mandate Effectiveness	38.18	40	24.33	36.97	35	23.46	39.74	40	25.48
Female Identifying	0.73	-	0.44	0.73	-	0.45	0.73	-	0.44
White	0.45	-	0.5	0.42	-	0.50	0.49	-	0.5
Black	0.06	-	0.25	0.04	-	0.19	0.11	-	0.31
Indigenous	0.01	-	0.07	0	-	0	0.01	-	0.11
Asian	0.03	-	0.17	0.05	-	0.21	0.01	-	0.11
Hispanic	0.32	-	0.47	0.38	-	0.49	0.25	-	0.44
Mixed Race	0.11	-	0.32	0.11	-	0.32	0.12	-	0.33
Prior Legal System Experience	0.23	-	0.42	0.24	-	0.43	0.23	-	0.42
Mask Usage	0.86	-	0.35	0.84	-	0.36	0.87	-	0.34
Immunocompromised	0.10	-	0.30	0.08	-	0.27	0.13	-	0.33
Vaccination Status	0.78	-	0.42	0.85**	-	0.35	0.68**	-	0.47
Plea Acceptance	0.53	-	0.5	-	-	-	-	-	-
Post-Condition WTAP	58.39	65	33.88	-	-	-	-	-	-
Difference in WTAP	6.30	1	22.65	-	-	-	-	-	-
Observations			(n = 193)			(n = 109)			(n = 84)

*Note: **p < 0.01*
between low and high
mitigation conditions

APPENDIX B

DEPENDENT VARIABLE MAIN RESULTS

	Low Condition		High Condition		Student's *t*-test		
Dependent Variable	Mean	SD	Mean	SD	Difference	SE	*p*-value
Decision [2]	0.57	0.50	0.48	0.50	0.09	0.07	0.203
WTAP-Post Condition	60.56	32.76	55.58	35.27	4.98	4.91	0.313
Difference in WTAP	8.17	23.64	3.86	21.21	4.32	3.28	0.190

[2] Chi-Squared value of 1.63 (p = .201)

APPENDIX C

DEPENDENT VARIABLE REGRESSION ANALYSES

		Observations	180		Observations	180		Observations	180
		Pseudo R^2	0.363		R^2	0.431		R^2	0.076
	(1) Plea Acceptance			(2) Post-Condition WTAP			(3) Difference in WTAP Scores		
Regressor Variable	Odds Ratio	SE	*p* - value	Coefficient	SE	*p* - value	Coefficient	SE	*p* - value
Low Condition	2.39	0.99	0.035	6.09	3.97	0.127	5.35	3.46	0.124
Female	1.49	0.73	0.421	8.68	4.90	0.078	5.51	4.27	0.200
Hispanic	0.95	0.44	0.911	-6.70	4.57	0.144	-4.71	3.97	0.238
Other Race	.67	.34	0.431	-1.66	5.11	.745	2.22	4.44	0.618
Conservatism	1.01	0.01	0.102	0.06	0.09	0.518	0.03	0.08	0.686
Prior Legal Experience	0.24	0.12	0.004	-5.08	4.80	0.291	-3.83	4.22	0.365
Conviction Probability	1.08	0.01	0.000	0.81	0.08	0.000	0.16	0.07	0.021
COVID-19 Compliance	1.32	0.34	0.275	2.46	2.51	0.328	2.10	2.19	0.337

APPENDIX D

MAIN EFFECT DIAGNOSTICS

Outcomes by Time Period	Low Condition Mean	High Condition Mean	Difference
Plea Acceptance Before 2/15/2022	0.55	0.42	0.13
Plea Acceptance On/After 2/15/2022	0.61	0.6	0.01
Post Condition WTAP Before 2/15/2022	60.11	54.17	5.94
Post Condition WTAP On/After 2/15/2022	61.61	58.92	2.69
WTAP Difference Before 2/15/2022	8.62	3.59	5.03
WTAP Difference On/After 2/15/2022	7.15	4.48	2.67
COVID-19 Influence Level (Guilt) Before 2/15/2022	2.83	2.35	0.48
COVID-19 Influence Level (Guilt) On/After 2/15/2022	2.35	2.29	0.06

APPENDIX E

SURVEY SCRIPT

The simulation opens with a black background and the following white text on the screen:

At 12 PM

March 3rd

An incident occurs.
The participant's avatar is shown walking across the mall toward a sunglasses store. The avatar points to a pair of sunglasses in a locked cabinet. The salesclerk removes the glasses from the cabinet and hands them to the participant's avatar, who walks toward a mirror to examine them more closely.

The participant's avatar begins to receive a series of text messages: "Dude, where are you?," "You're gonna be late to the movie!!!," "Previews are starting!!"

Two weeks later... You are served a summons.
A document over an envelope then appears on the screen with some text that is clearly shown on it:

Summons to Appear in Court
After the document is presented, the participant's avatar will appear in Court before a judge and a prosecutor (the Courtroom backgrounds, as well as the prosecutor, defense attorney, and judge avatar will remain the same as in the hit-and-run scenario).

PROSECUTOR:

Good afternoon, my name is Mr. Clark and I will be prosecuting this case on behalf of the State, Your Honor. >>
DISTRICT COURT JUDGE:

Good afternoon. What is the nature of this case, Mr. Clark? >>
PROSECUTOR (talking to the district court judge):

{User} is accused of committing larceny occurring around 12PM on the 3rd day of March in the year 2021. >>
In accordance with state law, larceny occurs when one steals the property of another. >>
According to the information provided in the police report, the defendant requested a pair of sunglasses in a locked case from the salesclerk. >>
The salesclerk provided the sunglasses to the defendant who allegedly walked away with them in order to examine them in a mirror. >>
Once the salesclerk's attention was diverted to another customer, the defendant exited the store wearing the sunglasses. >>
The salesclerk positively identified the defendant as the person who walked out of the store wearing the missing pair of sunglasses. >>
There is also security footage provided by the owner of the shop where the theft occurred that shows the defendant walking toward the exit wearing the sunglasses. >>

Grainy security footage shows the inside of the store from above the salesclerk's perspective at a bird's eye view. The avatar walks into the view of the camera, approaches the clerk's desk, and turns around appearing to be talking to the salesclerk. The avatar obtains a pair of sunglasses from the salesclerk and puts it on after the clerk grabs the pair of glasses from under the desk. The avatar walks away from the desk to another table with a mirror. After their phone buzzes, they slide the glasses over their head, and to check their phone. The avatar then walks out beyond the view of the camera, disappearing from the security footage (with the glasses still atop their head).

PROSECUTOR:

The security footage shows {User} wearing the missing pair of designer sunglasses and heading toward the store exit. Theft of these sunglasses is a clear larceny, which, given the value of these glasses is considered a felony offense punishable by imprisonment. >>
We request a court date be set by the State as soon as it is possible. >>

JUDGE:

{User}, you are being charged with larceny. >>
You have the right to request the appointment of counsel if you cannot afford counsel; the right to not make a statement; and the right to a jury trial, judgment, and sentencing before a district judge. >>
At this time, you will be held until counsel has been assigned to you, which will occur within the next 48 hours. >>
It is so ordered. >>
The avatar is shown to be in a jail cell, with their eyes closed, arms crossed, and appears to be thinking to themselves.

AVATAR:

I know I remember the day Mr. Clark is talking about ... >>
The flashback sequence begins. Here, the simulation shows one sequence relating to the defendant's innocence.

Flashback

A hand sets a pair of sunglasses down on a table and it is shown that the avatar walks across the lobby of the mall, in the opposite direction they arrived from the beginning of the simulation (without glasses on their head).

Back in the jail cell:

AVATAR:

The salesclerk was helping another customer, but I left the sunglasses on the counter. Someone else must’ve swiped them afterward outside the camera’s frame. I know I'm innocent!>>

Still in the jail cell:
I think I'm supposed to meet with my attorney soon. I wonder what's going to happen...

The simulation shows the defense attorney in a room with a closed door behind him. With his greeting, it is implied that the participant is no longer in the jail cell and is in a private room.

DEFENSE ATTORNEY:

Hello, {User}. I am your defense attorney, Mr. Grant. Mr. Clark, the prosecutor on your case is interested in seeing whether this case could be resolved without a trial. >>
Based on the security camera footage and testimony from the salesclerk, Mr. Clark believes that he could win if this case goes to trial. >>
If this case does go to trial, Mr. Clark will be seeking the maximum penalty of 9 months in jail. >>
If you plead guilty now, saving the State the resources needed for a formal trial, Mr. Clark is prepared to recommend that the district court judge sentence you to 6 months of probation rather than 9 months in jail. >>

If you reject the plea offer, because of your prior conviction, the prosecutor will push to have you held in jail to await your trial—this is called pre-trial detention. Pre-trial detentions can span weeks, or even months.>>

So, I would like you to take some time to think about this offer. >>

The participant is redirected to Qualtrics to answer:

The prosecutor has offered you a plea deal (which was just presented to you by your defense attorney)—given that offer, what are the chances that you will plead guilty?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

The participant is redirected to the simulation.

DEFENSE ATTORNEY:

If you accept this plea offer, you will be asked to sign this form, which includes the recommendations for lower sentencing that I just described. >>

Again, if you reject this plea offer and take your case to trial, Mr. Clark will pursue the maximum jail sentence of 9 months and will push to have you detained to await your trial. >>

I also want you to be aware of the additional complications presented by the coronavirus.>>

Due to the pandemic, many court dates have been pushed back, which means, if you reject the plea, you will likely be held in jail for several weeks, or even months, longer than usual.>>

You should also consider the risk of coronavirus exposure while detained.>>

If in Low COVID Mitigation condition:

The COVID vaccination rate for this jail's inmates is well below the state average, and the correctional officers have an even lower vaccination rate.>>

The jail is not requiring or providing masks, and there is no screening process to detect and isolate symptomatic individuals.>>

Finally, the jail has not attempted to reduce capacity, meaning that you will most likely have to share a cell with another individual.>>

Given all of these factors, jail administrators may have little control over a coronavirus outbreak within the facility.>>

If in High COVID Mitigation condition:

The COVID vaccination rate for this jail's inmates is well above the state average, and the correctional officers have a vaccination rate that is slightly higher than the state average.>>

The jail is requiring and providing masks, and there is a screening process to detect and isolate symptomatic individuals.>>

Finally, the jail has reduced capacity, meaning that it is unlikely that you will have to share a cell with another individual.>>

Given all of these factors, jail administrators may be able control any coronavirus outbreaks within the facility.>>

If you take Mr. Clark's offer and plead guilty, you can go home in a day or two; in the meantime, you would be returned to your holding cell.>>

Ultimately, the decision to plead guilty or go to trial is up to you. >>

Your signature will indicate your agreement to plead guilty and forgo your right to a trial. >>

The defense attorney disappears from the screen and two buttons as well as text in the dialogue box roll out onto the screen. Awaiting the participant's response of clicking one of the two buttons, the participant will be redirected to one of two corresponding Qualtrics surveys depending on their response to this situation.

BUTTONS:

[Plead Guilty] / [Reject Offer]
DIALOGUE:

Plead guilty in exchange for a lower sentence (6 months probation)

Reject the offer and risk a more severe sentence if found guilty at trial (9 months in jail)

The participant must click one of the buttons and respond with Plead Guilty or Reject Offer in order to proceed in the study to the post-simulation survey questions.

APPENDIX F

IRB APPROVAL

ASU Knowledge Enterprise Development

EXEMPTION GRANTED

Shi Yan
WATTS: Criminology and Criminal Justice, School of
602/496-1514
shiyan@asu.edu

Dear Shi Yan:

On 10/27/2021 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Influence of COVID-19 Mitigation Strategies on Simulated Plea Decisions
Investigator:	Shi Yan
IRB ID:	STUDY00014864
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	• Recruitment Script Classroom.pdf, Category: Recruitment Materials; • Recruitment Script Online.pdf, Category: Recruitment Materials; • Supporting Documents 27-10-2021.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Yan_Forston_PleaSimu_Consent_v2.pdf, Category: Consent Form;

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 10/27/2021.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).