2023

The Effect of Crime Drama Viewing Habits and Technology on Potential Jurors

Erin Marie Cosenza
Walden University

Walden University

College of Psychology and Community Services

This is to certify that the doctoral dissertation by

Erin M. Cosenza

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Wayne Wallace, Committee Chairperson, Psychology Faculty
Dr. Jessica Hart, Committee Member, Psychology Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2023

Abstract

The Effect of Crime Drama Viewing Habits and Technology On Potential Jurors

by

Erin M. Cosenza

MS, Walden University, 2014

BS, Central Michigan University, 2004

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Forensic Psychology

Walden University

August 2023

Abstract

Proponents of the "CSI effect" argue that viewers of fictional crime drama television programs are inappropriately influenced and have heightened expectations for the presentation of forensic evidence during jury trials and therefore cause jurors to incorrectly weigh the importance of the evidence on the outcome of the trial. Television programs make measurable contributions to viewers' perceptions of reality and cultivate the way people learn about the world. Cultivation theory suggests that the ability to use critical thinking is inhibited in discerning truth from glamorized portrayals of evidence collection, analyses, and the timeframe with which criminal investigation storylines are concluded. The impact of technology was examined as popular culture has evolved and advancements in technology are utilized more frequently. This quantitative survey study examined if any of four predictor variables: (a) crime drama viewing habits, (b) personal technological use, (c) attitudes about technology in society, and (d) perceptions of how technology is depicted in crime dramas, affected juror expectations for the presentation of evidence at trial. Multiple regression analyses were used and according to the study results, perceptions of how technology is depicted within crime dramas was significant in predicting juror expectations. The findings generalize to the people (defense attorneys, prosecuting attorneys, judges) invested in nonbiased jury outcomes and will contribute to the need for more meaningful *voir dire* processes to avoid and eliminate potential jurors with biased opinions and misguided expectations for how criminal cases are presented during trial. Findings may be used for positive social change in the ways attorneys can transform the *voir dire* process and eliminate juror expectations.

The Effect of Crime Drama Viewing Habits and Technology On Potential Jurors

by

Erin M. Cosenza

MS, Walden University, 2014

BS, Central Michigan University, 2004

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Walden University

August 2023

Dedication

This dissertation is dedicated to my father who lost his battle with Alzheimer's at the beginning of my doctoral journey. His loss was an incredible hurdle to overcome, and one I'm not sure I've quite grieved entirely. He taught me what it meant to work hard, work long, and stay positive no matter the circumstance. You are missed immensely, Dad. I hope I've made you proud.

Acknowledgments

I gratefully acknowledge the support and guidance of the Walden University faculty members that played a pivotal role in my success, most particularly my dissertation chair, Dr. Wayne A. Wallace. Although we never had the pleasure of meeting face-to-face, without his thoughtful encouragement and careful supervision throughout a long journey with me, this dissertation never would have taken shape. I am also humbly grateful to Dr. Jessica Hart for her guidance with the methodology side of things, the statistical processes, and all the stuff nightmares are made of…she made the journey painless and offered so much insight. I am beyond blessed to have taken this journey with both of you and had your support along the way. I am honored to have spent time in your tutelage.

I'd like to acknowledge my family that have been in my cheering section from the beginning. I don't think they can remember a time I wasn't in school for something. HA! But, my biggest fan and supporter, my mother, has helped me make this all happen. Without her emotional support, financial support, and encouragement I would not have made this dream a reality. Thank you, mom, for all you contributed to the completion of this research. I finally did it!

And finally, to my three beautiful daughters that were all born during my doctoral journey. Gianna, Liliana, and Lucia, you reminded me every day how important it is to be a woman capable of BIG things and how to keep pushing on in the face of adversity. Thank you for enduring the moments with daddy that seemed to last forever while mommy had to 'finish one last thing' ALL THE TIME. You are my heart. I love you.

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

Introduction

For more than a decade, the television crime drama series *CSI* and its various spinoffs have inadvertently led jurors to have unrealistic expectations of forensic evidence and has changed the way players in the criminal justice system operate. The creation of crime and justice programs has widely permeated television media and brought upon what some suggest as a "CSI effect" that has influenced the public (Baskin & Sommers, 2010). At the height of its popularity, although fictional in nature, CSI storylines drew from real world situations and mimicked the process of crime scene evidence technicians to collect, preserve, test, and analyze all types of evidence. Fiction is intended to capture aspects of reality so that the viewers can relate to its content or connect to it emotionally. Consequently, if a program appears to be real, viewers may perceive it to be real.

In 2002, Robin Franzen was the first journalist to use the term "CSI effect" to describe the police officers, lawyers, and judges' complaints of jurors expecting more forensic science in criminal trials and their increasing worry that television crime dramas taint the jury pools with heightened expectations for how easily and conclusively criminal cases can be solved using forensic evidence (Wise, 2010). Proponents of the CSI effect argue that viewers of crime drama television shows, such as CSI, are inappropriately influenced, based on what they perceive to be real depictions of the criminal adjudication process, and make decisions in jury trials because attitudes and expectations for the use of scientific evidence in trial are heightened (Baskin & Sommers, 2010).

The CSI effect has since been described as a phenomenon in juror decision making based on crime drama viewership, whether forensic evidence is presented in courtroom trials, and whether that evidence causes jurors to incorrectly weigh its importance on the outcome of a verdict (Alldredge, 2015). Judges and prosecutors tend to believe that fictional shows such as CSI cause jurors to be out of touch with what is real and have a demand for scientific evidence that is conclusive in its ability to point to an offender. According to attorneys and judges, the effect manifests as jurors falsely believing they understand how investigators collect, analyze, and interpret crime scene evidence and expect highly technical and definitive evidence in determining guilt (VandenBos, 2007).

More recently, the role of other factors related to the CSI effect are being examined and include perceived realism (Maeder & Corbett, 2015), crime drama viewing frequency, and difference in forensic evidence on juror decision making (Hawkins & Scherr, 2017). Perceived realism is the concept that television viewers evaluate how accurately media represent the people and events as they would be in real life (Busselle, 2020). Television realism is considered defined by the accuracy of the messages or as an attitude influenced by the viewers individual characteristics (Rubin et al., 2004). Researchers have demonstrated that realism is determined by individuals' perceptions of the content viewed rather than the content itself, lending to the idea that people may use other criteria as a basis for evaluating accuracy and realism (Busselle, 2020).

Crime drama viewing frequency is an important aspect to consider since the proliferation of crime drama popularity has swiftly become consumed through television

and online streaming services. People seem to be fascinated with watching stories that trigger a person's most primal human instinct. The fear or gratification resulting from immersing ourselves into a dark and scary setting that focuses on a horrific event, only to be brought back through the light in an ending where justice has prevailed, may simulate a visceral reaction or thrill factor that keeps viewers watching again and again. The more frequently a viewer watches specific content on television may contribute to the idea that viewers may perceive what they see on television to be real.

However, with crime dramas and true crime increasing in popularity and the innovation of current and ground-breaking technologies to help tell those stories, the average person may be influenced by more than the dramatization that unfolds on screen. The efforts and technology used within those programs to further the story make for the discovery and investigation of a crime rather quick, definitive, and wrapped up in under an hour-long episode. The perceptions of how technology is depicted within crime drama programs is important to consider whether it impacts how a juror might make a trial decision.

In addition, the majority of Americans use their own electronic device on a daily basis, or are at least familiar with the capabilities of those devices. About 60% of those people living in urban or suburban areas say the internet has been essential to them, especially during the coronavirus pandemic (McClain et al., 2021). Americans were reshaped by the effects of the pandemic and technology helped bridge the physical gap as restrictions were implemented. Internet websites and smartphone applications allowed for people to use online religious services, engage in telehealth doctor appointments, work

remotely from home, or attend meetings or court hearings via Zoom calls. The shift in current culture to rely so much on technology could contribute to the reason a CSI effect still seems to exist. Viewers of crime shows experience our advancing technologies firsthand while simultaneously seeing those technologies used within the program storylines. The capabilities and swiftness of the technologies from the crime shows mimic how they are used in real life but lack in the ability to mimic real world time constraints or real-life lab backlog. Perhaps the CSI effect should more appropriately be called a Tech effect to consider the other factors that may contribute to the lasting effects of watching crime drama television programs.

This study sought to examine the relationship between crime drama television programs and juror decision making. Juror decision making has been influenced and jurors have expectations for what and how evidence is presented. Expectations have been increased and it is unclear as to the whole reason. This study used crime show viewing habits and an assessment of individual technology use to learn more about how people spend their time. In addition, people's perceptions of how technology use is depicted within crime dramas and their attitudes about how technology is currently used in our society was assessed.

This chapter highlights the background for the CSI effect phenomenon and why it has been blamed for how jurors make decisions. The drama series *CSI* inadvertently created a social problem for the people invested in criminal law and the legal processes associated with presenting a criminal case to a jury. The problem the effect has had, the nature of the study, and the purpose of the study are discussed. The research questions

developed as a result of the problem, the theoretical framework used to back the study, definitions for terms used throughout the research, assumptions and limitations of the study, and the significance of its completion are also discussed.

Background

The CSI effect has been described as the publics' perception of the near-infallibility of forensic science, which has evolved in response to forensic television shows. It is said that jurors who watch these types of programs may place a heavy emphasis on forensic science in a case and tend to believe that forensic evidence is 100% accurate and should be readily available in every criminal case. In conjunction with the demand for evidence is the juror's heightened trust for the testifying forensic examiner, which according to Griebel (2012), has created an irrebuttable presumption of guilt in the minds of a jury. Multiple efforts have been made in research to determine whether a CSI effect exists or has transformed into an effect complicated by several factors not otherwise previously tested.

A small amount of research has been conducted on the CSI effect compared to other criminal justice issues and findings have shown little to no support of its existence (Cole & Dioso-Villa, 2007; Hayes-Smith & Levett, 2011; Podlas, 2005; Podlas, 2006; Shelton, 2010; Shelton et al., 2006; Tyler, 2006). However, many researchers have found that the perception of its existence among the public and the players of the criminal justice system is the opposite (Alldredge, 2015; Cole & Dioso-Villa, 2009; Hayes-Smith & Levett, 2011; Shelton, 2010). The differences are attributed to the promotion of an effect by popular media (Cole & Dioso-Villa, 2009; Podlas, 2005; Shelton, 2010; Tyler,

2006) and the proliferation of advancements in science and technology to dramatize storylines. Despite the empirical findings that suggest no CSI effect exists, many people still believe there is a phenomenon influencing juror decision making.

While researchers are varied in their definitions of the CSI effect, the vast majority agree that the CSI effect is centered in the belief that frequent exposure to *CSI* and other related forensic science/law-focused television programs cause unrealistic expectations among jurors (Baskin & Sommers, 2010; Podlas, 2006; Shelton, 2010; Shelton et al., 2006; Tyler, 2006). The idea is that these expectations may lead to either wrongful acquittals when forensic evidence is absent, or wrongful convictions when large amounts of forensic evidence is present (Alldredge, 2015; Hayes-Smith & Levett, 2011; Schweitzer & Saks, 2007; Tyler, 2006). Baskin and Sommers (2010) conducted surveys of more than 1,200 registered voters in California and found that when viewers watched three or more hours of crime dramas per week, respondents rated scientific evidence as more reliable and were less predisposed to convict defendants in rape and murder hypothetical cases without scientific evidence than those who watched two hours or less. Of 1,027 jurors surveyed in Michigan, *Law & Order* (45%) and *CSI* (42%) were reported among the most frequently viewed law-related television programs (Shelton, 2008). The series CSI was the first of its kind to feature attractive and resourceful crime scene investigators and follow them in an hour-long journey to use highly sophisticated forensic evidence to identify perpetrators of a crime (Papke, 2007). Some of the characters appeared to have police authority, they carried service weapons, and conducted interviews. At its height, CSI glorified the role of a crime scene investigator and blurred

the lines as to: (a) how investigations are really conducted, (b) how evidence is found, collected, tested, and analyzed, and (c) how science and technology contributed to the storyline and its conclusion.

In a 2008 study by Shelton, the more frequently jurors watched law-related programs, the more likely they perceived the programs to be accurate depictions of real life. Shelton also determined that jurors who are frequent viewers of crime related content had higher expectations for all categories of evidence relevant to a particular crime and would demand some kind of scientific evidence before returning a guilty verdict. Of the 1,027 surveyed jurors, 46% said they expected to see some kind of scientific evidence in every criminal case, 22% expected DNA in every criminal case, and 36% expected there to be fingerprint evidence in every case.

An analysis of the impact of crime and law-related programs on potential jurors revealed findings of heightened juror expectations and demands for scientific evidence, but were unable to indicate a causative relationship between watching *CSI* and related programs with higher acquittal rates. A multivariate regression and path analysis examining this relationship more specifically, and controlling for individual juror characteristics, confirmed no causal relationship between jury verdict behavior and crime drama viewership, leaving researchers to suggest the CSI effect is not an effect at all but merely a myth (Shelton et al., 2011). Alldredge (2015) also included that regardless of whether the CSI effect exists, the community and the players in the criminal justice system believe that it does, and they try to take precautions to prevent it. Thus, increasing

the unnecessary use of resources when prosecution orders unneeded forensic tests to satisfy certain expectations of potential jurors for the presentation of forensic evidence.

Suppose crime drama viewership does not cause juries to acquit defendants in cases without scientific evidence. A lack of a correlation could be explained by a broader saturation of the variations in our popular culture elicited through the influence of rapid developments in science and technology and the use of fictional crime stories to dramatize those advances (Shelton et al., 2011; Shelton et al., 2006). Shelton et al. (2009) termed this idea a "tech effect", to describe a cultural shift in thinking about increased capabilities in technology and science.

Problem Statement

The problem addressed in this study involved the effect of crime show storylines that include dramatizations of technology on juror decision making behaviors. Gerbner et al. (1986) proposed that much of what people learn about everyday information and the world around them is cultivated through socialization and television entertainment. Television programs make measurable contributions to viewers' perceptions of reality that relate directly to tangible life circumstances (Gerbner et al., 1986) and what is learned about the criminal investigation and adjudication processes. Crime show viewing research has been shown to affect people's perceptions of the criminal justice system, specifically of jurors' expectations for forensic evidence at trial (Hayes-Smith & Levett, 2011). In addition, the speed, frequency, and ease with which crime drama actors use various internet applications and technologies to conduct their investigations challenges the true nature of the process and it perhaps implies an unrealistic notion that scientific

evidence should be readily available in all trial cases. The idea that crimes can be solved, evidence tested and analyzed, and defendants prosecuted within an hour-long television program misconstrues the length of time the actual processes take to occur.

Crime scene technicians have a lengthy and meticulous job to do in relation to what it is the scene requires. At crime scenes, technicians can be tasked with a number of things that include taking photographs of the scene and the evidence, making sketches of the scene to match evidence to its proper locations, reconstructing the crime, collecting evidence, cataloging and preserving evidence for transfer, and determining next steps for the investigation to follow (Bureau of Labor Statistics, 2022). Comments reported by a 26-year veteran of the police force in River Forest, Illinois, according to the Purdue University Global (2021), mention a discrepancy with what is seen in the television shows and the portrayal of crime scene technicians. The portrayals are not reflections of reality and often misconstrue the job details. The characters are able to complete a scene, find and collect all the evidence, and talk to all the necessary people in under an hour for television. However, the actual process is time-consuming, methodical, and detail-driven, taking at minimum several hours to complete.

The *CSI* franchise was never intended to be a how-to for crime scene investigators or detectives. The television drama set out to be an entertaining avenue for viewers attracted to true crime to get lost in a fictional story, not a means to inform the general public about crime scene investigations and all that entails. Suppose the television series enhanced curiosity in understanding how the criminal investigation process works and the roles each person plays in that process. Deductive reasoning would imply that what is

believed to be real on screen must be accurate of real life. So, if the viewer believes the roles and actions of the characters are true to life, then the process by which they get to a conclusion must also be true to life. Hence, the CSI effect was introduced to explain away certain expectations potential jurors may have as a jury member as a result of being a *CSI* viewer.

Previous studies have examined the existence of a CSI effect and its proclivity to be blamed for increased knowledge and juror expectations in presenting scientific evidence (Cole & Dioso-Villa, 2009; Shelton et al., 2006, 2011). Nevertheless, as popular culture evolves and technological advancements are showcased throughout various fictional television programs, as well as utilized in our daily lives, ordinary people think they know more about science and technology from what is learned in the media (Shelton et al., 2011) and how it should be applied to real-life situations.

Nature of the Study

The nature of this study utilized a quantitative survey approach. Quantitative research is imperative in investigating observable phenomena, whereby statistical techniques and analysis can help explain relationships between variables (Bhawna & Gobind, 2015). A correlational research design helped determine which, if any, independent variables were statistically correlated to the dependent variable. This study examined the relationship several independent variables: crime drama viewing habits, personal technological use, attitudes about the advancement of technologies used in society, and perceptions of how technology is depicted in fictional television programs had on the dependent variable for expectations for scientific evidence in trial among

prospective jurors. This research inquiry method was important to use to understand how juror decision-making behavior was affected by specific variables.

Purpose of the Study

This study sought to examine the relationship between crime drama television programs and juror decision-making when considering crime show viewing habits, perceptions of technology use depicted within those programs, personal technology use, and attitudes about how technology is used in our society. It was the aim of this study to determine if several variables by themselves or in conjunction with one another contribute to an effect from being a crime drama viewer. Questions that pertain to an individual's everyday use of a personal electronic device were developed to help understand the averages of time spent daily using a device. The level of agreeableness to statements about forensic science and evidence were assessed using the Forensic Evidence Evaluation Bias Scale (Smith, 2012) and help to determine whether people have pro-prosecution or pro-defense biases. There are questions regarding how people perceive the use of technology that is used in fictional television programs and questions about their attitudes about advancements in science that have affected popular culture. These factors are used to more appropriately assess the influence of a tech effect on juror expectations and their propensity to lean toward a conviction or acquittal.

Research Questions

In this study, I examined the relationship between many factors on expectations for scientific evidence presented in jury trials. This research was organized around the following research questions and associated null hypotheses:

Research Question 1: Are expectations (EXP) for scientific evidence in trials positively influenced by crime drama viewing habits (CVH) among potential jurors?

$H_0$1: EXP are not positively influenced by CVH among potential jurors.

H_a1: EXP are positively influenced by CVH among potential jurors.

Research Question 2**:** Are EXP for scientific evidence in trials positively influenced by personal technological use (PTU) among potential jurors?

$H_0$2: EXP are not positively influenced by PTU among potential jurors.

H_a2: EXP are positively influenced by PTU among potential jurors.

Research Question 3: Are EXP for scientific evidence in trials positively influenced by attitudes (ATT) about the advancement of technology in society among potential jurors?

$H_0$3: EXP for scientific evidence in trials are not positively influenced by ATT among potential jurors.

H_a3: EXP for scientific evidence in trials are positively influenced by ATT among potential jurors.

Research Question 4: Are EXP for scientific evidence in trials positively influenced by perceptions (PER) about how technology is depicted in fictional television programs among potential jurors?

H_0 4: EXP for scientific evidence in trials are not positively influenced by PER among potential jurors.

H_a4: EXP for scientific evidence in trials are positively influenced by PER among potential jurors.

Theoretical Framework

Cultivation theory proposes that television's long-term effects on its viewers can shape people's moral values and general beliefs about the world (Mosharafa, 2015). Knowledge is often acquired not only from our own personal experiences but also from a variety of stories, specifically from mainstream media. Television has become an essential source of information about the world, life, people, society, and authority whereby the accumulation of television exposure and what the viewer sees on screen becomes the basis for the various cultural standards, values, beliefs, and assumptions about reality (Mosharafa, 2015). Mosharafa (2015) stated that television portrays hidden and pervasive values, rules, and morals for what is right, what is important, and what is appropriate in social discourse in an invisible manner, cultivating a broad and somewhat skewed worldview. Cultivating information through mainstream media emphasizes the disconnect between an individual's ability to differentiate between Hollywood drama and what is real. To our own detriment, media is sometimes believed more than our critical thinking.

Definitions

The following list of terms provides relevant definitions pertaining to this research. Other definitions may exist but may not represent the intended use in this study.

Criminal adjudication process: This refers to the legal process of resolving a dispute, specifically by which the court pronounces a judgment to the parties in a criminal case (Dressler & Michaels, 2006).

Crime drama viewership: This refers to the frequency which respondents view crime dramas and crime reality shows such as CSI (Brown, Lauricella, Douai, & Zaidi, 2012).

Critical thinking: This refers to a form of problem-focused thinking in which the individual tests a possible solution for errors or drawbacks (American Psychological Association, n.d.).

CSI effect: This term is used to describe the phenomenon that the crime drama television show *CSI* instills in its viewers unreasonable expectations about the commonality of forensic evidence presented in jury trials and its impact on juror decision-making (Podlas, 2006).

Cultivation theory: This theory refers to the notion that television media has the ability to shape people's moral values and general beliefs about society through repeated exposure and based on what is depicted on screen (Mosharafa, 2015).

Decision making: This term refers to the cognitive process of choosing between two or more alternatives that result in selecting of a belief or course of action (American Psychological Association, n.d.).

Deductive reasoning: This phrase refers to the ability for an individual to draw a conclusion about something based on premises generally believed to be true (American Psychological Association, n.d.).

Juror: This term describes any person serving on a jury (Merriam-Webster, n.d.).

Personal technology use: This phrase refers to the individual use of electronic or digital tools to expand the human ability to perform tasks, such as a personal computer,

smartphone/iPhone, tablet/iPad, kindle, video camera, home security systems, etc. (Woodcock, Middleton, & Nortcliffe, 2012).

Scientific evidence/Forensic evidence: This is used to describe evidence or objects that may be admitted into court for judges and juries to consider when hearing a case that can come from varied sources such as genetic material, trace chemicals, or fingerprints (National Institute of Justice, 2015).

Tech effect: This term refers to the impact and influence that science and advanced technology have over various aspects of our society and culture spread about using media as an information platform (Lobo & Schnobrich-Davis, 2015).

Trial: This term is used to describe a formal examination of the evidence presented before a judge and jury in order to decide guilt in a case of criminal proceeding (Merriam-Webster, n.d.).

Assumptions

The primary assumption was that all participants would answer survey questions honestly and would complete the survey. It was assumed that participants would meet the requirements to participate in the study as they would satisfy jury duty (i.e., at least 18 years old, English speaking, a U.S. citizen). It was also assumed that the study would add to the existing literature on this topic and would be of value to interested parties during trial processes.

Limitations

There are limitations to this study that could have an impact on the findings. One limitation of the study was in the inability for this researcher to control the environment

where participants would answer questions. Respondents may have had different interpretations of the questions depending on particular times and the conditions occurring during that time. Another limitation was in the absence of individual experience. It was thought that targeting potential jurors could reach a more widespread demographic than using individual's that had already sat in on a jury. Actual jurors may have been biased because of their specific experience or interaction with other jurors and their involvement in other cases. Quantitative research is not focused on the human experience attached to a phenomenon, instead, this research was limited to the interpretations of closed-ended questions. In retrospect, another limitation to the study may have been that participants were not asked to answer whether they had served as a juror before, thus denying the results to be compared between jurors who have already served on a trial and those that have not yet. This survey was also distributed online and through a popular social media platform, limiting the population sample to respondents with internet access.

Significance

According to Brickell (2008) the studies conducted on the CSI effect have been unable to quantifiably link jurors' television viewing habits to an increased propensity to acquit or convict a defendant with or without heightened expectations for scientific evidence. Brickell (2008) postulated that a tech effect has caused jurors to demand that both the prosecuting and defense attorneys present more scientific evidence during the trial, but this has yet to be supported. Shelton et al. (2011) suggested that a technology revolution has happened over the last thirty years that provides the quick transmission

and wide availability of information to not only scientists but to the public as well that has cultivated the way the layperson perceives scientific evidence at trial. Davis et al., (2010) suggested that additional quantitative research is needed to address whether knowledge and expectations of jurors are a result of the digital world we live in today or if the CSI effect truly does exist. Shelton et al. (2009) stated that the broader changes in popular culture brought about by rapid scientific and technological advances has disseminated information to its viewers. Subsequently, indicating a need to triangulate the potential interactive effects of a CSI effect with a tech effect in the context of 'mass mediated' effects. While some research about a CSI effect indicates that jurors are increasingly expecting scientific evidence to be presented during trial (Hayes-Smith & Levett, 2011; Shelton et al., 2006; Shelton et al., 2011), less is known about how those expectations influence decisions to convict or acquit. More recently, Klentz et al. (2020) found some support for a CSI effect among its high viewers of crime drama television programs when no DNA evidence and DNA innocent conditions was presented in mock trials, although the condition with incriminating DNA evidence found little support for such an effect.

The CSI effect alone has not been determined to explain this phenomenon so it is imperative to further explore a possible tech effect. Many people have grown accustomed to using technologies to conduct personal research inquiries, communicate with friends and family, manage and foster human relationships, complete higher learning degrees that were otherwise unobtainable, implement program strategies for daily business functioning, and view television programs that depict modern technologies as glorified

versions of what they are actually capable of (Waters & Hanaford-Agor, 2012). The term tech effect would be used to encompass the influence daily digital experiences have on individuals' attitudes about the criminal adjudication process.

An understanding about jurors' heightened expectations for evidence, their perceptions of modern technology, and whether a so-called 'tech effect' influences jurors' propensity to convict or acquit could indicate a need for changes in attorney trial strategies and possibly how justice is or is not administered. Information obtained as a result of this study can be applied to the voir dire process for juror selection as well as in prosecuting and defense efforts to deselect jurors who may have unrealistic perceptions of the criminal adjudication process based on modern technology depicted in crime drama television and knowledge about how technologies are used in society. It was the intention of this researcher to add to the existing literature about prospective juror behavior that resulted from the combined effects of fictional crime drama television viewing, personal technology use, and knowledge about available technologies used in society. To create an opportunity for positive social change among court participants is important for the future of juror expectations and jury trial as well as for communities interested in contributing to how justice is served.

Summary

It was imperative to understand more thoroughly the phenomenon within juror decision making and juror expectations for scientific evidence presented in trials. With the proliferation of modern-day technology, accessibility to that technology, and the way it has become an everyday habit to check personal electronic devices, it may be possible

to shed light on the idea that crime drama television programs illicit an unrealistic expectation for evidence because of their depictions of technology use in evidence collection and lab analyses. Chapter 2 will focus on the previous literature surrounding the CSI effect phenomenon and the trend toward another explanation for juror decision making behavior.

Chapter 2: Literature Review

Introduction

For 15 years, from 2000 to 2015, the hit drama series *CSI: Crime Scene Investigation* saturated primetime television. With its long run and popularity, several spinoffs that included *CSI: NY, CSI: Miami,* and *CSI: Cyber* were created to satisfy a public need to understand justice, solve puzzles and think through intricate situations. The television series, a fictional crime drama about a team of forensic investigators trained to solve criminal cases, was one of the first of its kind on television and helped make DNA a household term to millions of its fans in over 170 countries (CBS, 2017). The importance of forensic evidence and how elements of the investigatory process helped solve crimes captured the interest of viewers across the globe and may have unintentionally misinformed the public that solving criminal cases is as cut and dry as it is portrayed on screen. This study examined the influence that crime drama television programs have on juror decision making behaviors.

Through the propagation of numerous fictional crime dramas such as *CSI, Law & Order, Criminal Minds, NCIS,* and *Bones,* the mass media has presented a haphazard education about forensic investigation and the criminal adjudication process (Ramsland, 2009). Although these popular television series launched impressive popularity among its viewers, audiences have formed inaccurate ideas and expectations about solving crimes through the sophisticated stories of victim tragedies, forensic evidence collection and analysis, and the characters' glorified abilities to confirm their mastery in the tools of determining the truth. (Campbell, 2009; Ramsland, 2009).

Over the last 30 years, forensic science has increasingly become an integral part of the criminal justice system through its ability to provide scientifically based information from the analysis of physical evidence (National Institute of Justice, 2017). Browning (2015) stated that with numerous technological advances in forensic science, the acts of catching and convicting perpetrators are much more difficult and complicated than television portrays it. However, as of 2022, nine advances in forensic science have made it difficult for modern day criminals to evade detection by forensic scientists. Consequently, some of these new technologies have made it possible for departments to solve cold cases or test evidence that previously could not provide accurate results. DNA phenotyping, utilizing biosensors for fingerprint analysis, immunochromatography, the ability to geolocate a suspect or victim using stable isotopes of water, forensic palynology, blockchain technology to collect, analyze, and evaluate data collected from the 'Cloud', digital vehicle forensics, social network forensics, drone forensics, and 3D technology to determine physical fit of evidence that needs to be pieced back together are just the most recent advancements used to help solve crimes (Gustafson, 2022).

The ease and swiftness of evidence collection and analyses may be misrepresented and grossly exaggerated. Although advances in technology and science have paved the way to solving more crimes, the analysts tasked with implementing those technologies require training, time to test and perfect the analyses, and depend on department resources to fund the purchase of the equipment. Social science research over the last several years has shed light onto the ways human beings gather information from television to make decisions regarding criminal court cases. Consequently, the media

created the term "CSI-effect" to describe the potential impact that *CSI*-like fictional television programs have on jurors in the U.S. criminal justice system (Davis et al., 2010).

The CSI-effect, as examined by previous research studies, is a phenomenon in juror decision making that is loosely based on the public's viewing habits of fictional crime drama programs and heightened expectations for evidence in trial, and its propensity to be blamed for increased knowledge and juror expectations in the presentation of scientific evidence (Cole & Dioso-Villa, 2009; Shelton et al., 2006; Shelton et al., 2011). According to Gerbner et al. (1986), and cultivation theory, much of what people learn about everyday information and the world around them is cultivated through socialization and television entertainment. Hayes-Smith and Levett (2011) noted that their crime show viewing research has been shown to affect peoples' perceptions of the criminal adjudication process, specifically of jurors' expectations for forensic evidence at trial. Because people's perceptions are inappropriately skewed by the content of mass media, it is incumbent upon the work of relevant research to devise ways to mitigate the false assumptions by the very people chosen to make decisions during jury trials.

While it was once an issue in courtrooms to interpret scientific evidence to laypeople on a jury, it is now an issue to combat the layperson's unrealistic ideas about how evidence plays a role in an investigation, and ultimately the ways with which it can aid in the conviction of a guilty defendant or prove their innocence. Judge Donald E. Shelton of Ann Arbor, Michigan recalled a case in which the jury acquitted a defendant

because crime scene investigators failed to dust the lawn for fingerprints (Aisner, 2007; Ramsland, 2009). In addition, Aisner (2007) stated that one particular study of surveyed jurors found that 46% of participants had expected to see scientific evidence and half of them expected DNA in every case (Ramsland, 2009). Although increased jury awareness has made the handling of evidence and investigatory process and practices more accountable, many police departments are ill-equipped with the glorified high-tech devices depicted on crime show dramas, as well as the experts that are fictitiously characterized through glamorized portrayals.

Additionally, developments in science and technology continue to advance and create innovative ways of thinking. Crime and courtroom dramas are often packed with high-tech, state-of-the-art equipment and forensic testing capabilities that many real-life labs may not be funded with. The speed at which evidence is collected, processed, analyzed, and effectively matched to a suspect is exaggerated within fictional crime dramas. According to the National Institute of Justice (2015), ever-increasing volumes of evidence are slowing the pace of investigations and criminal trials with many crime laboratories unable to secure the resources needed to resolve the backlog problem due to the fiscal challenges faced by most U.S. government agencies. The ease with which crime drama actors are shown to use various internet applications and be familiar with multiple technologies to conduct their investigations deflects from the reality that crime lab scientists often must study and verify computerized comparisons to determine whether evidence matches or they may not always be able to deliver the solution to a crime. Forensic services are measured in terms of turn-around time, but a backlog of

uncompleted cases significantly hampers response time (Wickenheiser, 2021). As popular culture evolves and technological advancements are utilized throughout various fictional television programs, as well as in our daily lives, ordinary people think they know more about science and technology from what is learned in the media (Shelton et al., 2011).

CSI's use of forensic themed science, since its debut more than seventeen years ago, introduced a trend in crime drama television programs toward more realistic representations of technology and science in policing (Deutsch & Cavender, 2008); its ability to have created the illusion that suggests the forensic science and technology used within the dramatized episodes are valid and can be used to solve crimes is imperative to understanding whether concern should be placed on the information and knowledge jurors use and depend on to decide a case. Paullet et al, (2013) posited that supporters of the CSI effect tend to acquit suspects when forensic evidence is not as prevalent as what they see depicted in television crime dramas. Paullet et al. claimed however, that proponents of a newer tech effect argue that it isn't just the viewing of crime dramas that influences decision making behavior, but rather a heightened expectation for technological and digital scientific evidence because the use of technology is so prevalent and culturally acceptable.

A multitude of studies have been conducted involving the CSI effect and its steady progression toward a technology effect on juror decision making (Podlas, 2006, 2009; Schweitzer & Saks, 2007; Shelton et al., 2006, 2009; Cole & Dioso-Villa, 2009; Baskin & Sommers, 2010; Davis et al., 2010; Davis et al., 2011; Mancini, 2011; Hayes-

Smith & Levett, 2011; Lobo & Schnobrich-Davis, 2015). The various results have been open to multiple interpretations, different sampling strategies were used in different approaches to studying similar ideas, and even some have been criticized for containing flaws (Lobo & Schnobrich-Davis, 2015). This review begins with the relevant theories attributed to the CSI effect phenomenon and will continue by discussing the effect it has elicited on juror decision making behaviors, and how it can or has impacted trial outcomes. This literature review will include comparisons of former studies and the gaps associated with each study that have ultimately led to the need of this study. Furthermore, this literature review will investigate the change in research from the CSI effect to a broader effect brought on by the depiction of technology in current media and whether jurors are influenced by the content of television programs, their own personal technological use, and the attitudes and perceptions of how technology is used in society on making decisions in trial.

Literature Search Strategy

This literature review began with a search of the library databases within the Walden University Library in both psychological and criminal justice databases. A computerized search was conducted to identify articles pertaining to the concepts of the CSI effect, tech effect, juror decision making, juror expectations, juror misconceptions, media influence, cultivation theory, and perceived realism, and for material that intersected the domains of forensic psychology and influences of modern technology. Searches were set to recognize studies from the years 2000 to present for research

relevant to the debut of the television series, *CSI*, and the effect it may have had on its viewers.

The review was conducted via tertiary Libraries with electronic EBSCO databases, mostly utilizing psychological databases including psycINFO, psycARTICLES, ProQuest, Google Scholar, Psychology: SAGE Full-Text, SocINDEX, and ERIC. Criminal justice databases included Lexis-Nexis Academic, Legal Trac, Criminal Justice Periodicals, Oxford Bibliographies Online: Criminology, SocINDEX, ProQuest Central, and Google Scholar.

The phrase *CSI effect* produced 936 results, although upon closer examination it was evident that only approximately 32 out of the first 300 results were relevant to the subject matter. Of those 32 results, 14 were newspaper articles and the remaining 18 were peer reviewed journal articles. Combining terms such as *CSI effect* AND *juror decision making* with Boolean operators within the search parameters produced an underwhelming 13 peer reviewed journal articles.

The phrase *tech effect* on its own produced 797 results. However, only four of those results yielded relevant material to the influence of technology on juror decision making. When combining the terms *tech effect* AND *juror decision making*, the same four peer reviewed journal articles appeared, and were included in the previous search for *CSI effect* AND *juror decision making.*

Multiple combinations of search terms were conducted in different library databases. In ProQuest Central Criminal Justice database, the search terms *juror decision making* AND *technology influence* returned three results and *juror misconceptions*

returned 17 results, however none of the results were indicative of relevant material to this subject matter. In PsycINFO, using Boolean search parameters, *modern technology* AND *juror decision making* returned zero results, *cultivation theory* AND *CSI effect* returned six results, only five that were applicable, and *perceived realism* returned four results to which only two were relevant.

A keyword search of the phrase *CSI effect on jurors* in Google Scholar produces 9,240 results with Mann (2005) listed as the first response. Among the most commonly cited articles in the literature on the subject of *CSI effect on jurors* and *tech effect* included Shelton, Kim, and Barak (2006; 2011), Schweitzer and Saks (2007), and Cole and Dioso-Villa (2007; 2009).

Theoretical Foundation

Cultivation theory aims to explain the dynamics of repeated exposure and its effects on peoples' perceptions of reality. Gerbner et al. (1986) proposed that the repeated exposure to patterns in television settings, casting, social typing, actions, and related outcomes form a world with which many viewers cultivate an understanding about what is real and what is not. Cultivation analysis describes how research examines the way television viewing elicits conceptions among its viewers about the world and how they apply it to their social realities (Hayes-Smith & Levett, 2011). With regard to the CSI effect, it is believed that the layperson learns much about the law, legal system, and about forensics from what they see in television programs and has thus cultivated an unrealistic understanding of how the criminal adjudication process works in conjunction with making decisions on the behalf of defendants during trial.

There are three components that make up cultivation as a sociocultural theory, according to Shrum (2017). These components are intricately intertwined and include media institutions, message production, and the message effects on viewers that makes the storytelling function of television incredibly powerful. Shrum (2017) suggested that the consistency in television messages coupled with the high frequency at which these messages are viewed, gives television the power to shape individual and societal values and make it a dominating force in our current culture.

Shah et al. (2020) examined whether exposure to disaster-related information through television programs induced fear of victimization in audiences in Pakistan. The study was driven by cultivation theory and the idea that the frequent and repeated exposure to media coverage on disasters would heighten fear among its viewers, thus inducing altruistic behaviors of individuals. Shah et al. found that exposure to media and people's perception of media have significant positive relationships with individual's fear of victimization and fear of victimization significantly boosted the altruistic behaviors of individuals. The results align with previous literature that frequent exposure to media coverage contributes to changes in attitudes and can shape altruistic behaviors.

Literature Review

The CSI Effect

There is limited empirical research surrounding what has been coined the CSI effect. The operational definition of this term has undergone considerable debate, although according to Davis et al. (2010, p155) Podlas narrowed the views to explain the effect through three different perspectives: (a) television crime dramas like *CSI* create

"unreasonable expectations on the part of jurors, making it more difficult for prosecutors to obtain conviction," (b) television crime dramas like *CSI* increase the standard of forensic evidence to "virtual infallibility," and (c) television crime dramas like *CSI* have created heightened awareness and interest in forensic science among high school and college students.

Previous researchers suggested that the first definition is primarily what legal professionals believe. Podlas (2006) surveyed 42 assistant district attorneys from the New York area to help identify cases with which they personally had seen a CSI effect. Twenty-eight of the 42 distributed surveys were returned and 20 of those were reviewed, including the case files for witness lists, jury questions, jury deliberations, charges, charge requests, and other forensic evidence for each individual court case. Although the attorneys detailed their accounts of each case and claimed they experienced a CSI effect, Podlas asserted that recollections were lacking since nineteen of the twenty reviewed cases resulted in a conviction. An increase in acquittal rates is what was originally thought to be brought on by a so-called CSI effect, therefore cases where convictions were rendered leans toward disproval of an underlying effect caused by the proliferation of the popular television series *CSI*.

Tyler (2006) suggested that while it is alleged that jurors acquit more often as a result of a CSI effect, it could be equally plausible to claim that viewers of CSI have the opposite impact on jurors. In a review of previous studies that examined the existence of a CSI effect, Tyler proposed that jurors who regularly see the high-tech, high-quality forensic evidence depicted within the storylines of *CSI*, may in fact raise their standards

in real trials where evidence is generally more flawed and involves some level of uncertainty. Furthermore, it was recognized that people generally have the inability to discount fictional dramatizations of crime when making legal decisions. In circumstances when jurors are motivated to identify and punish a wrongdoer, the value of scientific evidence is exaggerated, people may "engage in an active process of distortion to create justifications for decisions that they want to make," and CSI viewing may encourage people to make decisions based on that increased legitimacy for scientific evidence (Tyler, 2006, p. 1084). So, given there is no direct research supporting the existence of an actual effect brought upon by the viewership of *CSI*, it could be argued that there is no CSI effect at all, but rather an illustration of the problems that arise from anecdotal accounts by justice system professionals to mitigate undesirable outcomes in trial. In conclusion, the effect does exist, but it may not be a CSI effect.

Additionally, Stinson et al. (2007) surveyed 36 police officers and 127 forensic investigators and found that the vast majority believed that television programs that depict forensic science practices in their storylines influence the public's perception of police work, investigations, court processes, and the legal system overall Podlas (2009) asserted that the propagation of visual imagery depicted throughout popular media has contributed to a shift in cognition, where the social stories people use to draw conclusions have skewed opinions about the justice system.

Schweitzer and Saks (2007) tested two hypotheses about whether television programs burden the prosecution by creating greater expectations about forensic science and support the idea behind a CSI effect, and whether television programs burden the

defense by creating exaggerated confidence in investigatory capabilities and forensic science. Forty-eight university students 18 years or older and eligible to serve on a jury were presented with a simulated transcript of a criminal trial that used one piece of inculpatory evidence. Students completed questionnaires that assessed opinions and perceptions of the forensic science used and of the trial as a whole as well as the frequency with which they watch crime drama television programs like *CSI*. The researchers found that regular viewers expect better science than what is presented in court, moreover that *CSI* tends to lead viewers to have unrealistic expectations for high tech science.

The lines between reality and fiction have begun to blur when television programs use real crime stories to dramatize content (Shelton et al., 2006). Mainstream television media has shifted toward the focus of current science and technology within crime drama programs to solve crimes and fictionalize how the criminal justice system is portrayed. The Honorable Judge Donald E. Shelton et al. (2006) determined expectations and demands for scientific evidence and the television viewing habits of 1,000 jurors prior to participation in trial processes in an effort to find any evidence to support the belief that heightened juror expectations is a condition for conviction as its related to watching crime and law-related programs. Questionnaires were administered that asked about seven types of cases including murder, physical assault, rape, breaking and entering, theft, and gun violence, and about the evidence jurors expected to see with respect to each category including eyewitness testimony from the victim, testimony from another

witness, circumstantial evidence, scientific evidence, DNA evidence, fingerprint evidence, and ballistics or other firearm laboratory evidence.

Shelton et al. (2006) found there was insignificant evidence to suggest that CSI viewers were more or less likely to acquit a defendant when no forensic evidence was available, and the more frequently jurors watched a program the more accurate they perceived the program to be. Furthermore, CSI viewers tended to have higher expectations for evidence than their non-viewing counterparts but this did not equate to a relevant change in acquittal rates. While Shelton et al. and the results of the study did not reveal a so-called CSI effect, the researchers suggested that a broader tech effect may be at play that could account for the saturation of science, advanced technology, and information within crime drama storylines that dramatizes the speed and accuracy with which evidence is obtained, tested, analyzed, and presented in court.

As research progressed, Cole and Dioso-Villa (2009) sought to detect whether a CSI effect exists through the analyzation of actual acquittal rates in criminal trials in contrast to what previous social science studies have done in administering surveys or conducting mock jury trials. The media may have an influence and shape jurors' opinions about the law and crime in ways that could potentially affect jury deliberations and verdicts, although Cole and Dioso-Villa found no change in acquittal rates correlated to the arrival of *CSI* on television.

Baskin and Sommers (2010) studied a sample of 1,201 registered voters that were instructed to use a reverse-coded four-point scale to rate several types of evidence that included police testimony, victims' statements, medical expert testimony, eyewitness

testimony, DNA, and fingerprints. What the researchers found suggested that respondents perceive the science-based evidence (i.e., DNA and fingerprints) to be more reliable than any other type of testimony. Additionally, the study confirmed that the hours spent watching crime shows and assessments of scientific evidence reliability were related more than that of the other various types of testimonial evidence (Baskin & Sommers, 2010). However, attitudes about scientific evidence did not mediate the relationship between crime show viewing habits and juror inclination to convict concerning the need for evidence to be presented during trial.

Baskin and Sommers' (2010) study demonstrated consistent results with previous research that a CSI effect may be responsible for juror decision making because of a predisposed notion that forensic evidence is an infallible science (Davis et al. 2010; Podlas, 2006; Schweitzer & Saks, 2007; Shelton et al. 2006, 2011) but it has been difficult for researchers to confirm a CSI effect truly exists on its own, or if there are other contributing factors and processes that could potentially help explain the public's attitudes and expectations regarding the use of scientific evidence in criminal trials. It is believed that there may be several mass mediated effects that work in conjunction with each other to fuel what the public perceives to be real, including a growing "tech effect" (technology effect) that has been termed to describe heightened juror expectations due to the shift in cultural norms toward digital and technological advancements (Schweitzer & Saks, 2007; Shelton et al. 2006, 2011).

Mancini (2011) investigated further into the CSI effect and whether a need for cognition (NC) was a moderator of its relationship to juror decision making. NC was

defined as a "personality characteristic reflected by one's tendency to engage in and enjoy effortful thought" (Mancini, 2011, p. 158). According to Mancini, individuals high in NC will be more likely to organize, elaborate on, and evaluate information with which they are presented, and can be influential in jurors' perceptions of scientific evidence shown in trial. The 217 undergraduate mock jurors that participated in viewing actual footage from a criminal trial and completed measures of verdict preference, verdict reasons, forensic television viewership and realism, and NC, yielded results that insignificantly predicted verdicts. High-NC participants were more sensitive to evidence strength and reported less satisfaction with pro-prosecution scientific evidence in addition to being more likely to identify potential mishandlings of evidence as a verdict reason that indicated a higher standard of certainty required for a guilty verdict. Although the results suggested that heavy viewership predicted dissatisfaction with pro-prosecution scientific evidence, the percentage certainty required to find guilt was insufficient for verdict prediction. Mancini's results partially replicated previous research findings in which viewership influenced greater expectations for (Shelton et al., 2011) and skepticism of (Baskin & Sommers, 2010; Schweitzer & Saks, 2007) pro-prosecution evidence, lending partial support for the CSI effect on juror expectations and perceptions of scientific evidence presented during trial.

The impact of television programs that elicit a CSI effect, along with current popularity in reality TV and other true crime procedural shows, have affected many aspects of criminal investigations (Trainum, 2019). Fictional dramatizations in combination with the viewing of reality television programs based on crime, such as *The*

First 48, Injustice with Nancy Grace, or *Cops,* creates a burden on real investigatory practices because of how these programs are edited and made to fit into the time constraints of the show to produce desirable results for the viewer. For example, true crime cold case stories are often chosen to grasp the interest of its viewers by showcasing success stories that work within the time limit of the show, but misrepresent actual length of time for aspects of the case to come together in the end. *The First 48* works off the premise that an arrest must be made in 48 hours or a case goes cold, and current podcasts and documentary series that highlight problematic investigative processes (i.e., *Making a Murderer, Confession Tapes*) heighten the idea that evidence is an important tool in determining guilt or innocence (Trainum, 2019). In addition, unresolved cases where DNA is compared to public genealogy websites that result in convictions like the Golden State Killer, Joseph James Deangelo, induce an idea that DNA-matching efforts were simple and readily accessible regardless of genetic privacy.

Piggybacking off the CSI effect, the CSI-education effect is an avenue researchers' have looked into regarding whether or not fictional crime shows help individuals commit crime and evade apprehension. Baranowski et al., (2018) interviewed convicted criminals and used experimental lab settings to ask about their impressions about the usefulness of crime shows for covering up crimes. They found no supportive evidence for a CSI-education effect and determined the effect is unlikely to have real life implications or in anything other than just a forensic interest in the content. Davis and Brooke (2021) studied the same avenue with criminology students and their level of crime show program consumption. They found that the frequency of crime show viewing

was most influential on whether individuals agreed or disagreed that crime TV shows help individuals commit crimes and evade apprehension. They were also able to determine that criminology students do in fact perceive the existence of a CSI effect for jury verdicts and offender behavior despite reporting previous awareness for a CSI effect (Davis & Brooke, 2021). Although it has been difficult for researchers to appropriately assess if offenders are learning 'tricks' from crime show viewing that help them get away with some type of crime, it should be acknowledged that viewership of crime shows in general does provide support for some kind of a CSI effect.

In 2020 however, Klentz et al. studied the influence of forensic crime drama viewing and DNA evidence on individual jurors' decisions using mock trials and three evidence conditions: (a) DNA guilty, (b) DNA innocent, (c) No DNA/control. A sample of 178 jury eligible college students were given a mock criminal case for breaking and entering. Researcher predictions for a CSI effect were not supported when examining mock deliberations for the discussion of DNA evidence, the expression of DNA opinions, or the mention of missing evidence. Additionally, crime drama viewing was not found to be related to guilty judgments with incriminating DNA evidence, thus implying that a CSI effect influencing juror decision making is not justified.

Consequently, a Staten Island jury declared itself hopelessly deadlocked in a trial involving the murders of two young children and the multiple stabbing of another two-year-old who survived. Seven of 12 jurors wanted to acquit the defendant regarding the children's murders because their DNA could not conclusively be established through what was found in blood stains on the defendant's jacket. Even with an expert witness

testifying to the fact that the DNA in question revealed the defendant and children being possible contributors, the seven jurors demanded some kind of certain proof regardless of the improbability of the defendant's overall story to what the evidence was telling (Leddy, 2017). Were the jurors influenced by things they have seen and heard in television programs demanding the same type of thing? Could it be that the CSI effect played into their decisions to acquit or were there other factors contributing to their demand for solid proof beyond a reasonable doubt?

The Tech Effect

The newer tech effect theory has since replaced the CSI effect as a means of explaining heightened juror expectations (Davis et al., 2011). Proponents for the tech effect argue that jurors are not just simply influenced by crime dramas, but rather have heightened expectations for technical and scientific evidence because technology is so widespread within our culture (Davis et al., 2011). Back-to-back studies were conducted to evaluate whether viewers of crime dramas have an increased knowledge of forensic evidence compared to nonviewers (Davis et al., 2011) and whether students in Information Systems/Information Technology (IS/IT) degree programs have a greater knowledge of forensic technology in cases regarding digital evidence compared to non-IS/IT students (Davis et al., 2011). Both studies asked participants about crime show viewing habits and utilized surveys with closed-ended questions to measure respondents' knowledge regarding forensic evidence and their tendency to find a defendant not guilty. Both studies indicated that those subjects who watched more hours of crime shows tended to have a better understanding for scientific evidence and higher rates of

acquittals. However, the studies were limited in their sample and may not have fully represented the opinions and perceptions of potential jurors.

There is limited research examining the tech effect as it relates to the legal system and juror decision making. Shelton et al. (2006) theorized that the CSI effect was too narrow to account for jury needs and heightened expectations (Lobo & Schnobrich-Davis, 2015). The origins of heightened expectations and need for forensic evidence does not solely exist from television shows, but in the overall change in culture, the advances in science and technology, and the ability to spread information through mass mediated platforms (Lobo & Schnobrich-Davis, 2015). Previous past studies have utilized different sampling strategies that have opened the doors to much criticism including Podlas (2006) whose study contained some information that he thought was irrelevant; Shelton (2008) along with Baskin and Sommers (2010) weakened their validity by oversimplifying crime scenarios; Schweitzer and Saks (2007) failed to use enough participants; and Baskin and Sommers (2010) opted for telephone surveys and thus weakened research validity as well.

In their 2015 study, Lobo and Schnobrich-Davis sought to determine if one specific factor, age, had a significant influence on jury verdicts but instead found it difficult to conceptualize the tech effect subject area. The tech effect variable reflected perception and efforts to quantify what the tech effect really encompassed proved to be a challenge. That being said, there was no significant evidence to suggest age was a factor in how jurors found verdicts, where it was initially hypothesized that younger respondents may have an increased knowledge for technology and how it is used. The

researchers suggested that future studies consider conceptualizing the term tech effect more appropriately and that other interrelated variables be used in conjunction with cultural influences to determine whether a tech effect truly exists (Lobo & Schnobrich-Davis, 2015).

A study conducted by Hui and Lo (2017) suggested that forensic dramas have cultivated people's perception of social reality and made them more likely to expect scientific evidence be presented frequently in criminal cases. They found that the higher expectation of scientific evidence among crime show viewers may have altered people's perception of the reliability of legal evidence, however this did not lend support to a CSI effect, and that the proliferation of criminal and forensic science topics in the mass media cannot account for elevated juror expectations. Instead, Hui and Lo (2017) agreed with Shelton et al. (2007) in that juror expectations regarding scientific evidence are more a reflection of the global awareness of advancements in science and technology in recent decades than a result of just having watched CSI, lending support to the idea of a 'tech effect'.

Lodge and Zloteanu (2020) investigated the CSI effect and the Tech effect and the impact of crime severity on juror decision making. The sample used 95 individuals eligible for jury service that were asked to read one of three newspaper articles focusing on "Technology" and touted Cleveland police department's new computer system, "Forensic" which boasted about advancements made in forensic testing by the Cleveland police, and "Neutral" that focused on a Cleveland police charity event. As predicted by the researchers, there was no evidence of a CSI effect or Tech effect impacting jurors'

decision-making despite having been primed with newspaper articles relaying information related to such effects. Lodge and Zloteanu (2020) proposed that the CSI and Tech effects related biases once observed in past literature were most likely due to a novelty or salience bias than to an underlying psychological effect. Although participants were asked whether they were also habitual crime show drama viewers, whereby most participants stated they often watched them, the types of programs (fictional or factual) were not considered.

More recently, and according to a team of University of Cincinnati social and behavioral experts, there is no scientific evidence that shows that smartphones or digital technology harm our biological cognitive abilities (Cecutti et al., 2021). Instead, the idea is that smart technology expounds on the evolution of the digital age and supplements our critical thinking. The use of smartphones to supplement the way we engage in life are cognitively beneficial and augments decision-making skills. The CSI effect suggests jurors are influenced by the dramatized portrayals of the criminal investigation process. A tech effect suggests jurors are influenced by the shift in cultural practices to utilize advanced technologies in addition to watching those technologies play out on screen to reach a conclusion.

Summary

The literature reviewed for this research provided insight into the phenomenon of the CSI effect and its shift toward a cultural 'tech effect'. The existing literature emphasizes a need to understand the heightened expectations jurors seem to have when presented cases in trial (Baskin & Sommers, 2010; Podlas, 2009; Schweitzer & Saks,

2007; Shelton et al., 2009), and the external influences that may be at play during the decision-making processes. Cultivation theory provided the framework with which to understand this television media phenomenon. The gaps in the articles identified in the research laid the foundation for the framework of this study into identifying whether a 'tech effect' has had an influence on juror decision-making habits.

Chapter 3 focuses on the study's methods and design, providing an explanation of the design, justification, and measurements utilized in the study. Included is a rationale for the study's design, a description of the population and the sample studied, the sampling procedure, data collection, instrumentation, and data analysis procedures. Chapter 3 concludes with a summary of the steps taken for the ethical protection of the research participants.

Chapter 3: Research Method

Introduction

This study examined the relationship between crime drama television programs and juror decision-making. This study took a further view into how specific variables may contribute to juror decision-making by taking into account people's crime show viewing habits over a one-month period and amount of time spent using a personal device. Perceptions of how technology is used within crime drama television programs was considered as well as people's attitudes about how technology is used in our society. The research questions were developed to help determine an idea about the "tech savviness" and comfortability jurors have with technology in their environment. In addition, the overall agreeableness to statements regarding forensic evidence was used to help identify whether respondents have biases toward the defense or prosecution.

The purpose of this chapter is to state the research questions, identify the alternative and null hypotheses, and explain the purpose for their inclusion. This chapter includes a description of the research design and rationale, the research methodology, and the study's limitations. It also discusses the target population, sampling frame, the questionnaire design, data collection, data analysis, and the reliability and validity issues.

Research Questions

The most critical step in the conduct of research is the development of a clear and articulated research question. Research questions are essential to a study because they help define the direction of the research and provide a means for understanding what it is the study aims to answer. Quantitative research questions inquire about the relationships

among variables, more specifically, about the relationship between crime drama television programs and juror decision-making. Quantitative hypotheses are predictions made by the researcher about the relationships among variables (Creswell, 2009). Four research questions guided this study and were developed to understand the relationships between four independent variables and the dependent variable represented by expectations for scientific evidence in trial. The independent variables were chosen carefully to determine whether crime drama viewing habits, personal use with technology, perceptions of how technology is utilized in crime drama TV programs, and attitudes about technology used in society help predict juror decision-making. This research was organized around the following research questions and associated alternative (H_a) and null (H_0) hypotheses.

Research Question 1: Are EXP for scientific evidence in trial positively influenced by CVH among potential jurors?

$H_0$1: EXP are not positively influenced by CVH among potential jurors.

H_a1: EXP are positively influenced by CVH among potential jurors.

Research Question 2: Are EXP for scientific evidence in trial positively influenced by PTU among potential jurors?

H_0 2: EXP are not positively influenced by PTU among potential jurors.

H_a 2: EXP are positively influenced by PTU among potential jurors.

Research Question 3: Are EXP for scientific evidence in trial positively influenced by ATT among potential jurors?

H_0 3: EXP are not positively influenced by ATT among potential jurors.

H_a3: EXP are positively influenced by ATT among potential jurors.

Research Question 4: Are EXP for scientific evidence in trial positively influenced by PER among potential jurors?

H_0 4: EXP are not positively influenced by PER among potential jurors.

H_a 4: EXP are positively influenced by PER among potential jurors.

Research Design and Rationale

The goal of behavioral research is to determine how people perceive the world around them, how they think and feel, how they change over time, how they make decisions and learn, and how they interact with others in a way that can be analyzed and understood as a means to create solutions to everyday problems (Stangor, 2014). The quantitative research design was selected to provide a numerical description of the results and a survey was used to gain information about the trends, attitudes, and opinions about a particular sample of the population. A multiple regression statistical analysis was used to fully explore how using several different independent variables (e.g., crime show viewing habits (CVH), personal technology use (PTU), perceptions of technology used in television (PER), attitudes about technology in society (ATT)) predicted the dependent variable for expectations (EXP) of evidence presented in trial.

Descriptive research such as surveys, questionnaires, and interviews, provide a relatively complete understanding of what is currently happening in our world and have been instrumental in measuring people's current concerns about their city, state, or nation which are reported in newspapers and online periodicals almost daily (Stangor, 2011). In addition to descriptive research, using a correlational research design had an advantage

because it could be used to assess behavior as it occurs in people's everyday lives, producing a snapshot of the opinions, attitudes, or behaviors of a group of people at a given time (Stangor, 2011). Correlational research is a type of nonexperimental research that facilitates prediction and is designed to measure two or more variables to investigate the extent to which they are related (Seerum, 2019). It is used when the researcher is interested in how variables relate to each other and unique in its ability to allow the researcher to make predictions based on those relationships. This design was crucial in understanding attitudes and perceptions about technology use on decision-making because it provides a quantifiable means for explaining relationships among the variables and the way decisions are made about a trial. It is important to recognize that this researcher was interested in determining a relationship only, not causation.

Multiple regression analysis is a statistical technique used for estimating the relationship among variables having cause-effect relations, to make predictions about behavior by using the relation (Uyanik & Gùler, 2013). This method of statistical analysis was employed to assess the relationship between the independent variables for CVH, PTU, ATT, and PER and the dependent variable EXP to describe the extent of linear relationships between variables (Frankfort-Nachmias & Nachmias, 2008).

Methodology

Population

In the American court system, a pool of potential jurors is randomly selected from the local population of individuals eligible for jury duty. The most commonly listed juror qualifications across the United States were that a prospective juror must be: (a) a citizen

of the United States and a resident of the county they were summoned in, (b) at least 18 years old, (c) able to read and write English, and (d) never convicted of a felony. For this reason, study participants were individuals 18 years and older, English-speaking, and citizens of the United States. Although courts may offer non-English speaking interpreters for potential jurors, for the purposes of this research participants were limited to English-speaking only. Any respondent that did not meet these requirements in the demographics section of the questionnaire were eliminated from data collection as would also be the case in the creation of a real-life jury pool. According to Frankfort-Nachmias and Nachmias (2008) a population is the combination of all cases that conform to some designated set of specifications, and in this study, to generalize results to any prospective juror chosen to sit on a criminal trial.

Sampling Procedures

Convenience sampling is a type of nonprobability sampling that is used by researchers simply because the people that are sampled are convenient sources of data. Members of the target population that meet the criteria relevant to becoming a potential juror, are available at a given time, and are willing to participate make up a convenience sample (Etikan, Musa, & Alkassim, 2016). Convenience sampling, for the purposes of this study, were used to collect information from participants that were easily accessible. Easy access to participants was achieved through online applications and social media platforms. Since jurors are chosen at the discretion of lawyers present during voir dire based upon qualifying answers to questions relevant to their specific case, juries are often not representative of the general population. Convenience sampling in this research was

used under the assumption that there will be no difference in the results from a random sample; that the members that make up the target population are homogeneous (Etikan et al., 2016).

An *a priori* power analysis for linear multiple regression was conducted using G*Power3.1.9.2 (Faul, Erdfelder, Lang, & Buchner (2014) to determine the appropriate number of participants needed to detect significance within the sample between juror expectations for evidence and the four IVs. In this type of power analysis, researchers are able to specify the size of the effect to be detected, the alpha (α) level, and the desired power level of the test to determine the necessary sample size *N*. To achieve a power of .80 with a medium effect size ($f^2 = .15$), using a two-tailed test and an alpha of .05, a sample size of at least 73 was required to determine relevant significance. The significance level, as denoted as alpha or α, is the probability of rejecting the null hypothesis when it is true.

Recruitment

Participants were recruited through the social media platform Facebook and Reddit, an American social news aggregation and discussion website. The recruitment of eligible candidates for the survey was conducted through the use of SurveyMonkey, a web-based platform with which to create and distribute surveys. SurveyMonkey was used to host the survey and the survey was posted via a link on this researcher's Facebook profile page as well as a dissertation group page. The Facebook link was posted and shared publicly and not just limited to 'only friends' of the researcher. It was also left available to be shared and posted to other member profile pages if they decided

to forward the survey. Links were also posted to Reddit within different discussion community groups including but not limited to research, science, and psychology. The eligibility requirements to complete the survey were based on the United States District Court Juror Qualification Questionnaire for the State of Michigan (MCL 600.1307a, MCL 600.1313). For an individual to meet the criteria of basic jury eligibility, these qualifications are most commonly recognized among courtrooms across the United States as important factors in serving as a juror, including being a citizen of the United States, being at least 18 years old, able to understand and speak English, and never been convicted of a felony. Respondents recruited in this study were both male and female and met the criteria for completing the survey.

Procedures and Data Collection

A web link to the survey was posted via Facebook and Reddit and was accompanied by a description and objective of the survey, informed consent (see Appendix B), and this researcher's contact information. Information about respondent anonymity was discussed as was the ability for a respondent at any time to abort participation. The length of time needed to complete the survey was acknowledged in the informed consent as well as what risks and benefits were attributed to its completion.

Participants read the informed consent and were required to digitally acknowledge consent through the web link that was provided. Participation was at the discretion of the individual, as there was no monetary incentive or credit given toward a college course. Eligibility to complete the survey was determined once participants acknowledge they met specific criteria relevant to basic jury duty eligibility as is noted above. Participants

were then able to respond to the survey which took approximately five to ten minutes to complete and was comprised of closed-ended questions. Upon completion of the survey, respondents were debriefed about their contribution to the study and informed no follow-up procedures were required.

Instrumentation

The survey instrument was developed based largely in part on other surveys and questionnaires that have been used to study the effects of fictional crime television programs on juror decision-making. The Juror Expectations and Tech Effect Questionnaire is a questionnaire comprised of several demographic questions, the Forensic Evidence Evaluation Bias Scale (Smith, 2012) used to identify whether a pretrial bias for forensic evidence exists, and questions modeled from the Television Viewing Questionnaire developed by Mancini (2013) which is used to determine television viewership habits. Questions were also developed to gain insight as to people's perceptions of scientific evidence and juror decision-making, as well as questions modeled from the Survey of Public Attitudes Toward and Understanding of Science and Technology (Miller et al., 1979-2006) used to gain an understanding of public knowledge of and attitudes toward science and technology.

Forensic Evidence and Evaluation Bias Scale

The FEEBS was used to evaluate an overall average of respondent agreeability to statements made about forensic evidence for the purposes of criminal trials. They are as follows:

1. Every crime can be solved with forensic science.

2. Every criminal leaves some physical evidence behind at every crime scene.
3. If forensic evidence suggests a defendant is guilty, this should be enough to convict even if other evidence (i.e., eyewitness testimony, alibi) suggest otherwise.
4. Forensic evidence always eventually identifies the guilt person.
5. Forensic evidence always provides a conclusive answer.
6. Science is the most reliable way to identify the perpetrators of crime.
7. If no forensic evidence is recovered from a crime scene, it means the investigators did not look hard enough.
8. If there is no forensic evidence presented in a particular case, then the jury should not convict.
9. Police should not charge someone with a serious crime unless forensic evidence is available to prove their guilt.
10. If no forensic evidence is recovered from a crime scene the defendant is probably innocent of the crime.

The Forensic Evidence Evaluation Bias Scale (FEEBS) was developed to understand the underlying process connecting individuals' biases toward evidence and their likelihood to convict (Smith & Bull, 2012b). Items for the FEEBS were developed and tested and eventually narrowed to 10 items based on their high inter-item and item-total correlations (Smith & Bull, 2012b). These 10 items were broken into subscales related to pro-prosecution bias and pro-defense bias. A multiple regression analysis was used to determine what variables predicted how strong participants perceive DNA evidence and

found that the pro-prosecution bias subscale approached significance as a predictor of DNA evidence strength (t =-1.87, p = 0.06). This confirmed that as the prosecution score increases, so does the strength rating of DNA evidence (Smith & Bull, 2012b). Items in the defense subscale that describe attitudes about inferences made when no evidence is presented was related to high expectations for the presence of forensic evidence. The FEEBS is useful for measuring juror bias as it relates to forensic evidence evaluation and it appears to predict perceptions of scientific evidence quality and guilt decisions. Permission to use the FEEBS was acquired for this study (see Appendix A) and was used in part to understand juror bias.

The Television Viewing Questionnaire developed by Mancini (2013) was used to determine the amount of time participants spent during a one-month period watching television programs related to criminal dramatizations and legal proceedings. Permission was granted (Appendix A) to use the Television Viewing Questionnaire design but for the purposes of this study, television programs chosen for this measure were picked based on current popularity and availability to stream these programs at home through other online applications (i.e., Netflix, Hulu, Amazon Prime, etc.). The list of programs used by Mancini were outdated and some no longer available to view. The updated list contained 17 current and/or available television programs and included: *Blacklist*, *Blindspot*, *Blue Bloods*, *Chicago P.D.*, *Criminal Minds*, *Elementary*, *FBI*, *Hawaii Five-0*, *How to Get Away with Murder*, *Law & Order: SVU*, *Magnum P.I.*, *NCIS*, *NCIS: Los Angeles*, *NCIS: New Orleans*, *Prodigal Son*, *Sherlock*, and *S.W.A.T*.

The television programs selected for this study were chosen to represent different aspects of the criminal investigation process, crime scene analysis, evidence collection and analysis, legal processes and litigation, *voir dire*, jury trials, and jury outcomes. These crime dramas were also selected because they utilize some element of technology to make a conclusion. For example, the television series *Blindspot* follows a team of FBI agents trying to figure out why a heavily tattooed woman shows up nude in a duffel bag in NY Times Square with no recollection of who she is or how she got there. Agent Patterson with the team uses computer technology to photograph, decipher, and piece together what the tattoos mean and how they relate to other crimes or situations. The fictional television series *Criminal Minds* follows the FBI's Behavioral Analysis Unit and their contributions to investigations all over the country. They have Penelope Garcia, an elite computer hacker with an ability to find any answer to any question about anyone within seconds and dramatically effects the outcome of their cases. Without her skills, the team may be unable to narrow down a suspect pool, determine motive, or make an arrest before another crime occurs. Not only was this crime drama list created to determine which ones are viewed most frequently, but also to include different aspects of how crime is dealt with: (a) on a local scale as it is with the police department in *Law & Order: SVU*, *Chicago P.D.*, and *Hawaii Five-0*, (b) in the military and naval arenas like in *NCIS*, *NCIS: Los Angeles*, *NCIS: New Orleans*, (c) on a federal scale like with *Criminal Minds* and *FBI*, and (d) in investigations that utilize private consultants to reach a conclusion like in *Prodigal Son*, *Blacklist*, or *Sherlock*.

Miller et al. (1979-2006) developed the Surveys of Public Attitudes Toward and Understanding Science and Technology and used it to understand scientific and environmental concepts such as DNA, how scientific knowledge and information is acquired, computer access and usage, and how science and technology affect everyday living. Face-to-face and telephone interviews were given at regular intervals beginning in 1979 through 2006 producing 12 cross-sectional surveys including the above-mentioned topics. For the purposes of this study, three topics make up the bulk of the questionnaire including personal technology use, attitudes about technology in society, and perceptions of technology in television. Items in these subsections of the questionnaire were modeled after the questions used in Surveys of Public Attitudes Toward and Understanding Science and Technology.

Several of the background questions were derived from the Juror Qualification Questionnaire for the State of Michigan (MCL 600.1307a, MCL 600.1313) and based on the eligibility requirements for jury duty. These items included age, race, education, and household information. In addition, three items targeted television viewing habits, 11 items targeted general knowledge for the criminal investigation process, forensic science, forensic evidence, the legal system, and modern technology and placed on a 5-point, Likert type scale ranging from 1 (*not at all knowledgeable*) to 5 (*extremely knowledgeable*). Another 10 items targeted attitudes and perceptions about modern technology, advancements in technology and science, the application of science and technology on daily lives and jobs, and how accurately technology is portrayed in

television and based on a 5-point Likert type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

The first version of the survey was pre-tested by a panel of experts in the field of forensic psychology and eligible members from the target population. They were asked to read through the survey, answer the questions, and to share all thoughts or questions they may have had. Comments and improvement ideas were noted and put into effect regarding the use of specific questions that may narrow the population or were of no relevant value to the overall demographic findings. However, no major problems were discovered in their ability to complete the survey or in its functionality and commented that the survey appears to align with what it is trying to measure lending support to face validity.

Operationalization

There are four DVs, crime drama viewing habits (CVH), personal technological use (PTU), attitudes about technology used in society (ATT), and perceptions about how technology is depicted in television (PER) that were tested with respect to their relationship to the IV for expectations (EXP) for scientific evidence in trial. CVH was operationally defined as 'the number of hours spent watching crime drama television programs across a one-month period'. This was measured by respondents' answers to the Television Viewing Habits subsection of the survey. Scores were calculated and categorized into three categories: (a) least views (never – 3x/mo.), (b) moderate views (4-7x/mo.), and (c) most views (8-10+x/mo.). This was intended to help understand which programs are frequented more often and whether programs with the most views are more

likely to influence expectations at trial. PTU was operationally defined as the 'rate of personal use with an electronic device over a one-day period' and was tested by an item using a Likert scale ranging from 'not at all' to '10+ times daily' (coded numerically from 1 to 5). Seven additional items were included which were filler items used to assess the same construct. An example of this type of item is "How often do you use a personal electronic device (i.e. Smartphone, laptop, tablet, PC) to communicate (i.e. call, text, email, video-conference)?

ATT was operationally defined as the 'level of agreeableness toward statements about technology in society' and was tested by the item "I believe that with technology, anything is possible". Fourteen additional Likert-scale items ranging from 'strongly disagree' to 'strongly agree' and numerically coded from 1 to 5 were included and used as filler questions to make the purpose of the measure less obvious to respondents. PER was operationally defined as the 'level of agreeableness toward statements about technology in television' and was tested by the item "I was unaware of the capabilities technology brings to law enforcement and criminal investigations until seeing it portrayed through crime shows". This item along with seven others for this construct were numerically coded from 1 to 5 as well and range from 'strongly disagree' to 'strongly agree'.

Lastly, EXP was operationally defined as 'level of agreement toward statements about forensic evidence' and was measured by 10 items in the FEEBS at the beginning of the survey. This scale was developed and based on a Likert scale similar to the other subsection scales that range from 'strongly disagree' to 'strongly agree'. In relation to

the constructs being measured, the higher the level of agreeableness in this subsection of the survey could be an indication of forensic evidence bias and/or increased juror expectations.

Data Analysis Plan

Once data was collected for the number of participants projected by power analysis (73) the dataset was cleaned for irregularities and missing values. Irregularities in the data would indicate outliers or less than ideal distributions of data points, but this was not a factor in the data cleaning. Missing values were replaced in the statistical software program used to analyze the results. IBM® SPSS® Statistics software was used to analyze the data so that several statistical tests could be run quickly and cleaning the data would be simplified. To test the following questions and hypotheses, a multiple regression analysis was conducted to determine whether the independent variables predicted the dependent variable by using a linear regression analysis while testing that none of the eight assumptions had been violated.

Research Question 1**:** Are EXP for scientific evidence in trial positively influenced by CVH among potential jurors?

H_0 1: EXP are not positively influenced by CVH among potential jurors.

H_a 1: EXP are positively influenced by CVH among potential jurors.

The Baskin and Sommers (2010) study found in California voters that crime-show viewing habits affect potential jurors' pretrial attitudes and predispositions regarding scientific evidence. In relation to this study, if juror expectations are significantly

influenced by crime drama viewing habits, CVH could be considered a predictor of juror decision-making behavior.

Research Question 2: Are EXP for scientific evidence in trial positively influenced by PTU among potential jurors?

H_0 2: EXP are not positively influenced by PTU among potential jurors.

H_a 2: EXP are positively influenced by PTU among potential jurors.

Potential jurors may be influenced by what is viewed through television media and make decisions based on those influences. The idea that people may be biased toward technology because they themselves use a device on a daily basis may be relevant in determining whether it effects their decision-making.

Research Question 3: Are EXP for scientific evidence in trial positively influenced by ATT among potential jurors?

H_0 3: EXP are not positively influenced by ATT among potential jurors.

H_a 3: EXP are positively influenced by ATT among potential jurors.

According to Cormick (2019), people's attitudes to complex new technologies are often based on how well the technology aligns with their personal values rather than what the technology can actually do. Asking respondents to rate their level of agreeableness to statements made about science and technology helps in understanding the value placed on that technology and whether it predicts juror decisions.

Research Question 4: Are EXP for scientific evidence in trial positively influenced by PER among potential jurors?

H_0 4: EXP are not positively influenced by PER among potential jurors.

H_a 4: EXP are positively influenced by PER among potential jurors.

The prevalence and utility of technology among the nation's law enforcement agencies and the factors that influence its selection and implementation is largely unknown. Resources allocated for local and federal municipalities are varied, so perhaps the technology depicted in fictional crime dramas contributes to the false idea that the state-of-the-art technology practices are commonplace across the board. Similar to attitudes, perceptions are rated based on agreeableness to statements made about technology used in crime drama programs and used to determine whether perceptions can predict juror decision making behaviors.

Threats to Validity

Validity is the extent to which a researcher is able to measure a specific idea or concept. Internal validity is the degree to which a study is void of flaws in its structure that could interfere with the results and its representation of the phenomenon being tested. Internal validity of this study was predominantly sound. The study was designed to take place over a short period of time in a single setting, meaning that threats to history, maturation, or experimental mortality were at a minimum. The research design did not include a pretest so testing effects were not expected to be of concern and selection-maturation threats nonexistent.

External validity refers to the ability of the study to be generalized to similar populations and how well the outcome of the research applies to other settings. Threats to external validity in this study were minimal. The only relevant threat was in respondent reactivity, although it was expected that the overall impact of the content in the survey

should have been negligible if there was one at all. The survey was created and pieced together from existing and validated questionnaires ensuring that the external validity was strong. The design of the current study demonstrated sound construct validity with its simple and direct presentation that utilized measures from similar studies by Smith and Bull (2014) and Mancini (2013).

Ethical Considerations

All of the research participants read and digitally signed an informed consent (see Appendix B) agreement acknowledging their participation in the study was voluntary and that they could discontinue at any time without any adverse action. There was not any tangible rewards or monetary incentives provided for participation in the study. Participants' anonymity was assured as the survey questions did not ask for specific or identifying information, just basic demographics such as gender, age, and household status. All of the electronic data collected was stored within the survey host's online platform, SurveyMonkey, and will be kept on a password protected USB Flash drive for five years. This researcher received Institutional Review Board approval (#05-13-21-0363457) through Walden University as a condition for data collection and participant recruitment.

Summary

This chapter described methods for a quantitative study to determine whether a technology effect exists in juror decision-making. Aspects of recruitment and inclusion are detailed as well as how the survey instrument was developed. Instrumentation is defined as the combination of previously used survey scales and questionnaires with

questions pertaining specifically to science and technology. The variables are operationally defined to help differentiate their relevance to the overall model and completion of a linear multiple regression enables the results of this study to be related to better understanding attitudes and perceptions of future jurors. Data analysis includes computing descriptive statistics and multiple regression to evaluate whether any of the independent variables (CVH, PTU, ATT, and PER) help predicted the dependent variable for expectations during trial. The results of the study are presented in Chapter 4.

Chapter 4: Results

Introduction

The purpose of this study was to examine the relationship between crime drama television programs and juror decision-making when taking into account crime show viewing habits, perceptions of technology use depicted within those programs, personal technology use, and attitudes about how technology is used in our society. I examined whether any of the four independent variables influenced the dependent variable for juror expectations during a trial. This chapter examines the data collection method, time frame and response rates for data collection, descriptive and demographic characteristics of the sample, and the basic results of the multiple regression analyses in relation to each of the research questions and hypotheses.

Data Overview

A power analysis determined a sample size of at least 73 participants was needed to achieve a power of .80 with medium effect size. A total of 127 (N=127) respondents participated in the study through convenience sampling. Participants were recruited through two of the researcher's social media platforms, Facebook and Reddit, and met the criteria of basic jury eligibility; (a) at least 18 years of age, (b) a citizen of the U.S., (c) able to understand and speak English, and (d) never have been convicted of a felony. The desired sample amount was achieved within one week of posting the invitation links and was nearly doubled after ten days. Participation tapered off to only a few responses a day near the end of two weeks and the links were deactivated after no activity was recorded at the end of three weeks. Participants were surveyed to analyze the

relationship between the independent variables for crime drama viewing habits (CVH), personal technology use (PTU), attitudes about technology in society (ATT), and perceptions of how technology is depicted in media (PER) and the dependent variable identified as expectations for scientific evidence presented in trial (EXP). Discrepancies in the data collection process did not occur relative to the data collection plan presented in chapter three. The recruitment process, respondent participation and survey completion were concluded as anticipated without any intervention to change procedure. The study was guided by the following research questions and hypotheses and restated here:

Research Question 1: Are EXP for scientific evidence in trial positively influenced by CVH among potential jurors?

$H_0$1: EXP are not positively influenced by CVH among potential jurors.

H_a1: EXP are positively influenced by CVH among potential jurors.

Research Question 2: Are EXP for scientific evidence in trial positively influenced by PTU among potential jurors?

$H_0$2: EXP are not positively influenced by PTU among potential jurors.

H_a2: EXP are positively influenced by PTU among potential jurors.

Research Question 3: Are EXP for scientific evidence in trial positively influenced by ATT about the advancement of technology in society among potential jurors?

$H_0$3: EXP are not positively influenced by ATT among potential jurors.

H_a3: EXP are positively influenced by ATT among potential jurors.

Research Question 4: Are EXP for scientific evidence in trial positively influenced by PER about how technology is depicted in fictional television programs among potential jurors.

$H_0$4: EXP are not positively influenced by PER among potential jurors.

H_a4: EXP are positively influenced by PER among potential jurors.

Descriptive Statistics

In this section, I discuss the descriptive statistics of the demographic information collected from responses to the *Tech Effect on Juror Decision Making Questionnaire* (see Appendix E). Five questions targeted respondent demographics including gender, age, completed education, race/ethnicity, and status in the household. Table 1 provides the genders and ages of the selected sample. It indicates that females accounted for more than three-quarters (79.5%) of responses and males a little less than a quarter of overall responses (20.5%). The ages of participants ranged from 21-29 years old (8.7%), 30-39 years old (27.6%), 40-49 years old (27.6%), 50-59 years old (22.8%), and 60+ years old (13.4%), which implied that the survey was able to reach respondents across all age groups relatively equally.

Sample demographic information indicating participants' race is included in Table 1. Unlike age, a gross misrepresentation of the general population was sampled, with the majority of respondents (89%) being Caucasian. African Americans (4.7%), Asians (.8%), Hispanics (.8%), and respondents identifying as Other (4.7%) made up the rest of the sample. Unfortunately, this specific demographic is disproportionate to the

larger population intended and may not adequately represent a broader, more balanced sample.

Table 1

Descriptive Statistics (N = 127)

Variable	Category	*N*	%
Gender	Female	101	79.5
	Male	26	20.5
Age	21-29	11	8.7
	30-39	35	27.6
	40-49	35	27.6
	50-59	29	22.8
	60+	17	13.4
Race	African American	6	4.7
	Asian	1	.8
	Caucasian	113	89
	Hispanic	1	.8
	Other	6	4.7

Two other demographic constructs were considered for the study. Level of education (i.e., high school diploma, college degree, professional/graduate degree) was asked of respondents as well as status within the household (i.e., single, married, divorced, widowed), however I did not feel these constructs were necessarily an indication of representing the general population. While they were an interesting aspect of the respondents' background information, they are not relevant to the results of the

overall study. Descriptive results for highest level of completed education were as follows: (a) High school diploma (7.1%), (b) Some college (22%), (c) Associate Degree/Bachelor Degree (37%), (d) Master Degree (24.4%), (e) Ph.D./M.D. (3.9%), (f) Other – J.D., Trade School, Specialist Degree, Technical Certificate (5.5%). Descriptive results were also collected for how participants identified their status within the household and were broken into categories of single (19.7%), married (64.6%), domestic partner (4.7%), separated (.8%), divorced (9.4%), and/or widowed (.8%).

Model Assumptions

In addition to running descriptive tests for the data, multiple regression analysis provided more detailed information. Model assumptions for linear relationships, multicollinearity, independence, homoscedasticity and normality were tested. Violations to any assumptions may render the results of the multiple regression analysis as unreliable, but that was not the case in this analysis. The dependant and independent variables can all be measured using a continuous or categorical scale and the four variables of interest have a linear relationship. In analyzing linear regression using SPSS, estimates, collinearity diagnostics, independence and model fit were statistically evaluated (Verma & Abdel-Salam, 2019). A Durbin-Watson test was run to confirm that each observation in the dataset was independent. Residuals were normally distributed as observed by residual scatter plots and outliers that may have skewed the distribution were nonexistent (Field, 2013). Consideration was made to ensure the assumptions were not violated. For these data the assumptions of independent errors, normally distributed errors, linearity, homoscedasticity, and multicollinearity were all met.

Goodness of Fit of the Model

According to Field (2013), goodness of fit refers to how well the data predicted by the model corresponds to the data that was collected. It was important to assess how well the model fit the actual data to determine whether there was error in the prediction. Multiple regression analyses were conducted to determine which, if any of the independent variables predicted the expectations for scientific evidence at trial. The hypotheses were tested and Table 2 demonstrates goodness of fit model. The regression model was a good fit of the data and showed that the independent variables statistically significantly predicted the dependent variable, $F(4, 122) = 7.136$, $p < .0005$. A well-fitting regression model results in predicted values close to the observed data values.

Table 2

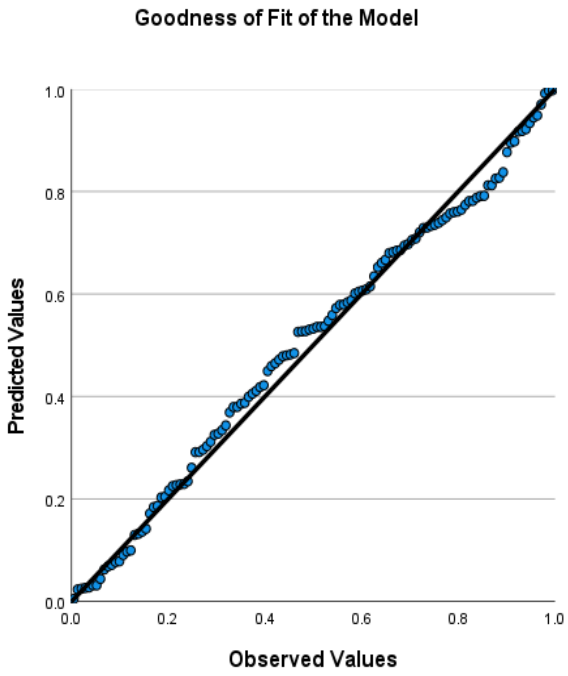
Goodness of Fit of the Model (N=127)

Model	Sum of Squares	*df*	Mean Squares	*F*	Sig.
Regression	1405.245	4	351.311	7.136	.000
Residual	6005.936	122	49.229		
Total	7411.181	126			

Figure 1 demonstrates how closely the predicted data matches the observed data from the four independent variables used in this study.

Figure 1

Plot of Linear Regression Standardized Residual



Research Question 1

In the first research question, I focused on examining the impact of crime show viewing habits (CVH) on expectations for scientific evidence in trial (EXP). Crime viewing habits were used as an independent variable while expectations for evidence were used as the dependent variable. Seventeen crime drama programs were selected to be included in the survey and they ranged in popularity according to Nielsen ratings. Nielsen ratings are based on data recorded from television sets across the world. They are national ratings of popularity of American television shows that project each program's total audience (Britannica, 2023). *Blacklist, Blindspot, Blue Bloods, Chicago*

P.D., *Criminal Minds*, *Elementary*, *FBI*, *Hawaii Five-0*, *How to Get Away with Murder*, *Law & Order: SVU*, *Magnum P.I.*, *NCIS*, *NCIS: Los Angeles*, *NCIS: New Orleans*, *Prodigal Son*, *Sherlock*, and *S.W.A.T.* were included for respondents to indicate the frequency with which each of the programs were viewed in the past month by choosing the most appropriate number on a scale of 0 (*never/less than once per month*) to 10 (*ten or more times per month*). Values for CVH were totaled and revealed the five most frequently watched programs to be: (a) *Law & Order: SVU* (42.5%), (b) *Criminal Minds* (41.2%), (c) *NCIS* (32.3%), (d) *Chicago P.D.* (31.5%), and (e) *Blue Bloods* (22%) as indicated by the percentage of respondents who valued each program as one they watched more than never or less than once per month. Using SPSS, measures of central tendency determined the average value of the data set and results are *N*=127, M=12.56, SD=16.446, showing that respondents spend approximately 12-13 hours (M=12.56) over a one-month period watching their favorite crime drama television programs. According to Hubbard (2021), aside from sleeping, Americans spend the majority of their leisure time watching television and average about 3.1 hours per day. While this number has decreased from 5.5 hours per day during the quarantine of the coronavirus pandemic, roughly 90 hours per month are spent watching television programs or streaming their content online. Of those 90 hours spent watching television programs, approximately 12-13 hours (roughly 7%) are spent watching crime-related programs. Table 3 is used to present the results as well as show the percentage of program popularity based on participant responses.

Table 3

Descriptive Statistics: Crime Drama Viewing Habits

Crime Drama Viewing Habits		*N*	M	SD	%
CVH Total / 1month		127	12.56	16.446	
Crime Program	Blacklist				11
	Blindspot				5.5
	Blue Bloods				22
	Chicago P.D.				31.5
	Criminal Minds				41.2
	Elementary				14.2
	FBI				14.2
	Hawaii Five-0				10.2
	How to Get Away with Murder				18.1
	Law & Order: SVU				42.5
	Magnum P.I.				6.3
	NCIS				32.3
	NCIS: Los Angeles				19.7
	NCIS: New Orleans				16.5
	Prodigal Son				13.4
	Sherlock				11.8
	S.W.A.T.				13.4

The dependent variable, expectations for scientific evidence in trial (EXP), was ordinal, which enabled multiple linear regression to analyze the research question. Table 4 demonstrates the descriptive statistics of the dependent variable EXP, which was measured by the items represented in the *Forensic Evidence and Evaluation Bias Scale*

(FEEBS; Smith & Bull, 2021b) and asked for respondents to rate their agreeableness to statements about forensic evidence.

A maximum score of 50 (10 statements with a maximum rating of 5) would indicate respondents strongly agree with the statements in FEEBS and are more likely to prosecute when making a decision in a jury trial. A minimum score of 10 (10 statements with a minimum rating of 1) would indicate respondents strongly disagree with the statements in FEEBS and would be more likely to acquit when deliberating in a jury trial. Once values for each individual response were recorded, a total score for EXP was calculated through SPSS. Using the maximum score of 50 to determine agreeability, an average score under 25 would indicate respondents were less agreeable to the statements and a higher score above 25 would indicate respondents were more agreeable toward statements about forensic evidence. Measures of central tendency were computed to summarize the data for the EXP total variable.

Table 4

Descriptive Statistics: Expectations for Scientific Evidence in Trial

EXPectations for Scientific Evidence in Trial	*N*	M	SD
EXPectations Total	127	27.57	7.669

Results of this analysis, and based on the number of respondents (*N*=127) included in the study, were M=27.57, SD=7.669. When looking at the mean (M=27.57), and comparing it to how the scores would represent respondent agreeability, it was clear that the average respondent was more agreeable to statements made about forensic evidence.

However, in relation to the first research question and hypothesis, CVH on their own were not a significant predictor for EXP as indicated by the coefficients model, p = .074 and represented in Table 5. A p-value of 0.05 or lower is considered statistically significant and it is calculated from the deviation between the observed data values and the predicted values (Field, 2013). CVH were not predictors for juror decision-making behaviors and heightened expectations for scientific evidence in trials.

Table 5

Parameter Estimates: Linear Regression Model
Significance level of 4 predictor variables

Model	B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	10.948	5.763		1.900	.060
CVH Total	.070	.039	.150	1.800	.074
PTU Total	- .236	.163	- .126	- 1.451	.149
ATT Total	.053	.119	.040	.445	.657
PER Total	.875	.194	.403	4.518	.000*

Note. a. Dependent Variable: EXP Total

Research Question 2

The second research question was focused on respondents' use with personal electronic devices (PTU) and the impact that had on the dependent variable for expectations (EXP). A total value was computed for PTU and used as an independent variable against the dependent variable for expectations for scientific evidence during trial. Similarly to the first research question, a multiple regression analysis was used to

determine if respondents' own use with personal electronic devices helps to predict juror expectations at trial. Respondents rated their personal use to questions on a Likert scale ranging from *1=No use at all* to *5=10+ more times daily*. The Likert scale is a psychometric tool used to measure the intensity of a response by using a rating scale, or a continuum from least to most, not at all to all the time, or strongly disagree to strongly agree (Frankfort-Nachmias & Frankfort, 2008).

There were seven questions that targeted a person's daily use with an electronic device. Items included questions such as, "*How often do you use a personal electronic device* (i.e., Smartphone, laptop, PC, tablet, etc.) *to communicate* (i.e., call, text, email, video-conference)?" The maximum response for each of the seven questions would yield a total possible score of 35 and a minimum score of at least seven. Out of a possible score of 35, descriptive statistics for PTU indicated that the mean average (N = 127, M = 17.87) for personal use with an electronic device accounted for a score of approximately 18. The average score of 18 fell in the middle of the rated responses, indicating that overall, respondents spend about 4-6 times a day at least utilizing a personal electronic device, demonstrated in Table 6. Personal technology use as a variable on its own however, was not a significant contributing predictor to the overall model for expectations for scientific evidence during trial as indicated by the coefficients model,
p = .149 and represented in Table 5. PTU did not reach the level of statistical significance that would indicate it having any influence over people's expectations for evidence at trial.

Table 6

Descriptive Statistics: Personal Technological Use

Personal Technological Use	*N*	M	SD
PTU Total	127	17.87	4.079

Research Question 3

The third research question focused on respondents' attitudes about the advancement of technology in society (ATT) and were measured by 15 statements using a Likert scale ranging from *1=Strongly Disagree* to *5=Strongly Agree*. I examined whether attitudes about technology in society contribute to expectations for scientific evidence in trial. Items included statements such as, "*It is important to be able to access and find any information online*," and *"Advancements in technology makes our way of life change too fast."* With 15 items targeting attitudes, there was a minimum total score of 15 and a maximum total score of 75. When looking at the middle value (45) of the total score, a value of 45 or below would indicate an average disagreeability to the statements regarding attitudes about technology in current culture. A total value of 45 or above would indicate an average agreeability to the statements made about technology in our culture. Measures of Central tendency were performed and the total score was computed for ATT (N = 127, M = 49.83) indicating that respondents generally agree with the statements made regarding technology used in society. This is demonstrated by the descriptive statistics shown in Table 7. After regression analysis, ATT was not a significant contributing predictor to the overall model for expectations for scientific evidence during trial, as indicated by the coefficients model, p = .657 and as

demonstrated in Table 5. Although respondents tend to agree with statements made about attitudes and feelings toward technological use in current culture, their attitudes in general do not predict expectations and do not influence juror decision-making as a variable on its own.

Table 7

Descriptive Statistics: Attitudes About Technology in Society

Attitudes about Technology in Society	*N*	M	SD
ATT Total	127	49.83	5.790

Research Question 4

The fourth and final research question examined the impact of respondents' perceptions of technology depicted in television (PER) and was measured with a Likert scale ranging from *1=Strongly Disagree* to *5=Strongly Agree*. Seven items targeting people's perceptions included statements such as, "*The technology used in crime drama television programs is an accurate depiction of how it is used in real life*." A minimum total score of 7 and a maximum total score of 35 represent the range in level of agreement. Measures of central tendency utilized to determine the total average score among respondents. A total score above the middle value of 17.5 would indicate overall agreeableness to the statements. Once the total score was computed, 20 (N = 127, M = 19.79) indicates that respondents generally tend to agree with statements about

technology depicted in television. This is represented in the descriptive statistics model for PER in Table 8.

Additionally, I found that PER statistically significantly contributed and predicted expectations for scientific evidence in trial (EXP) as indicated by the coefficients model, $p = .000$ and shown in Table 5. People's perceptions of how technology is used in television influences their expectations for scientific evidence presented in trial.

Table 8

Descriptive Statistics: Perceptions of Technology in Television

Perceptions of Technology in Television	*N*	M	SD
PER Total	127	19.79	3.529

Summary

The purpose of this study was to determine which factors, crime drama viewing habits (CVH), personal technological use (PTU), attitudes about technology in society (ATT), and perceptions of technology used in television (PER) influence juror expectations (EXP) for scientific evidence during trial. I examined whether CVH, PTU, ATT, and PER were significant predictors for juror expectations during trial. The results from the multiple linear regression showed that only PER had a positive significant effect on EXP (t=4.518, p-value=.000); whereas, CVH (t=1.800, p-value=.074), PTU (t=-1.451, p-value=.149), and ATT (t=.445, p-value=.657) did not have a significant effect on overall EXP.

Chapter 5 will further discuss the overall basis for this research and the details of the study. An interpretation of findings for each research question are discussed as well as study limitations and recommendations for future research.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

This quantitative study was conducted to explore the relationship between crime drama television programs and juror decision-making. Are jurors more inclined to have heightened expectations for forensic evidence during trial because of the science and technology that we have contact with every day? People who watch specific television content and see the way technology is used within that content may be influenced in a way that is not currently being considered. When looking more closely into several different factors that included respondents' crime show viewing habits, their perceptions of the technology depicted within those programs, personal technology use, and their attitudes about how technology is used in our society, the gap in the research that exists relative to the reason jurors have heightened expectations for the presentation of scientific evidence during trial was explored. This study posited four research questions focused around juror expectations and the variables used to determine predictive value in decision-making. The four research questions were developed and based on the assumption that expectations for scientific evidence in a trial are influenced by crime drama viewing habits, that expectations are influenced by personal technological use, that expectations are influenced by attitudes about the advancements of technology in society, and that expectations are influenced by perceptions of how technology is depicted within fictional crime drama television programs.

The participant sample for this survey study consisted of 127 individuals who were representing the general population and eligible to serve on a jury. Participants were

male and female and ranged in age from 20 to 60+ years old. All participants were citizens of the United States and able to understand and speak English. Of the 127 respondents who completed the survey, 113 were Caucasian, six were African American, one was Asian, one was Hispanic, and the remaining six identified as other.

Findings were compared after using multiple regression analysis and the results for each variable were interesting: (a) expectations for scientific evidence presented in trial were not predicted by crime show viewing habits, (b) expectations for evidence presented in trial were not predicted by personal technological use, (c) expectations for evidence presented in trial were not predicted by attitudes about technology used in society, however, (d) expectations for evidence presented in trial *were* predicted by people's perceptions of how technology is depicted in television programs.

The amount of crime drama television consumed has no significant influence over juror expectations, as is similarly the case with personal electronic devices. Attitudes about science and technology in our day to day lives does not have an influence over juror expectations, but how people perceive the technological advancements and capabilities depicted within crime related television programs does shape expectations for evidence presented in a trial. This information may lead to a greater understanding of the impact fictional television programs have on the layperson's view of technology used within the constructs of criminal investigations, evidence collection and analysis, and the speed/accuracy with which those contexts are utilized in jury trials.

Interpretation of the Findings

Research Question 1

Crime Show Viewing Habits (CVH)

Research question one examined whether crime show viewing habits (CVH) impacted expectations for scientific evidence in trial (EXP). Total values were established based on the number of hours respondents spent watching popular crime dramas over a one-month period. Central tendency statistics were performed indicating that on average respondents spend roughly 12 hours watching crime drama television programs over a one-month period, but the number of hours watched was insignificant in contributing to respondent expectations for evidence at trial once a multiple regression analysis was conducted. Shelton et al. (2006) discovered that viewers of crime drama-related programs in general tend to have higher expectations for evidence in trial, but like the results of this research, the amount of television watched did not contribute to a difference in conviction or acquittal rates. In addition, while Mancini's (2011) research results indicated that crime drama viewership influenced greater expectations in trial, viewership alone was not indicative of pro-prosecution or pro-defense outcomes.

Jury research, in the form of mock trials or focus groups, helps attorneys acquire valid insights that help the legal team answer questions about the case through the opinions, attitudes, and perceptions of the potential jury. A greater public awareness of forensic science from the 'television-educated' viewer has increased the demand for forensic evidence in trial in terms of the type of evidence expected. In TV shows, detectives and police officers will often easily walk-through crime scenes, discover and

pick up evidence, hunt for clues, and always manage to secure the one piece of evidence that ties everything together. However, Clements (2015) acknowledged that viewers now demand expensive and often unnecessary DNA tests, handwriting analyses, gunshot residue testing, and other procedures that are not pertinent to the case because of what they have seen on episodes of crime dramas that pose problems for investigations, inflates workloads for crime labs, and adds to the length of time it takes to conclude. Although viewership in general raises expectations, viewing crime dramas alone is not enough to blame for what jurors expect to be presented in a jury trial. Additionally, Vicary and Zaikman (2017) found in their examination of police chiefs' attitudes toward the CSI effect that despite high levels of crime show viewership, individuals were no more understanding of forensic science. On its own, crime drama viewing does not account for a CSI effect or a tech effect, but could lend its influence to the additional time prosecution and defense attorneys spend during voir dire questioning potential jurors about their television watching habits (Eatley et al, 2018).

Research Question 2

Personal Technology Use (PTU)

Research question two examined respondents' personal use with electronic devices (PTU) and the impact that had on possible expectations for evidence presented during trial. Davis et al. (2011) argued that jurors are influenced by multiple factors not just crime drama viewing habits. Davis et al. suggested that heightened expectations for evidence at a trial may be a result of the widespread accessibility to technology within our culture, while Shelton et al. (2006) theorized the change in culture and advances in

science and technology lend to the origins of heightened expectations for evidence during trial. Accounting for respondents' personal use of technology was important to understand if this variable inadvertently contributes to an expectation about evidence presented in trial. Our current culture has become accustomed to the accessibility of having an electronic device at our fingertips. People are used to the instant gratification of obtaining whatever it is we want in increasingly short order. It is not necessarily a bad thing to have our needs, wants, and desires met quickly, but as it pertains to the spread of quick-fix solutions in the digital age, instant gratification-fueled impulsive behaviors may be detracting from our health, ability to use critical thinking, and our quality of life (Perlmutter, 2019). Our brains are constantly changing in response to what we do and pay attention to, including how we tend to overvalue instant gratification and get distracted from longer-term, more meaningful goals. Of course, people are going to enjoy and perhaps even rely on personal electronic devices to acquire or achieve the conveniences of the modern world, but an over-reliance on instant gratification behaviors can cause problems by changing our brains when we need to be more conscious about the context, frequency, and consequences of decision-making (Perlmutter, 2019).

A total value was computed for the variable representing personal use with technology. The value indicated that on average respondents utilized electronic devices 4-6 times a day. This number pales in comparison to the average of 344 times per day Americans say they check their personal cellphones (Wheelwright, 2022) according to a survey of 1,000 Americans 18 years old and older. However, the multiple regression analysis determined that PTU was not a significant contributing predictor to the overall

model for EXP and thus the null hypothesis was accepted. At the height of a digital revolution, even personal use with technology and the instantaneous gratification people get as a result of speedy commands, does not on its own contribute to an overall tech effect. Personal electronic use could however contribute to the overall idea of technology having an effect on juror decision making when taking into consideration other contributing factors such as the perceived realism of crime drama TV programs and the technology used within those programs.

Research Question 3

Attitudes About Technology (ATT)

Research question three examined respondents' attitudes about the advancement of technology in society (ATT) and the impact that had on expectations for evidence presented in trial. This variable piggybacked off personal technology use and was examined to determine whether several mass mediated effects work in conjunction with each other to fuel what the public perceives to be 'real' (Schweitzer & Saks, 2007) and whether a technology effect has emerged from the cultural shift in digital and technological advancements (Shelton et al., 2006, 2011). Technological change is inherent to human progress and serves to alter the capacity with which we act (Weinberg, 2019). The fast pace of technical and industrial advancement over the last century has redefined the relationship between people and the natural world, thus affecting how social arrangements, individual behavior, and collective development is influenced (Weinberg, 2019).

The application of high-tech imagery and contemporary visual experiences in film and television have exponentially increased as our current culture combines modern technology and the Internet (Liu, 2021). Some of the most alluring aspects of crime dramas are their high-tech methods they use to elicit information about crime scenes, collect and analyze evidence, and gather insight toward a solution. The characters of the show often successfully discover links between suspects and crime scenes in little to no time at all with extreme ease and are all knowledgeable on how to manipulate electronic equipment to manufacture an answer about some aspect of the case. Perhaps this implies that definitive answers and identifications can be attained quickly when police departments and crime labs utilize top-of-the-line tech to aid in their investigations like is shown throughout television portrayals. Unfortunately, however, television portrayals of the criminal investigation process fail to accurately mimic the amount of time that passes as a result of evidence analysis.

According to the Office of Legislative Research (2010), turnaround time for regular DNA cases varied between states, with some like Wyoming, Tennessee, Texas, New Hampshire, and Arizona estimating less than 15 days turnaround time for results compared to others like Florida, Kansas, Missouri, Oklahoma, and Rhode Island estimating more than two to three months turnaround time. No matter how quickly a crime scene is secured, combed through, and evidence collected, definitive results may take upwards of months at the hands of crime lab technicians and that is if the sample collected provided conclusive analyses that add to the story of what occurred at the crime scene. Not to mention the fact that many real-life police departments are operating on 20-

year-old technology that has no current integration capability and do not have access to things like fully integrated or interoperable systems as reported by a former police lieutenant in Georgia (Mitrokostas, 2019). When equipping a forensic laboratory, the cost of purchasing and maintaining instrumentation and equipment is one of the first considerations. Not all jurisdictions are equipped equally. Law enforcement agencies that have labs ill-equipped to handle specific analyses of evidence may need to spend extra time and resources to get the analysis completed. It is expected soon that efforts will focus on the development of technologies to improve the speed of DNA evidence analysis and reduce lab turnaround time from days to hours (Kloosterman et al., 2015).

So, are attitudes toward the advancement of technology used in our current culture contributing to a tech effect among jurors? Are public attitudes heightening expectations for evidence as definitive proof for conviction in a trial? The value of ATT was totaled based on responses to the Likert scale questions and it was determined to be indicative of overall agreeableness to the statements. Although respondents generally agreed with the statements made about technology use in society, results from the multiple regression analysis confirmed that this variable was insignificant in predicting people's expectations for evidence presented during a trial, and, therefore once again accepted the null hypothesis. Respondents' attitudes about the progression of technology in current pop culture does not account for or contribute to heightened expectations for scientific evidence to be presented during trial.

Research Question 4

Perceptions of Technology used in Crime Drama Television (PER)

Research question four examined respondents' perceptions of the technology depicted within crime drama television programs (PER) and its impact on expectations for evidence in trial. Lobo and Schnobrich-Davis (2015) suggested that heightened expectations were not based solely on crime drama viewership but in the overall change in culture and the ability for information to be spread through mass mediated platforms. In conjunction to Hayes and Levett (2013) concluding that those who watch crime shows are more likely to think the shows are both accurate and educational especially when looking specifically at forensic and crime dramas, Rhineberger-Dunn et al., (2017) found that when crime dramas present themselves in a way that looks like reality, people perceive it to be true. Fictional crime dramas that can show an inaccurate display of the function of criminal investigators and the justice system jeopardize how people perceive the way the system solves crime and treats victims and criminals (Hogan, 2019). PER were totaled based on responses to Likert scale statements and determined to be indicative of overall agreeableness to the statements.

A multiple regression analysis determined that PER *is* statistically significant in predicting expectations for evidence presented during trial and the null hypothesis is rejected. This is important to consider when thinking about how real-life jury trials may be affected in terms of juror perceptions. The idea that what people perceive to be real from what is viewed from television programs, supports the idea that there are multiple

factors contributing to the reason potential jurors have expectations about evidence in the first place (Shelton et al., 2006, Davis et al., 2011, Lobo & Schnobrich-Davis, 2015).

Till et al., (2021) conducted a cross-sectional web-based survey to ask 1,002 Austrian respondents about their weekly crime drama television viewing habits and their beliefs about the use of the death penalty. The death penalty, which has been abolished in most Western countries, is often portrayed, or mentioned in U.S. crime shows distorting perceptions of reality among its Austrian viewers. Although the death penalty is still practiced among some states in the U.S., it has long been abolished in Austria. However, U.S. based crime dramas are just as popular internationally as they are with Americans. The amount of television viewing can be associated with erroneous perceptions of the use of the death penalty, even when the death penalty is not used in the respective country. Till et al. (2021) discovered that the more U.S. crime shows respondents watched, the more likely they were to mistakenly believe that the death penalty is used in Austria. Respondents' perceptions of the death penalty used in television was inappropriately associated with its use in the real world, which subsequently leads to the idea that some viewers were guided more by mediated reality than by actual social reality. It is possible that the results from the current study mimic the results from Till et al. (2021) because people perceive what they are watching to be based in reality.

Limitations of the Study

Participant Response

Limitations in research are restrictions and constraints which have been put on the methodology of the study and recognized by this researcher. Construct validity of the

survey used in this study was subject to the honesty and certainty of the participant's responses (Creswell, 2003; Frankfort-Nachmias & Nachmias, 2008). If respondents were over-indulgent or under estimated their beliefs and agreeableness to the statements, the reliability of the survey may be compromised. Additionally, since Likert-type questions are closed-ended, participants have to choose the most relevant answer even if it may not accurately reflect their true feelings. Likert-type questions/statements may invoke a level of response bias, whereas participants may have avoided selecting the extreme end of items to appear more 'normal' to avoid having extreme views one way or the other and to show themselves in a favorable way. Response fatigue could have been a limitation within the study as well if participants felt bored or lost interest in the context of the questions, resulting in absentmindedly selecting responses regardless of their true feelings. However, this researcher's survey was kept within a minimal completion time in an effort to mitigate these issues.

Sampling Strategy

Another limitation of the study was in the sample. Participants were recruited through convenience sampling using online forums and the social media platforms Facebook and Reddit. Although this allowed for the quick recruitment of participants, participation was limited to only those individuals with active social media accounts and access to the Internet. Not unlike Baskin and Sommers (2010) who opted for only telephone surveys, this may have weakened research validity.

Recommendations

There are several recommendations that could be explored as a result of this research. Although the sample for this study satisfied the number needed for statistical significance, a much larger and diverse sample would be ideal. Future studies that utilize a broader sample representative of participants that not only have social media accounts, but are active members of society and meet the eligibility requirements for jury duty should be considered in future research and would be beneficial to enhance the depth of understanding within the targeted population.

Having a greater representation of minority groups would help in understanding how people across all races and ethnicities would make decisions about jury trials and whether there are differences between those groups. In efforts to continue research related to the effects of crime drama viewership, careful consideration to gain a more diverse sample would be beneficial in understanding how the results could be interpreted across different groups. Perhaps an interesting aspect of decision-making behaviors would be in whether (single vs. married or college graduate vs. high school graduate) individuals differ in the way they base decisions. Education level and household status could be looked at more specifically as they relate to how decisions are made for future studies, but for the purposes of this research, age, gender, and race were primary considerations.

Future studies should also consider *how* people's perceptions of the technology used within fictional television programs impacts their expectations for evidence presented in trial and whether there may be other contributing factors to that perception

not considered within this study. It would be necessary to determine how fictional crime drama programs ultimately impact the way potential jurors make decisions in jury trials. The players invested in the adjudication process, attorneys and judges alike, can benefit in accounting for the general perception of the ordinary person and can do their due diligence during *voir dire* to mitigate misunderstood beliefs of what is to be expected during that particular trial.

Since this research was quantitatively based, a qualitative approach may be useful in understanding juror behavior as well. Gathering anecdotal accounts from jurors that sat on a criminal jury trial would help to dissect an individual's perspectives about how strongly evidence and the influence of technology is regarded with respect to making decisions on behalf of a defendant. In opposition of that, another qualitative study could assess pre-trial perspectives about what is expected at trial, focusing on individual opinions through interviews about what kind of evidence they expect to be presented and why.

Summary of Implications

The Cultural Shift in Media Influences

This study offers several implications to the way popular media culture has evolved into a technologically advanced world. Shelton et al. (2011) acknowledged the fact that a CSI effect could no longer be blamed for heightened juror expectations, but perhaps a technology effect as a result of the evolution of popular media culture to saturate our television programming with technological advancements used to enhance storylines in unrealistic ways. What once was thought to be the cause of jurors having

knowledge and expectations about the jury trial process through CSI related television viewership, is now 'outdated' thinking. Current culture implores people to buy into the newest and best version of electronic devices. Perhaps the reason people continue to have a certain expectation of evidence during a jury trial is because our culture has shifted into a technological revolution; people have some level of expectation for the science to prevail when what is shown in television programs always does.

The tech items available for the everyday consumer pale in comparison to what is assumed to be used in crime labs and police departments. Further glamorize that technology with speed, accuracy, and timeliness to help further the story and reach a fictional conclusion. The results of my research only support that people's perceptions of crime drama content has an influence on their level of expectations for what is presented as evidence during a trial. The fact that technological dramatizations occur within plotlines, top of the line equipment is used throughout the storylines, and access to that technology is readily available, in conjunction with the fact that most everyone carries their own personal electronic device capable of tracking their own habits and interests, lends to the idea that what people perceive to be real is cultivated from television viewing.

Hayes-Smith and Levett (2011) noted that crime show viewing research influences the ordinary person's perception of the criminal justice system and the expectations for the presentation of forensic evidence during trial, which coincides with the findings of this research. What people view through fictional crime dramas is primarily perceived as real. This was indicated by significance in the statements used to

evaluate how people perceive technology that is depicted within television programs. The advances in science and technology, and the ability for mass mediated platforms to spread information (Lobo & Schnobrich-Davis, 2015) has led to the realization through this research that external influences like fictional crime dramas and how technology is used to tell those stories are responsible for heightened juror expectations in courtroom trials.

It is not enough to claim that just simply having been a viewer of the older television series "CSI' was to blame for how jurors make decisions in trials. As our culture has shifted, inundated by technology use in all facets of life that include personal use, home security and management, how we cultivate and maintain relationships, the way we communicate, how we manage finances and banking, how education can be fostered and obtained, cryptocurrency and mining, the way we do our jobs on a daily basis just to name a few; has catapulted the illusion that everything we see on television that uses the same technologies must be true. The difference however is that the speed, accuracy, and availability for those technologies to be utilized in media platforms are gross misrepresentations of the ability or funding for real-life jurisdictions to mimic their successes.

Social Change Implication

One specific social implication of the findings of this research is the connection between crime drama viewership and the layperson's expectations at trial for evidence. Lawyers should consider the fact that people may unrealistically believe what is shown in crime drama storylines to be real and determine a way to mitigate that in the juror

selection process. Perhaps, if attorneys can decipher which potential jurors have certain presumptions about how evidence is presented in court, changes in defendant trial outcomes could be possible. Even technically trained individuals or people familiar with certain types of technology may have undue biases and misperceptions about the evidence process that could hinder a trial. The shift in culture because technology is so widespread in our lives has continued to perpetuate an 'effect' as a result of crime drama television programs and the technologies used to dramatize their stories. What once was termed a CSI effect to explain jurors' heightened expectations for the presentation of evidence in trial, should now be considered a 'tech effect' to account for the way the ordinary person perceives what they see depicted on screen.

Conclusion

When popular television programs that showcased criminal investigations and trial practices took hold of the general public, police officers, lawyers, and judges alike had complaints reminiscent of tainted jury pools. Jurors began assuming more forensic evidence would be presented in jury trials and had heightened expectations for how easily and conclusively cases could be solved (Wise, 2010). This phenomenon was initially termed the CSI effect as a result of the content portrayed and depicted through fictional storylines and its ability to be blamed for heightened juror expectations. But as our culture has shifted toward a more technologically advanced world, so too has the idea that just the fact that watching specific crime drama television programs is the only culprit behind continued juror beliefs about the adjudication process and the evidence that may be presented.

Technology is everywhere and present in our everyday lives. It may be naïve to think technology in our culture today has not made things easier, or more accessible, or faster, or more simplified in some way, and transcended boundaries to reach everyone in some capacity having profound influences on our lives. As our culture has shifted toward modernization and scientific and technological advancements, it has brought about changes in the whole system of people's values, beliefs, perceptions, attitudes, and ideologies. With this study, it is apparent that people's perceptions of what they believe to be real in television programs has a profound influence on the expectations for scientific evidence to be readily presented in jury trials. With future studies adding to these results, I am hopeful that players in the adjudication process can work around potential juror biases and expectations as they result from watching popular fictional crime drama television programs and getting a false sense of how the real processes work.

References

Aisner, A. (2007, May 18). CSI effect put under the scope. *Ann Arbor News*.

Alldredge, J. (2015). The CSI Effect and its potential impact on juror decisions. *Themis: Research Journal of Justice Studies and Forensic Science, 3*(6), 114-126.

American Psychological Association. (n.d.). Decision making. In *APA dictionary of psychology*. Retrieved October 19, 2020, from https://dictionary.apa.org/decision-making

Baranowski, A.M., Burkhardt, A., Czernik, E., & Hecht, H. (2018). The CSI-education effect: Do potential criminals benefit from forensic TV series? International *Journal of Law, Crime, and Justice, 52*, 86-97. https://doi.org/10.1016/j.ijlcj.2017.10.00

Baskin, D.R., & Sommers, I.B. (2010). Crime-show-viewing habits public attitudes toward forensic evidence: The CSI effect revisited. *Justice System Journal, 31*(1), 97-113.

Britannica, T. Editors of Encyclopaedia (2023, January 19). Nielsen ratings. *Encyclopedia Britannica*. https://www.britannica.com/art/Nielsen-ratings

Brown, D., Lauricella, S., Douai, A., & Zaidi, A. (2012). Consuming television crime drama: A uses and gratifications approach. *American Communication Journal, 14*(1), 47-60.

Browning, K. (2015). Social science research on forensic science: The story behind one of NIJ's newest research portfolios. *NIJ Journal, 275*, 40-47. Retrieved from http://nij.gov/journals/275/Pages/social-science-forensics.aspx

Bureau of Labor Statistics, U.S. Department of Labor. How to become a forensic science technician. *Occupational Outlook Handbook, Forensic Science Technicians*. Retrieved from: https://www.bls.gov/ooh/life-physical-and-social-science-technicians.htm

Busselle, R. W. (2020). Perceived realism. *International Encyclopedia of Media Psychology*. Retrieved from: https://doi.org/10.1002/9781119011071.iemp0206

Campbell, S. (2009). "Dead men do tell tales": CSI" Miami and the case against narrative. *The Journal of American Popular Culture, 8*(1), 1-10. Retrieved from: http://www.americanpopularculture.com/journal/articles/spring_2009/campbell.htm

CBS. (2017). *CSI: Crime scene investigation*. Retrieved from: http://www.cbs.com/shows/csi/about/

Cecutti, L., Chemero, A., & Lee, S.W.S. (2021). Technology may change cognition without necessarily harming it. *Nature Human Behavior, 5*, 973-975. https://doi.org/10.1038/s41562-021-01162-0

Cole, S. A., & Dioso-Villa, R. (2007). 'CSI and its effects: Media, juries and the burden of proof'. *New England Law Review, 41*, 435-470.

Cole, S. A., & Dioso-Villa, R. (2009). Investigating the 'CSI Effect' effect: Media and litigation crisis in criminal law. *Stanford Law Review, 61*(6), 1335-1374.

Cormick, C. (2019). Public attitudes toward new technologies: Our post-truth, post-trust, post-expert world demands a deeper understanding of the factors that drive public attitudes. *Science Progress*. https://doi.org.10.1177/0036850419851350

Creswell, J.W. (2003). *Research design: Qualitative, quantitative, and mixed method approaches*. London: Sage Publications.

Davis, B.K. & Brooke, E.J. (2021). Making better offenders? Exploring the perception of the CSI effect among college students. *Journal of Criminal Justice Education, 32*(4), 446-463. https://doi.org/10.1080/10511253.2021.1912128

Davis, G. A., Paullet, K. L., Houck, M., & Swan, T. (2010). Does the technology portrayed in television crime shows have an effect on potential jurors? *Issues in Information Systems, 11*(1), 154-163.

Davis, G. A., Paullet, K. L., Grant, A. J., & Kraeer, B. (2011). The new tech effect: Analyzing juror credibility in cases involving digital evidence. *Journal of Information Systems Applied Research, 5*(4), 44-54.

Deutsch, S. K., & Cavender, G. (2008). CSI and forensic realism. *Journal of Criminal Justice and Popular Culture, 15*(1), 34-53.

Dressler, J. & Michaels, A. C. (2006). *Understanding criminal procedure: Adjudication (4th ed.)*. Matthew Bender & Company, Inc., LexisNexis. Danvers, MA.

Eatley, G., Hueston, H.H., & Price, K. (2018). A meta-analysis of the CSI effect: The impact of popular media on jurors' perception of forensic evidence. *Politics, Bureaucracy, and Justice, 5*(2), 1-10.

Etikan, I., Musa, S. A., & Alkassim, R.S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1-4. DOI: 10.11648/j.ajtas.20160501.11

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2014). G*Power 3.1.9.2 A flexible

statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*, 175-191.

Field, A. (2013). Discovering statistics using IBM SPSS statistics. (4th ed.). SAGE Publications.

Frankfort-Nachmias, C. & Nachmias, D. (2008). *Research methods in the social sciences* (7th ed.). New York, NY: Worth Publishers.

Gerbner, G., Gross, L., Morgan, M., & Signorielli, N. (1986). Living with television: The dynamics of the cultivation process. *Perspective on Media Effects*, 17-40.

Griebel, K. K. (2012). Fred Zain, the CSI effect, and a philosophical idea of justice: Using West Virginia as a model for change. *West Virginia Law Review, 114*(3), 1156-1193. https://researchrepository.wvu.edu/wvlr/vol114/iss3/13

Gustafson, K. (2022). *9 Modern forensic science technologies*. Retrieved from: https://www.forensiccolleges.com/

Hawkins, I. & Scherr, K. (2017). Engaging the CSI effect: The influences of experience-taking, type of evidence, and viewing frequency on juror decision making. *Journal of Criminal Justice, 49*, 45-52. DOI: 10.1016/j.jcrimjus.2017.02.003

Hayes-Smith, R. M., & Levett, L. M. (2011). Jury's still out: How television and crime show viewing influence jurors' evaluation of evidence. *Applied Psychology in Criminal Justice, 7*(1), 29-46.

Hogan, A. (2019). How crime dramas influence perception of crime. *Undergraduate Honors Thesis Collection, 459*. https://digitalcommons.butler.edu.ugtheses/459

Hui, C.Y.T., & Lo, W. (2017). Examination of the "CSI effect" on perceptions of

scientific and testimonial evidence in a Hong Kong Chinese sample. *International Journal of Offender Therapy and Comparative Criminology, 61*(7), 619-135. DOI: 10.1177/0306624X15611874

Klentz, B.A., Winters, G.M., & Chapman, J.E. (2020). The CSI effect and the impact of DNA evidence on mock jurors and jury deliberations. *Psychology, Crime, & Law, 26*(6), 552-570. DOI:10.1080/1068316X.2019.1798353

Kloosterman, A., Mapes, A., Geradts, Z., Kopere, C., & Vereheij, S. (2015). The interface between forensic science and technology: How technology could cause a paradigm shift in the role of forensic institutes in the criminal justice system. *Philosophical Transactions of the Royal Society B: Biological Sciences, 370*(1674). https://doi.org/10.1098/rstb.2014.0264

Leddy, D. (2017). *Blame CSI effect for hung jury in motel massacre*. Retrieved from https://www.silive.com/opinion/danielleddy/2017/11/blame_csi_effect_for_hung_jury.html

Liu, J. (2021). Impact of high-tech image formats based on full-frame sensors on visual experience and film-television production. *Wireless Communications and Mobile Computing*, 9881641. https://doi.org/10.1155/2021/9881641

Lobo, J. & Schnobrich-Davis, J. (2015). Tech effect and generational age implications on jury verdicts. *Forensic Research & Criminology International Journal, 1*(3), 1-9. DOI:10.15406/frcij.2015.01.00016

Lodge, C. & Zloteanu, M. (2020). Jurors' expectations and decision-making: Revisiting the CSI effect. *Bulletin of the British Psychological Society. The North England,*

Autumn 2020. 19-30. https://www.researchgate.net/publication/343230426_Jurors'_expectations_and_decision-making_Revisiting_the_CSI_effect

Maeder, E. M., & Corbett, R. (2015). Beyond frequency: Perceived realism and the CSI effect. *Canadian Journal of Criminology and Criminal Justice, 57*, 83-114. DOI:10.3138/cjccj. 2013.E44

Mancini, D. E. (2011). The CSI effect reconsidered: Is it moderated by need for cognition? *North American Journal of Psychology, 13*(1), 155-174.

Mann, M. D. (2006). The 'CSI-effect': Better jurors through television and science? *Buffalo Public Interest Law Journal, 24*, 157-183.

McClain, C., Vogels, E. A., Perrin, A., Sechopoulos, S., & Rainie, L. (2021). *The internet and the pandemic*. Pew Research Center.

Merriam-Webster. (n.d.). Juror. In *Merriam-Webster.com dictionary*. Retrieved October 19, 2020 from https://www.merriam-webster.com/dictionary/juror

Merriam-Webster. (n.d.). Trial. In *Merriam-Webster.com dictionary*. Retrieved October 19, 2020 from https://www.merriam-webster.com/dictionary/trial

Michigan Compiled Laws. (2006). MCL § 600.1307a

Miller, J, D., Kimmel, L., ORC Macro, Smith, T., & Losh, S.C. (1979-2006). *National Science Foundation Surveys of Public Attitudes Toward and Understanding of Science and Technology*. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2016-12-07.

https://doi.org/10.3886/ICPSR28368.v1

Mitrokostas, S. (2019). *7 things crime shows always get wrong, according to law enforcement professionals*. Retrieved from: https;//www.insider.com/things-crime-shows-get-wrong-about-real-life-2019-3

Mosharafa, E. (2015). All you need to know about: The cultivation theory. *Global Journal of Human-Social Science: A Arts & Humanities – Psychology* 15(8), 22-37.

National Institute of Justice. (2015). *Crime laboratory backlogs: The impact on justice*. Retrieved from: https://nij.ojp.gov/events/crime-laboratory-backlogs-impact-justice

National Institute of Justice. (2015). *Forensic sciences: Types of evidence*. Retrieved from: https://www.nij.gov/topics/forensics/evidence/pages/welcome.aspx

National Institute of Justice. (2017). *Forensic sciences*. Retrieved from https://www.nij.gov

Office of Legislative Research. (2010). Forensic testing turnaround time in 50 states. *OLR Research Report, 2010-R-0086*. Retrieved from https://www.cga.ct.gov/2010/rpt/2010-R-0086.htm

Papke, D.R. (2007). The impact of popular culture on American perceptions of the courts. *Marquette Law School Legal Studies Paper No. 07*-07. Retrieved from http://dx.doi.org/10.2139/ssrn.1005383

Paullet, K., Davis, G. A., McMillion, S. K., & Yerby, J. (2013). The new tech effect: A comparative analysis of two universities. *Issues in Information Systems, 14*(2),

12-22.

Perlmutter, A. (2019). *The real issue with instant gratification. How quick-fix thinking creates problems in the modern world*. Retrieved from https://www.psychologytoday.com

Podlas, K. (2001). Please adjust your signal: how television's syndicated courtrooms bias our juror citizenry. *American Business Law Journal, 39*(1), 1-24.

Podlas, K. (2006). The "CSI effect" and other forensic fictions. *Loyola of Los Angeles Entertainment Law Review 27*(2), 87-125.

Podlas, K. (2009). Impact of television on cross-examination and juror "truth." *Widener Law Review, 14*, 483-511.

Ramsland, K. (2009). The facts about fiction: What Grissom could learn about forensic psychology. *Journal of Psychiatry & Law, 37*(1), 37-50.

Rhineberger-Dunn, G., Briggs, S. J., & Rader, N. E. (2017). The CSI effect, DNA discourse, and popular crime dramas. *Social Science Quarterly, 98*(2), 532-547. https://doi.org/10.1111/ssqu.12289

Rubin, R.B., Palmgree, P., & Sypher, H.E. (2004). *Communication Research Measures: A Sourcebook* (1st ed.). Routledge. https://doi.org/10.4324/9781003064343

Schweitzer, N. J., & Saks, M. J. (2007). The CSI effect: Popular fiction about forensic science affects the public's expectations about real forensic science. *Jurimetrics, 47*, 357-364.

Seerum, E. (2019). An overview of correlational research. *Radiologic Technology, 91(2),* 176-179.

Shah, Z., Chu, J., Ghani, U., Qaisar, S., & Hassan, Z. (2020). Media and altruistic behaviors: The mediating role of fear of victimization in cultivation theory perspective. *International Journal of Disaster Risk Reduction, 42*, 1-8. DOI: 10.1016/j.ijdrr.2019.101336

Shelton, D. E., Kim, Y. S., & Barak, G. (2006). A study of juror expectations and demands concerning scientific evidence: Does the CSI effect exist? *Vanderbilt Journal of Entertainment & Technology Law, 9*, 331-336.

Shelton, D.E. (2008). The "CSI" effect: Does it really exist? *NIJ Journal 259*, 1-7.

Shelton, D. E., Barak, G., & Kim, Y. S. (2011). Studying juror expectations for scientific evidence: A new model for looking at the CSI myth. *Court Review: The Journal of the American Judges Association, 354*. Retrieved from: http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1357&context=ajacourtreview

Shrum, L. J. (2017). *Cultivation theory: Effects and underlying processes*. The International Encyclopedia of Media Effects, 1-12. DOI:10.1002/9781118783764.wbieme0040

Smith, L. L. & Bull, R. (2012a). Forensic Evidence Evaluation Bias Scale [Database record]. Retrieved from PsycTESTS. Doi: http://dx.doi.org/10.1037/t62636-000

Smith, L. L & Bull, R. (2012b). Identifying and measuring juror pre-trial bias for forensic evidence: development and validation of the Forensic Evidence Evaluation Bias Scale. *Psychology, Crime & Law*, *18*(9), 797-815, DOI:10.1080/1068316X.2011.561800

Smith, L. L. & Bull, R. (2014). Validation of the factor structure and predictive validity of the Forensic Evidence Evaluation Bias Scale for robbery and sexual assault trial scenarios, *Psychology, Crime & Law*, 20(5), 450-466. DOI:10.1080/1068316X2013.793340

Stangor, C. (2011). *Research methods for the behavioral sciences* (4th ed.). Belmont, CA: Wadsworth, Cengage Learning.

Stangor, C. (2014). *Research methods for the behavioral sciences* (5th ed.). Belmont, CA: Wadsworth, Cengage Learning.

Stinson, V., Patry, M.W., & Smith, S.M. (2007). The CSI effect: Reflections from police and forensic investigators. *The Canadian Journal of Police & Security Services, 5*, 125-133.

Till, B., Arendt, F., & Niederkrotenthaler, T. (2020). The relationship between crime-related television viewing and perceptions of the death penalty: Results of a large cross-sectional survey study. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.715657

Trainum, J.L. (2019). The CSI effect on cold case investigations. *Forensic Science International, 301*, 455-460. https://doi.org/10.1016/j.forsciint.2019.05.020

Tyler, T. R. (2006). Viewing CSI and the threshold of guilt: Managing truth and justice in reality and fiction. *The Yale Law Journal; New Haven, 115*(5), 1050-1085.

VandenBos, G. R. (Ed.). (2007). *APA Dictionary of Psychology*. CSI Effect. American Psychological Association.

Verma, J. P. & Abdel-Salam, G. A. (2019). Testing statistical assumptions in research.

John Wiley & Sons Inc. DOI: 10.1002/9781119528388

Vicary, A., & Zaikman, Y. (2017). The CSI effect: An investigation into the relationship between watching crime shows and forensic knowledge. *North American Journal of Psychology, 19*(1), 51-64.

Weinberg, M. (2019). Technology, values, and the shaping of social reality. *Bahá'i World*. Retrieved from: https://bahai-library.com/weinbereg_technology_values_reality

Wheelwright, T. (2022). *2022 Cell phone usage statistics: How obsessed are we?* Retrieved from https://www.reviews.org/mobile/cell-phone-addiction/

Wickenheiser, R.A. (2021). Reimagining forensic science – The mission of the forensic laboratory. *Forensic Science International Synergy, 3*, 100153. https://doi.org/10.1016/j.fsisyn.2021.100153

Wise, J. (2010). Providing the CSI treatment: Criminal justice practitioners and the CSI effect. *Current Issues in Criminal Justice, 21*(3), 383-399.

Woodcock, B., Middleton, A., & Nortcliffe, A. (2012). Considering the Smartphone Learners: An investigation into student interest in the use of personal technology to enhance their learning. *Student Engagement and Experience Journal, 1*(1), 1-15. DOI: 10.7190/seej.vlil.38

Uyanik, G. K., & Gùler, N. (2013). A study on multiple linear regression analysis. *Procedia – Social and Behavioral Sciences, 106*, 234-240. DOI: 10.1016/j.sbspro.2013.12.027

Appendix A: Permission Emails

From: Dante Mancini, Ph.D.
To: Erin Cosenza
June 18 at 9:42 AM
I have given Erin Cosenza permission to use the "Television Viewing Questionnaire" in her research as well as the attached questionnaires I had been using in a similar study.

Dante E. Mancini, Ph.D.
Licensed Psychologist
508 Allegheny River Blvd., Suite 206
Oakmont, PA 15139
http://papsychologist.com

From: Smith, Lisa L. (Prof.)
To: Erin Cosenza
June 13 at 9:23 AM
Thanks for your email, and your interest in the FEEBS. I'm certainly happy for you to use the scale in your research.

Professor Lisa Smith, MCSFS FHEA
Deputy Head of Department of Criminology
Director, Leicester Institute for Advanced Studies
Department of Criminology
University of Leicester, 154 Upper New Walk,
Leicester, LE1 7QA, UK
http://www.le.ac.uk

Appendix B: Online Survey Invitation

Online survey study seeks participants 18yo+ to share attitudes about crime drama viewership and technology.

There is a new study called *"Do Crime Drama Viewing Habits and Attitudes About Technology in Media Contribute to an Emerging 'Tech Effect' Among Potential Jurors"* that could help players in the legal arena better understand juror decision making behaviors based on several specific factors relating to technology. For this study, you are invited to respond as honestly as possible.

This survey is part of the doctoral study for Erin Cosenza, a Ph.D. student at Walden University.

About the study:

- 5–10-minute online survey
- Names will NOT be collected; Demographic information (i.e. age, gender) will be used to assist in determining differences among groups.

Volunteers must meet these requirements:

- 18 years old or older
- United States citizen
- English speaking

To confidentially volunteer, click the following link: [https://www.surveymonkey.com/r/8PN7DSK]

Appendix C:

IRB Approval

Dear Erin Cosenza,

This email is to notify you that the Institutional Review Board (IRB) has approved your application for the study entitled, "Do Crime Drama Viewing Habits and Attitudes About Technology in Media Contribute to an Emerging 'Tech Effect' Among Potential Jurors?"

Your approval # is 05-13-21-0363457. You will need to reference this number in your dissertation and in any future funding or publication submissions. Also attached to this e-mail is the IRB approved consent form. Please note, if this is already in an on-line format, you will need to update that consent document to include the IRB approval number and expiration date.

Your IRB approval expires on May 12, 2022 (or when your student status ends, whichever occurs first). One month before this expiration date, you will be sent a Continuing Review Form, which must be submitted if you wish to collect data beyond the approval expiration date.

Your IRB approval is contingent upon your adherence to the exact procedures described in the final version of the IRB application document that has been submitted as of this date. This includes maintaining your current status with the university. Your IRB approval is only valid while you are an actively enrolled student at Walden University. If you need to take a leave of absence or are otherwise unable to remain actively enrolled, your IRB approval is suspended. Absolutely NO participant recruitment or data collection may occur while a student is not actively enrolled.

If you need to make any changes to your research staff or procedures, you must obtain IRB approval by submitting the IRB Request for Change in Procedures Form. You will receive confirmation with a status update of the request within 10 business days of submitting the change request form and are not permitted to implement changes prior to receiving approval. Please note that Walden University does not accept responsibility or liability for research activities conducted without the IRB's approval, and the University will not accept or grant credit for student work that fails to comply with the policies and procedures related to ethical standards in research.

When you submitted your IRB application, you made a commitment to communicate both discrete adverse events and general problems to the IRB within 1 week of their occurrence/realization. Failure to do so may result in invalidation of data, loss of academic credit, and/or loss of legal protections otherwise available to the researcher.

Both the Adverse Event Reporting form and Request for Change in Procedures form can be obtained on the Tools and Guides page of the Walden website: https://academicguides.waldenu.edu/research-center/research-ethics/tools-guides

Doctoral researchers are required to fulfill all of the Student Handbook's Doctoral Student Responsibilities Regarding Research Data regarding raw data retention and dataset confidentiality, as well as logging of all recruitment, data collection, and data management steps. If, in the future, you require copies of the originally submitted IRB materials, you may request them from Institutional Review Board.

Both students and faculty are invited to provide feedback on this IRB experience at the link below:
http://www.surveymonkey.com/s.aspx?sm=qHBJzkJMUx43pZegKlmdiQ_3d_3d
Sincerely,
Elyse V. Abernathy, MSL, MSM
Research Ethics Support Specialist
Office of Research Ethics and Compliance
Walden University
100 Washington Avenue South, Suite 1210
Minneapolis, MN 55401

Information about the Walden University Institutional Review Board, including instructions for application, may be found at this link:
http://academicguides.waldenu.edu/researchcenter/orec

Appendix D:

Juror Expectations and Tech Effect Questionnaire

I. Demographics

1. Gender
    - Female
    - Male

2. Completed Education:
    - Did not finish high school
    - High School
    - Associate Degree
    - Bachelor Degree
    - Master Degree
    - Ph.D., M.D.

3. Age:
    - 18-25
    - 26-30
    - 31-40
    - 41-50
    - 51-65
    - 66+

4. Race/Ethnicity:
    - African American
    - Asian American
    - Caucasian
    - Hispanic
    - Native American
    - Other

5. Household: Your status
    - Single
    - Married
    - Domestic Partner
    - Separated
    - Divorced

- Widowed

Forensic Evidence Evaluation Bias Scale (FEEBS)

6. Please indicate your level of agreement with the following statements by marking the most appropriate number using the scale 1 (strongly disagree) to 5 (strongly agree).

Statement	Strongly Disagree	Moderately Disagree	Neither Agree or Disagree	Moderately Agree	Strongly Agree
Every crime can be solved with forensic science	1	2	3	4	5
Every criminal leaves some physical evidence Behind at every crime scene	1	2	3	4	5
If forensic evidence suggests a defendant is guilty, this should be enough to convict even if other evidence (i.e. eyewitness testimony, alibi) suggest otherwise	1	2	3	4	5
Forensic evidence always eventually identifies the guilty Person	1	2	3	4	5
Forensic evidence always provides a conclusive answer	1	2	3	4	5
Science is the most reliable way to identify the perpetrators of crime	1	2	3	4	5
If no forensic evidence is recovered from a crime scene, It means the investigators did not look hard enough	1	2	3	4	5
If there is no forensic evidence presented in a particular Case, then the jury should not convict	1	2	3	4	5
Police should not charge someone with a serious crime Unless forensic evidence is available to prove their guilt	1	2	3	4	5
If no forensic evidence is recovered from a crime scene The defendant is probably innocent of the crime	1	2	3	4	5

Television Viewing Habits

Please indicate the frequency with which you have watched each of the following television programs in the last month by choosing the most appropriate number using the scale 0 (never/less than once per month to 10 (ten or more times a month)

Program	Never/Less than once per month	Once per month	Twice per month	Three times per month	Four times per month	Five Times Per month	Six times per month	Seven times per month	Eight times per month	Nine times per month	Ten or more times per month
Blacklist	0	1	2	3	4	5	6	7	8	9	10
Blindspot	0	1	2	3	4	5	6	7	8	9	10
Blue Bloods	0	1	2	3	4	5	6	7	8	9	10
Chicago P.D.	0	1	2	3	4	5	6	7	8	9	10
Criminal Minds	0	1	2	3	4	5	6	7	8	9	10
Elementary	0	1	2	3	4	5	6	7	8	9	10
FBI	0	1	2	3	4	5	6	7	8	9	10
Hawaii Five-0	0	1	2	3	4	5	6	7	8	9	10
How to Get Away w/Murder	0	1	2	3	4	5	6	7	8	9	10
Law & Order SVU	0	1	2	3	4	5	6	7	8	9	10
Magnum P.I.	0	1	2	3	4	5	6	7	8	9	10
NCIS	0	1	2	3	4	5	6	7	8	9	10
NCIS: Los Angeles	0	1	2	3	4	5	6	7	8	9	10
NCIS: New Orleans	0	1	2	3	4	5	6	7	8	9	10
Sherlock	0	1	2	3	4	5	6	7	8	9	10
S.W.A.T.	0	1	2	3	4	5	6	7	8	9	10

II. Personal Technology Use

Rate your level of use by choosing the most appropriate number from 1 (Not at all) to 5 (Ten or more times)

7. How often do you use a personal electronic device (i.e. Smartphone, laptop, PC, Tablet, etc) to communicate (i.e. call, text, email, video-conference)

1	**2**	**3**	**4**	**5**
Not at all	1 – 3 times Daily	4 – 6 times Daily	7 – 9 times Daily	10 + times Daily

8. How often do you use a personal electronic device for entertainment purposes? (i.e. music, videos, gaming)

1	**2**	**3**	**4**	**5**
Not at all	1 – 3 times Daily	4 – 6 times Daily	7 – 9 times Daily	10 + times Daily

9. How often do you use a personal electronic device to manage money, pay bills, and/or transfer funds?

1	**2**	**3**	**4**	**5**
Not at all	1 – 3 times Daily	4 – 6 times Daily	7 – 9 times Daily	10 + times Daily

10. How often do you use a personal electronic device to watch television? (i.e. streaming apps, Netflix, Hulu, Roku, recorded TV, etc)

1	**2**	**3**	**4**	**5**
Not at all	1 – 3 times Daily	4 – 6 times Daily	7 – 9 times Daily	10 + times Daily

11. How often do you use a personal electronic device to meet new people, date, or foster online relationships?

1	**2**	**3**	**4**	**5**
Not at all	1 – 3 times Daily	4 – 6 times Daily	7 – 9 times Daily	10 + times Daily

12. How often do you use a personal electronic device to monitor your home? (i.e. home alarm systems, alarm monitoring apps, wireless cameras, energy use, etc)

1	**2**	**3**	**4**	**5**
Not at all	1 – 3 times Daily	4 – 6 times Daily	7 – 9 times Daily	10 + times Daily

13. How often do you use a personal electronic device to get information and daily local/world news?

1	**2**	**3**	**4**	**5**
Not at all	1 – 3 times Daily	4 – 6 times Daily	7 – 9 times Daily	10 + times Daily

III. Attitudes about Technology in Society

For each statement, please indicate on a scale from 1 (strongly disagree) to 5 (strongly agree).

14. It is important to be able to access and find any information online.

1	**2**	**3**	**4**	**5**
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

15. It is important to be able to access the Internet at any time.

1	**2**	**3**	**4**	**5**
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

16. It is not important for me to know about science and technology in my daily life.

1	**2**	**3**	**4**	**5**
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

17. Advancements in technology makes our way of life change too fast.

1	**2**	**3**	**4**	**5**
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

18. I get anxious without the availability of a Smartphone.

1	**2**	**3**	**4**	**5**
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

19. With the application of science and new technology, our jobs will become easier and more interesting.

1	**2**	**3**	**4**	**5**
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

20. I get anxious without the availability of the Internet.

1	**2**	**3**	**4**	**5**
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

21. I believe that technology can provide solutions to my problems.

1	**2**	**3**	**4**	**5**
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

22. I believe that with technology, anything is possible.

1	**2**	**3**	**4**	**5**
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

23. I believe more gets accomplished due to technology and rapid advancements.

1	**2**	**3**	**4**	**5**
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

24. I believe technology is easy to use.

1	**2**	**3**	**4**	**5**
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

25. I enjoy using new technology when it hits the market.

1	**2**	**3**	**4**	**5**
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

26. I believe technology makes people waste time.

1	**2**	**3**	**4**	**5**
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

27. I believe technology makes life more complicated.

1	**2**	**3**	**4**	**5**
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

28. I believe technology makes people more isolated.

1	**2**	**3**	**4**	**5**
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

IV. Perceptions of Technology in Television

29. I enjoy watching television programs that showcase what modern technology can do.

1	**2**	**3**	**4**	**5**
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

30. The technology used in crime drama television programs is an accurate depiction of how it is used in real life.

1	**2**	**3**	**4**	**5**
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

31. Modern technological advancements are used in television programs before becoming available to the general public.

1	2	3	4	5
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

32. I was unaware of the capabilities technology brings to law enforcement and criminal investigations until seeing it portrayed through crime shows.

1	2	3	4	5
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

33. The speed with which technology on television contributes to identifying suspects is an accurate depiction of real time.

1	2	3	4	5
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

34. The accuracy with which technology on television contributes to correctly identifying suspects is an accurate depiction of real investigation processes.

1	2	3	4	5
Strongly Disagree		Neither Disagree or Agree		Strongly Agree

35. Technology depicted in crime drama television is misrepresented and does not accurately portray how it is used in real life.

1	2	3	4	5
Strongly Disagree		Neither Disagree or Agree		Strongly Agree