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The University of Southern Mississippi
CSI EFFECT AND FORENSIC SCIENCE/CRIMINAL JUSTICE
DEGREE PROGRAMS

by

Megan Dutton McCay

Abstract of a Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

August 2014

ABSTRACT

CSI EFFECT AND FORENSIC SCIENCE/CRIMINAL JUSTICE

DEGREE PROGRAMS

by Megan Dutton McCay

August 2014

This research sought to determine the relationship between obtaining a criminal justice or forensic science degree and the CSI Effect followed by whether the students were satisfied with their major selection. Additionally, this research sought to determine if there were discrepancies between students' expectations before entering the forensic science or criminal justice degree program and students' attitudes while enrolled in the forensic science or criminal justice degree program. One hundred and ninety-six participants responded to a 33-item survey instrument over a three week time period. It was determined there was a television influence on students' major selection in the forensic science and criminal justice degree programs. Additionally, the students' satisfaction with major was influenced by factors such as academic performance, amount of hours students' watch crime-related television shows, students' expectations before entering the degree program, and students' attitudes while in the degree program.

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2014

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A Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

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CHAPTER I

INTRODUCTION

Background

On September 13, 1990, the television show *Law & Order* aired its first episode, which was one of the more popular crime drama series introduced to society. On October 6, 2000, one of the most recent popular television series *CSI, Crime Scene Investigation* premiered. Following the original *CSI* series, spin-offs originated such as *CSI: Miami* and *CSI: New York*. Furthermore, an abundance of criminal drama series television shows, similar to *CSI*, have premiered on television stations throughout the country and the world since the creation of *CSI*. Shelton (2008) stated that in one week in 2006 over 100 million viewers watched a crime-related television show depicting forensic evidence in criminal cases. The television shows depict a glitz and glamour version of reality.

In these fictional programs, sexy, charismatic, and highly astute crime scene investigators recover covert evidence from the crime scene, analyze the evidence with exceedingly sophisticated scientific testing procedures (often to the beat of a stylish soundtrack), make absolute conclusions about the perpetrator's identity and involvement in the crime, and often extract a confession from the perpetrator, all within an hour. (Mancini, 2011, pp. 155-156)

These crime-related television shows, such as *CSI*, have been able to depict the forensic science field as being sexy (Durnal, 2010). *CSI* has continued to be a growing success, and forensic science is the new hot topic in multiple settings.

Crime-related television shows, such as *CSI*, all depict some form of forensic science and/or criminalistics. With the varying series and spinoffs, there are different plots throughout each television show. However, no matter the specific series or television show, it can be anticipated that the criminal investigator will be displayed as the protagonist and will have the highest education level. Furthermore, it can be anticipated, that every crime being investigated will be solved.

Crime-related television shows reflect a false sense of reality in regard to forensic science and criminal justice. According to Houck (2006), an estimated 40% of forensic science in *CSI* is fiction. Dowler, Fleming, and Muzzatti (2006) expressed concern over how unrealistic the television show is, which causes viewers to be unsure what is fiction and reality. One example of blurred lines between fiction and reality is the depiction of the role of the crime scene investigator (Nolan, 2007). In reality, police officers are involved as much as the crime scene investigator. Additionally, crime scene technicians do not focus on nearly as much scientific information as they do processing the crime scenes. Furthermore, a crime is typically not solved in a 30 to 45 minute time period, as it is displayed on television. Schweitzer and Sakes (2007) stated that in recent years, *CSI* and its spin-offs have depicted forensic science as almost a magic trick with the small amount of time taken to solve the crimes. Bergslien (2006) discussed how real and fictional scientific equipment used on the television shows combined with the solving of crime scenes in 40 minutes has started to alter the perceptions of reality in the viewers' eyes. From the start of the television show to the end, the roles portrayed are depicted in a manner the producers see fit.

In *CSI* it is the civilian investigator who is the dominant and driving force in the criminal investigation. The police officers are depicted as bumbling, clueless functionaries who are barely tolerated by the dedicated, conscientious, and ultimately moral “scientists” who search for the truth amid the chaotic and gruesome remnants of the violent acts of those soon to be caught (all in forty-five minutes). (Nolan, 2007, p. 577)

Nolan (2007) described how society members who watch *CSI* and its spin-offs are being introduced to a world that is filled with the idea that the police officers are reporting to the criminal investigator. However, in crime-related television shows prior to *CSI*, society was introduced to the idea that police officers and detectives were taking the lead role in a criminal investigation. Nolan (2007) stated “police officers and sheriff’s deputies are depicted as fundamentally anachronistic; they respond to crimes and crime scenes, but they are cast by and large as acolytes and subalterns to the far more professional, knowledgeable, and sophisticated crime scene investigators” (p. 588).

Besides the crime-related television shows giving false information about who is in charge and the amount of time it takes to solve a crime, there are five major television characters that are thought of when crime scene investigation comes to mind. VanLaerhoven and Anderson (2009) stated many viewers want to have a profession in the field; however, they do not have much understanding to compare to. Additionally, VanLaerhoven and Anderson stated the careers being chosen are being influenced by the glamorous and exciting positions portrayed by the drama series characters. Nolan (2007) described the first as the character of Sara Sidle from *CSI*. Sara is portrayed as a dedicated scientist who is solely focused on solving crimes. The second character is

Warrick Brown, who is portrayed as using inanimate objects to solve crimes (Nolan, 2007). The third character, Catherine Willows, depicts the sympathetic female investigator who handles vulnerable female victims. The fourth character, Gil Grissom, is the mental image that is in society's head when they envision a crime scene investigator. In *CSI*, Grissom plays many roles from crime scene investigator to psychologist, to attorney, Robocop, and philosopher. The last character, Nick Stokes, is depicted as a member of the police fraternity (Nolan, 2007). Overall, these five characters are portrayed as being in direct control in the entire crime scene investigation process (sometimes managing more than one job), when in reality, it is the complete opposite.

Harriss (2011) stated ever since the rise of the *CSI* television series, society has been very critical of the show. Because of the setup of the show, there is repetition that occurs in the schematics. Furthermore, the television series is part of the mystery genre, which focuses more on knowledge rather than violence and force. Therefore, society has created the belief that it has negative social effects due to the television series. As a result, the television shows are inferring that with scientific evidence, the truth and justice will be discovered (Harriss, 2011).

Finally, Mann (2006) argued television is a source of profit; therefore, that is all that matters. The reality of the show becomes less important as more profit is obtained through the scripts. Furthermore, Mann stated there is no question that crime dramas educate the public. Mann explained due to society being in awe over reality entertainment, pieces of reality are cut to get a one-hour clip. “During this ‘Hollywoodization’ process, much of the content that accurately depicts real life criminal investigations is left on the cutting room floor, leaving viewers with a false sense of

understanding how complex and challenging investigative work can be" (Mann, 2006, p. 165). As a result, society is conflicted with trying to determine what is reality versus fiction.

Higher Education

Throughout higher education, there are a variety of collegiate degree programs an individual can obtain. While higher education has been in existence for a long period of time, the criminal justice and forensic science degree programs have been around only since the 20th century (Stephens, 1976). While both degree programs have not been in existence for too long, there has been a steady development of the degree programs as the time has passed.

Forensic Science. In the late 1960s and early 1970s, the nation witnessed a drastic change in crime rates (Peterson & Leggett, 2007). Crimes in general increased by 83% and violent crimes by 90% between 1966 and 1971. As a result of the increase in crimes, forensic laboratories in the nation have tripled (Peterson & Leggett, 2007). Tregar and Proni (2010) stated that in 1975 there were only 21 colleges or universities that were offering degrees in forensic science, whereas in 2007 there were over 120 colleges or universities. Lee (2007) stated there are currently 20 graduate level programs offered in the United States for forensic science, and approximately 120 colleges and universities that offer a baccalaureate degree in forensic science or a science degree with an emphasis in forensic science.

However, Quarino and Brettell (2009) referenced a decline in forensic science programs in the 1980s due to there being a lack of an academic component. The forensic science programs that were in existence were composed of scientific elements and standards were too low. Quarino and Brettell (2009) stated a concern over the need to

drastically increase the amount of forensic science programs in a small amount of time. It suggested that the quality of the forensic science programs is a negative result of the drastic increase of programs. Due to the awareness of low quality forensic science degree programs, quality standards were developed. Quarino and Brettell (2009) discussed how the Technical Working Group for Education and Training in Forensic Science: A Guide for Forensic Science Laboratories, Educational Institutions, and Students (TWGED) developed curricular guidelines for the degree programs. As a result, the Forensic Science Educational Program Accreditation Committee (FEPAC) was formed to help develop an accreditation system for forensic science degree programs. Quarino and Brettell (2009) stated the development of an accreditation process has increased the quality of degree programs.

Criminal Justice. In 1909, the National Conference on Criminal Law and Criminology took place in Chicago, Illinois. This was the first integration of higher education and the field of criminal justice (Stephens, 1976). The year prior to the conference, Andrew Vollmer created a police training that was then developed into the Berkeley Police School. By 1913, this police school had evolved into a three-year program consisting of various types of training and educational components (Stephens, 1976). In 1916, the first set of classes was offered at a university.

The University of California at Berkley was the first institution to have a criminal justice program in place in higher education. Following the University of California at Berkley were institutions such as Northwestern, Harvard, University of Southern California, University of Chicago, Michigan State University, and others. Southerland (1991) stated the baccalaureate degree in criminal justice grew tremendously during the

late 1960s and early 1970s. Michigan State University was the first college to offer a bachelor's degree directly related to law enforcement in 1935. From there, universities across the country started to not only develop courses and programs related to law enforcement, but actual degree programs started to develop as well. However, Stephens (1976) stated it was not until after World War II that there was an explosion of criminal justice higher education. Simpson (1979) stated there were approximately 1200 programs by 1979; Halsted (1985) stated that in 1965 there were only 64 programs noted. It is apparent that as time progressed, a period of growth for criminal justice degree programs occurred.

Foster, Magers, and Mullikin (2007) stated the Law Enforcement Education Program (LEEP) resulted in an increase of criminal justice academic programs in the United States. LEEP was a result of Title 1 of the legislative act Omnibus Crime Control and Safe Street Act. The original purpose of LEEP was to provide funding to students to encourage them to enter the field. Foster et al. (2007) described LEEP as a student financial program, but for the institutions to receive the financial aid, the criminal justice degree programs had to be in existence. As a result, criminal justice degree programs started to expand across the country in the 1970s.

Satisfaction

Nauta (2007) stated the level a student is satisfied with his or her major is important from practical and theoretical standpoints. Tontodonato (2006) explained measuring student satisfaction helps schools and programs understand the educational attitudes and preferences they bring with them to the university. Some of the questions that are referenced in student satisfaction are “are you satisfied with your major” and “if

you could do it all over again, would you have your same major?" By asking questions such as these, the researcher is able to determine if specific expectations are achieved before entering the program. Krimmel and Tartaro (1999) claimed a majority of students select their college major because of their career choice post graduation. Additionally, Krimmel and Tartaro stated a majority of responses to the question, why the criminal justice major was selected, was due to the field being interesting. The second strongest response was the major's relevance to the criminal justice field. Therefore, if students are interested in a major, then they may have a set expectation before entering the degree program.

CSI Effect

In 2004, the term *CSI Effect* evolved through a news report in *USA Today*. However, it was not until 2005 that the term was explained in a World News Report describing how crime-related television shows affect jury convictions. The CSI Effect can be described as crime-related television shows affecting jury convictions by jurors expecting more evidence to convict. Several scholarly articles continued to expound upon the CSI Effect and its relationship to the courtroom; however, Cole and Dioso-Villa (2007) further explained the CSI Effect by stating there are actually six versions: (a) prosecutor's effect, (b) weak prosecutor's effect, (c) defendant's effect, (d) producer's effect, (e) professor's effect, and (f) police chief's effect. While the first four versions directly deal with the courtroom, the last two versions do not. The professor's effect is related to academia, whereas the police chief's effect is related to potential criminals.

Theoretical Framework

There has been more than 30 years of research examining the concepts of television viewers' social reality being shaped by the amount of television exposure an individual has (Gerbner & Gross, 1976; Gerbner, Gross, Morgan, & Signorielli, 1994; Hawkins & Pingree, 1982; Hawkins, Pingree, & Adler, 1987; Morgan & Shanahan, 1996). The idea that the more an individual is exposed to television, the concepts that are displayed on the television are more accessible in memory. Furthermore, research has shown that frequency of television viewing is positively correlated with the viewers' perceptions of the items, which are heavily shown on television (Gerbner, Gross, Morgan, & Signorielli, 1980; Hawkin et al., 1987; Shrum, 1996).

The concept of an individual's beliefs being cultivated by the amount of exposure to television is known as cultivation theory (Gerbner, 1972). Shanahan and Morgan (1999) explained cultivation as the effects patterns of television images have on individuals. Television has a crucial impact on society's beliefs, values, and ideologies due to the images portrayed through it being a common feature in households (Shanahan & Morgan, 1999). Shanahan and Morgan discussed how cultivation theory is misused in research and the point of the theory is to examine broad patterns of relationships between the messages sent via television and the personal beliefs of those messages in society.

Gerbner (1972) alluded to how the combination of being easily impressionable and lack of knowledge could lead viewers to believe the media is accurately depicting information. Children and less educated adults are typically the society members who are exposed to the images and myths television portrays (Gerbner & Gross, 1976). Podlas (2006) stated due to the exposure of television, the viewers' reality tends to mirror the

images television portrays. As a result, the viewers start experiencing the blurred lines of reality and fiction, especially when there is heavy dependence on the specific medium (Elliot & Rosenburg, 1987).

Statement of the Problem

The phenomenon known as the CSI Effect has been developing for less than a decade; however, there is a great deal of research completed on the topic. The CSI Effect has several components; however, the most frequently researched component examines jury members and the judicial system. While it is very important to research the components affecting individuals' lives within the judicial system, there are other aspects the CSI Effect impacts.

Additionally, throughout the same time period of the development of the CSI Effect, there has been an increase in enrollment numbers in forensic science and criminal justice programs. However, there is not much empirical research on the impact of the CSI Effect on prospective college students when choosing a college major. Lastly, once the college major is selected, research has not examined the subsequent satisfaction of the students who choose criminal justice and forensic science as their major. The CSI Effect is commonly thought to negatively impact aspects of the field. With a lack of empirical evidence on the academic side, it is not known if the CSI Effect also has an impact on the students' retention. If the students are misinformed or rely on media depictions of forensic science and criminal justice to choose a profession, it would be beneficial to change the portrayal of the professions on television; however, it is unrealistic to say television shows' ratings and profits would not have an impact on this change. Overall, there is a gap in the literature, which is exploring whether students are being negatively

affected by the CSI Effect and being misguided from the truth of the actual degree programs and professions.

The purpose of this study is to determine the relationship between obtaining a criminal justice or forensic science degree and the CSI Effect followed by whether the students are satisfied with their major selection. Specifically, this study seeks to determine if watching crime-related television shows influences the decision to choose a major in criminal justice or forensic science (RQ₁) and to determine if there are any discrepancies between students' expectations and attitudes before and while in the degree program (RQ2). Then, this study seeks to determine the students' satisfaction with their criminal justice or forensic science major selection (RQ₃). In other words, the goal is to not only determine if watching the television shows influences college major selection of forensic science or criminal justice, but also if there is a misinterpretation of what the crime-related professions are, which may result in decreased student satisfaction.

Methods Overview

College students who declared their major as criminal justice and forensic science were sought as participants in this study. Furthermore, only institutions that have certified and accredited criminal justice and forensic science programs were sought for participants. Upon approval from the department chair of an accredited institution, each student received an email with access to a questionnaire link from the researcher. After the student chose to participate, participation consent information was displayed. For the participant to proceed any further, they must have selected the option that stated they understand they are completing the questionnaire voluntarily and can stop at any point throughout. Then, there was one screening question asking the participant if they are a

criminal justice or forensic science major. If the response of no was selected, the participant was not allowed to continue further. If the response of yes was selected, then the participant was allowed to continue to the questionnaire. Next, the participant viewed a series of questions that they answered at their own pace. The results were analyzed through statistical software and examined to determine descriptives, correlations, and any inferences that can be made.

Justification

It is essential to conduct empirical research to determine if crime-related television shows are cultivating fictional or factual expectations of criminal justice and forensic science degree programs and professions for the students. The term *CSI Effect* has been coined as a term of art within the American legal system for years now especially with expectations as a jury member; however, discrepancies between expectations and reality for a criminal justice or forensic science student is an area that warrants additional inquiry. Whether the discrepancy is positive, negative, or lacking, it is important to determine the relationship between the CSI Effect and criminal justice/forensic science majors.

As a result, examination of the link between the CSI Effect and college student satisfaction (or lack thereof) within these majors would assist prospective students in ensuring they are aware of the realities of the major and the profession prior to registering for classes. Assisting college students with appropriate and realistic college major selection can help the retention rate for the specific academic program as well as ensure matriculation of the student.

Definition of Terms

For the purposes of this study, the following definitions will be used:

CSI Effect: influence of crime-related television shows on varying areas in society, such as the criminal system and academia.

Assumptions

There is an assumption that respondents completed the questionnaires themselves rather than delegated someone else to respond. Additionally, there is an assumption that the respondents answered the questions to the best of their ability and as accurately as possible. There is also an assumption that the respondents are misinformed.

Delimitations

This study is delimited to those undergraduate and graduate students who are enrolled in a forensic science or criminal justice degree program at an accredited institution. The forensic science degree programs must be accredited through the Forensic Science Education Programs Accreditation Commission (FEPAC). The criminal justice degree programs must be certified through American Criminal Justice Society (ACJS). The study is also delimited to self-reported data.

CHAPTER II

REVIEW OF RELATED LITERATURE

The effect of television shows on the viewers' perceptions of forensic science is known as the *CSI Effect*. The *CSI Effect* concept was first coined through a news report and it spread from there.

Prosecutors claim that the show makes juries less inclined to convict because they have inflated expectations for the comprehensiveness, sophistication, and clarity of forensic evidence-all those threads and fibers and DNA traces left behind at crime scenes. But the effect could work the other way, too. Defense attorneys contend that the show makes juries inclined to convict because it portrays forensic evidence as unambiguous and more certain than it is. (Cole & Dioso-Villa, 2005)

However, even though the main usage of the CSI Effect is in a judicial setting, there are actually six different versions. The first type entails the strong prosecutor's effect (SPE), which includes the typical definition of the CSI Effect society knows more than any other definition (Cole & Dioso-Villa, 2007).

The purest version of the CSI Effect, which we call the strong prosecutor's effect, is the one alluded to in the previous section: that actual jurors in actual cases are "wrongly acquitting" defendants whom they would have convicted had the television show CSI never existed. (p. 447)

The second version of the so-called CSI Effect is one that is known as the weak prosecutor's effect (WPE). This version is similar to the strong prosecutor's effect in which the knowledge of the possibility of wrongfully accusing an individual is possible; however, the supposed increase of knowledge causes influence with the prosecutor more

than the juror. As a result, prosecutors will take more proactive steps in diverting juries from referencing the actions of the crime-related television shows. These two versions are mainly known as the CSI Effect, if mentioned in society.

However, as stated previously, there are a total of six versions. The third version is known as the defendant's effect (DE), which is described as jurors visualizing the forensic scientists as those in the crime-related television shows. As a result, forensic scientist testimony is given more weight than actual physical evidence (Cole & Dioso-Villa, 2007). This version also relates to the judicial system, but in a different light. The DE can be viewed as a secondary component to either the strong prosecutor or weak prosecutor's effects by the addition of added weight to a testimony. However, Peterson and Leggett (2007) stated since attorneys are aware of the added weight of testimonies from scientists, they should not use it to their advantage by playing charades. There should be consistency in using scientific evidence and forensic scientists; not changing it up to ensure you win the court case.

The producer's effect (PE) is known as a fourth version of the CSI Effect. The producer's effect relates the television show *CSI*, Crime Scene Investigation, with an educational purpose even though most viewers may not realize the learning aspect in the television shows. Cole and Dioso-Villa (2007) developed the fourth version and its relationship to an educational purpose.

...the show is educational, and ... juries are now more educated about forensic science. There is greater public awareness about forensic science and jurors are better at assessing testimony of expert witnesses and evaluating evidence because of *CSI*. (p. 451)

This version of the CSI Effect states *CSI* has an educational use in the general concept of forensic science. The producer's effect states that the main premise of the television shows is to make viewers aware of the forensic science field.

The fifth version of the CSI Effect is known as the professor's effect (PFE). The professor's effect explains the explosion of interest in criminology from the television shows and increasing number of college students studying the subject since the show was first televised. It can be seen across the country in the increase of enrollment as well as the creation of new degree programs. Cole and Dioso-Villa (2009) stated while there are positive impacts of increasing quantity within the degree programs, there are also negative impacts such as disappointing the students when they discover the profession is not as glamorous as they had believed. While there has been an increase in enrollment numbers, there has also been minimal empirical research on this version of the CSI Effect.

Finally, the last version of the CSI Effect is known as the police chief's effect (PCE). This effect states the knowledge acquired through watching the crime-related television shows has educated not only the society, but criminals as well. Criminals are supposedly learning how to commit crimes or reduce detection. The police chief's version of the CSI Effect is one that frightens society the most due to the educational outcome being negative unlike the producer's effect. Cole and Dioso-Villa (2009) stated that between the six versions, only the strong prosecutor's effect, defendant's effect, and police chief's effect would have a serious impact on society.

However, Machado (2012) did not find support for the police chief's version and states most criminals already learn criminal acts through their environmental settings.

While Machado does mention that criminals do obtain some information from crime-related television shows, there is a huge source of information gained outside of watching television. Machado surveyed incarcerated criminals who were convicted for committing crimes ranging from homicide to fraud with sentences ranging from three to 25 years. Machado explained how there is more information about how to commit certain crimes shared within prison among criminals than that presented in the crime-related television shows. The information shared among prisoners is more typically about how to commit a crime or how to reduce detection (Machado, 2012). Additionally, criminals were more likely to learn criminal actions from learning through experience in every day living. Finally, inmates did state if a source of knowledge were to be obtained through watching crime-related television shows, it would be to learn how to reduce traces of evidence at the crime scene (Machado, 2012). However, Machado referenced that there is more than one way for criminals to learn how to commit crimes.

CSI Effect and Court System

As stated previously, the CSI Effect has four versions that are viewed within the court system. Robbers (2008) examined the relationship between media depictions of criminal investigations and reality. Then, the relationship was examined to determine if there was any influence on criminal trials. Robbers (2008) surveyed prosecutors, public defenders, and judges from varying jurisdictions randomly. Three hundred and sixteen participants completed the questionnaire. One important factor in the survey process was the inclusion of questions involving the amount of time spent practicing law. The goal was for the individuals to have witnessed jury decisions prior to the CSI Effect and after. One major theme mentioned was specific instances of forensic television shows

influencing the court system. The first instance was juries not counting eyewitness testimony. A second instance discussed throughout was the change in the way forensic evidence is presented. Robbers described the third common instance as the role of irrelevant forensic evidence. Recently, irrelevant forensic evidence has been requested more because it was used in previous court cases. The fourth instance was the increased use of negative eyewitness testimony (Robbers, 2008).

The second major theme of the survey focused on the way professionals in the field changed the way they executed their job duties because of the forensic television shows (Robbers, 2008). For example, lawyers may have to spend more time discussing evidence over eyewitness testimony. The second instance of the theme is the additional time for *voir dire* questioning (Robbers, 2008).

The third major theme was in general comments. The first instance was unrealistic expectations of forensic science evidence by jurors (Robbers, 2008). Robbers (2008) described the second instance where convictions were easier with forensic evidence. The third instance was the levels of knowledge jurors have of forensic evidence. Overall, Robbers determined crime-related television shows are hindering the criminal justice system.

Cole and Dioso-Villa (2011) also examined the CSI Effect in regards to the court system. Cole and Dioso-Villa examined what judges should do with the CSI Effect information. It was already discovered in previous research that the CSI Effect existed. Due to the discovery of potential bias in juries, judges need to probe for the bias through *voir dire*, but in an ethical way. The questions asked in *voir dire* or in general cannot be direct to the point, such as stating what is factual versus what is not. If such questions are

asked, it may have the adverse effect and create bias or confusion instead of clarity. Another example of when judges need to decide whether CSI related comments could be used is during opening and closing arguments. The issue with CSI related comments in opening and closing statements is trying to determine if television is a standard of proof (Cole & Dioso-Villa, 2011).

Lawson (2009) discussed how *voir dire* questions attempt to lower the potential influence of crime-related television shows in the courtroom; however it is believed written instructions on the differences between reality and fiction may be beneficial as well. The more instructions that can be provided to jurors before, during, and after evidence is presented the better. Lawson referenced the strong concern for a negative impact through either wrongful convictions or acquittals due to false expectations of jury members. There is too much at stake for false outcomes (Lawson, 2009).

Holmgren and Fordham (2011) had 657 participants, of which approximately 75% stated they had viewed crime-related television shows. *CSI*, *Law & Order*, and their spinoffs were the most popularly watched crime-related television shows (Holmgren & Fordham, 2011). The idea that regular viewing of crime-related television shows influences the viewers' perceptions of the criminal justice system is supported (Holmgren & Fordham, 2011). According to Holmgren and Fordham, approximately 42% of participants stated that they learned about the criminal justice system through television. Overall, Holmgren and Fordham were able to determine the CSI Effect existed on juries in two different countries.

Cooley (2006) examined the fallacies and impacts the CSI Effect has in society and its relationship to the court system. Additionally, Harvey and Derksen (2009) stated

there has been some research to prove *CSI* causes a viewer to have heightened expectations of what science can do; the crime-related television shows may alter the viewers' perceptions of reality as well. Cooley discussed the negative impacts of the CSI Effect and how society has a distorted picture and understanding of what forensic science actually is. With those distorted views, the field of forensic science has also been distorted. As a result, the criminal justice system's integrity has been compromised. Additionally, due to the entertainment media's distorted representation of forensic science, forensic science's credibility has been placed in jeopardy within the court system. However, even with the distorted representations occurring, crime-related television shows have increased the interest of the American public in the forensic science field (Cooley, 2006).

Expectations. Additionally, there is a relationship between jury expectations and the CSI Effect (Cole & Dioso-Villa, 2009; Lawson, 2009; Shelton, Kim, & Barak, 2007). Shelton et al. (2007) surveyed 1027 participants who had been called for jury duty during a nine-week time period. The purpose of the study was to examine jury expectations and determine if there was a relationship to crime-related television shows. Shelton et al. (2007) concluded that individuals who watch the television show *CSI* had higher expectations of evidence (scientific and non-scientific) than those who do not watch the television show. Additionally, *CSI* viewers had a higher expectation of scientific evidence to a specific crime than individuals who do not watch *CSI*. Overall, Shelton et al. (2007) determined that a slight majority of jurors expected the prosecution to present scientific evidence in every criminal case, with the amount of scientific evidence increasing with the severity of the crime. However, Shelton et al. found there is no

significant relationship between watching crime-related television shows and expecting scientific evidence for conviction.

Kim, Barak, and Shelton (2009) determined that there was an increase in jury expectation of scientific evidence if the individual watched crime-related television shows. Specifically, if the jury member was exposed more frequently to crime-related television shows, there was higher expectation for scientific evidence. Additionally, the jury members were less likely to convict if there was no scientific evidence (Kim et al., 2009).

Cole and Dioso-Villa (2009) continued the discussion of the presence of the CSI Effect within the court system. Cole and Dioso-Villa stated jurors are expecting a higher standard of evidence than normal. This is suspected to be due to the crime-related television shows. Cole and Dioso-Villa stated surveying is the best means to obtain information about whether there is a CSI Effect or not in the court system; however, jurors, not legal actors, must be surveyed to obtain accurate information. While legal actors may witness what they believe are results of the CSI Effect, there is no way to know for sure except to ask the jurors directly.

Additionally, Lawson (2009) stated that crime-related television shows are influencing court systems through heightened expectations. However, it is believed to be a new concept: CSI Infection, rather than the CSI Effect. CSI Infection is believed to be a better term than CSI Effect. This is due to there not only being expectations of evidence, but also of the entire court process. Lawson explained, due to crime-related television shows depicting false accounts of evidence and the court system, their expectations are tainted. Lawson stated that even though a very small number of cases actually go

through the process for a jury to be involved, the cases that do typically have more severe punishments on the line. Therefore, it is a paramount concern that CSI Infection is examined further to ensure correct decisions are made. Lawson referenced the Peoria case as the staple court case exhibiting pieces of the influence of crime-related television shows. The case is referenced as being tainted by the CSI Effect through the jury members and their heightened expectations.

Conversely, Harvey and Derksen (2009) questioned whether the CSI Effect is a new concept or a 50-year-old tradition. In the 1960s, Perry Mason was well known for depicting intimidating tactics by leaning up against witness stands (Franzen, 2002; Mann, 2006). After this, jury expectations started to develop for intimidating tactics being used in all courtroom trials. In the 1970s, fingerprint evidence was used in multiple cases involving Quincy; therefore, an expectation grew for fingerprint evidence (Franzen, 2002). Harvey and Derksen (2009) referenced Court TV programs in the 1980s starting to emerge, creating an expectation of judges' actions in real courtrooms. Mann (2006) described the term oprahization, which describes jurors failing to hold the defendant responsible because of their victimization. Harvey and Derksen (2009) questioned whether new threats to the criminal justice system through crime-related television shows such as CSI are really new phenomena or are just a continuation of previous issues.

Additionally, Harvey and Derksen (2009) proposed the idea the CSI Effect is a generational effect. It is stated the CSI Effect is a generational effect due to the coming-of-age of individuals in Generation X. It is believed that due to these individuals being raised with television present in their lives, they are more susceptible to being influenced as jurors. Additionally, Generation Y individuals have grown up with computer

technology being present. Therefore, it is believed that Generation's X and Y could be influenced as viewers of the crime-related television shows (Harvey & Derksen, 2009).

Attitudes towards forensic science and criminal justice. Baskin and Sommers (2010) examined whether watching crime-related television shows affects the public's attitudes towards forensic evidence and if there is an influence on convictions. There were 1201 registered voters surveyed via telephone. Baskin and Sommers (2010) supported the belief that the viewing of crime-related television shows affect potential jurors' pretrial attitudes regarding scientific evidence and testimony. Baskin and Sommers supported the first and third versions, strong prosecutor's effect and defendant's effect. However, respondents who watched three or more hours of crime-related television shows a week were less inclined to convict when there was no scientific evidence (Baskin & Sommers, 2010). Podlas (2006) introduced a similar concept known as the anti-prosecution effect, which states juries will expect more evidence than usual before they will convict. Podlas explained by the development of the anti-prosecution effect, the burden of proof has been increased to beyond a reasonable doubt. However, Podlas stated there was no anti-prosecution effect on guilty verdicts. There was no significance between *CSI* viewers and non-viewers for anti-prosecution bias.

Smith and Bull (2012) focused on identifying and measuring the pre-trial bias for forensic evidence. Smith and Bull developed a scale known as the Forensic Evidence Evaluation Bias Scale after discovering the large amount of literature that discusses pre-trial biasness in regard to the CSI Effect. However, it was discovered subscales were developed from the Forensic Evidence Evaluation Bias Scale, one supporting pro-prosecution and the other supporting pro-defense in regard to forensic evidence. While

there are other bias measures in the literature, these two scales were determined to measure a new type of bias (Smith & Bull, 2012). The pro-prosecution subscale was a significant predictor of perceived evidence strength whereas the pro-defense subscale was not. Overall, Smith and Bull showed the CSI Effect is apparent in the court system and there are scales to help measure pre-trial bias now.

Smith, Patry, and Stinson (2007) stated one recurring theme in crime-related television shows was forensic evidence being more advanced than non-scientific evidence. Additionally, there will always be evidence in every case. Smith et al. (2007) referenced social learning theory to support the claim that media affects individuals perceptions of forensic science. Smith et al. (2007) researched attitudes of forensic evidence, the relationship between the attitudes and television viewing, and whether or not there was a causal relationship. One hundred and forty eight participants were sought through snowball sampling. It was discovered that television-viewing habits were not related to the following: ratings of fingerprints, confession, matching, and eyewitness evidence. However, judgments of DNA, ballistics, and arson evidence were related to television-viewing habits. Toxicology, pathology, compositional, and handwriting evidence were all found to be sporadically related to television-viewing habits (Smith et al., 2007). All of these findings were based on television serving as a predictor for reliability, accuracy, and fairness of the forensic technique.

Additionally, Smith et al. (2007) performed a second study with participants who had a reduced amount of crime-related television viewing. The participants watched an episode of *CSI* and completed a questionnaire following the episode to determine their belief of the accuracy and reliability of the evidence shown in the episode. Smith et al.

(2007) determined there was a partial causal relationship between watching *CSI* and attitudes about certain types of evidence. While watching *CSI* influenced all forensic evidence, DNA and fingerprint evidence were positively influenced. Overall, Smith et al. determined, yes, there is proof to state there is a CSI Effect.

Finally, Smith, Patry, and Stinson (2008) expanded previous research by surveying legal professionals to seek their opinions on the existence of the CSI Effect. Ninety-four percent of the legal professionals stated crime dramas have influenced the public's attitude about their profession. Overall, Smith et al. (2008) discussed that they confidently state the CSI Effect does exist; however, not in the form the media portrays.

Alternate Explanations

Mancini (2011) stated that while there are several other published empirical studies, they fail to address other potential moderating variables besides forensic science television viewership. Mancini mentioned need for cognition as one potential moderating variable that should be considered when researching the CSI Effect. With the validity of need for cognition being formed, along with an abundance of previous research demonstrating need for cognition being influential in jury perceptions in trials, the construct should be examined further in regard to the CSI Effect and the amount of jurors' television viewing (Mancini, 2011).

Mancini researched the construct through a sample size of 217 participants, who were undergraduate students at a small, Catholic, liberal arts institution. The participants were instructed to watch a criminal trial video that had been used successfully in another research study. The participants were asked to complete a questionnaire regarding determining the verdict using the standard of proof beyond a reasonable doubt (Mancini,

2011). Additionally, the participants were asked about their viewing habits of crime-related television shows. Finally, a need for cognition scale was used, which was proven reliable. Mancini explained that there were no significant findings discovered; therefore, the results were just another replication of the previous studies published.

Harvey and Derksen (2009) examined how the volume of articles published about the CSI Effect are high around times that major court cases are going on. The CSI Effect is more of a catchphrase that gets used when high profile cases are being tried, making the readers more interested. For example, in 2003, the Laci Peterson case was tried, which made headline news across the country. Additionally, upon examination of the articles being published that reference the CSI Effect, Harvey and Derksen (2009) stated that a majority reference back to two main articles; therefore, the claim is made that the CSI Effect is really not as big as it appears to be. The overuse of the small number of articles has made it appear the CSI Effect is everywhere. “It is more likely that the media have turned the persistent effects of television on popular culture into a catchy phrase that encapsulates the latest installment of the public’s long-term fascination with crime and mystery games” (Harvey & Derksen, 2009, p. 21). Overall, Harvey and Derksen stated the CSI Effect has become a continuance of the already growing concern from the late 20th century, which has been overplayed in the media.

Tyler (2006) stated the CSI Effect has become accepted due to its repeated nature in the media. There are large amounts of literature to support the claim that the CSI Effect could happen (Tyler, 2006). However, Tyler explained there is potential for the opposite of the CSI Effect to occur. Furthermore, Tyler stated there are alternate

explanations to why there is an increasing acquittal rate besides directing causation to the CSI Effect.

CSI Effect

Cole and Dioso-Villa (2009) expressed the potential for a new version of the CSI Effect, which would be classified as the victim's effect. This effect is there are increased expectations that law enforcement will always collect forensic evidence at the crime scenes. However, there is approximately 50% doubt that the victim's effect exists. There is only 8% doubt in the professor's effect. Furthermore, the strong prosecutor's effect and weak prosecutor's effect have a percentage doubt of 17% and 11%, respectively. The defendant's effect has a percentage of doubt of 19%, whereas the police chief's effect is 15%. Finally, the producer's effect has a percentage doubt of 0%. Cole and Dioso-Villa stated the percentage numbers were a result of discovering documents that discuss skepticism of the respective version of the CSI Effect.

As seen with the numerous pieces of literature, there are varying of opinions of the so-called influence crime-related television shows are having on society. While Cole and Dioso-Villa (2007) discovered the six versions of the CSI Effect, there have been several studies following that have supported or opposed the claim. One purpose of this research is to further examine the CSI Effect and incorporate a theoretical foundation.

Theoretical Foundation

Gerbner (1972) stated that television has been integrated into a majority of society from birth to present day. Therefore, television is a common feature found in every household across the country. It can be viewed any time of the day with a varying array of information being viewed. Gerbner (1972) developed a concept known as cultivation

theory, which several researchers expounded upon throughout the years. Cultivation theory in the most basic form is known as an individual's beliefs being influenced by television.

If we assume that the messages of television have some commonality and consistency to them – that they are not just a random collection of entertainment “units” in a media universe without purpose – then we might be tempted to conclude that exposure to those messages over time should mean something.

(Shanahan & Morgan, 1999, p. 2)

Shanahan and Morgan (1999) argued if a viewer watches television over weeks, months, and even years it is expected that some information will be learned through the watching of television. Additionally, Shanahan and Morgan explained that the amount of exposure to television minimizes the use of other sources of media.

Shrum, Wyer, and O’Guinn (1998) argued that for heavier television viewers, some constructs are more accessible in memory because television acts as a natural prime. Busselle (2001) explained perceived realism as an individual perceiving media as realistic. Furthermore, Shanahan and Morgan (1999) explained the concept of representational realism as storytelling that can be perceived as reality if certain assumptions are met.

Hawkins and Pingree (1982) explained if television has patterns of content, which reflect the norms of society, television will influence viewers to believe that what they visualize is reality. However, Hawkins and Pingree (1982) discussed several complications and issues that arise with television effects research in demonstrating an influence of television viewing on social reality. Usual problems that are discussed are

lack of unexposed groups, causal ordering, and control of third variables. Hawkins and Pingree (1982) explained there are two new complications besides the usual problems. First, if the patterns are relevant messages on television in the aggregate, then there will be less generalizability in reality. Furthermore, if the messages on television are reflecting the norm, then the television's influence will be on the status quo (Hawkins & Pingree, 1982).

Shrum (2002) discussed some of the reasons items are recalled from memory more than others, which are frequency and recency of construct activation, vividness of a construct, and relations of with accessible constructs. Additionally, there are some consequences of frequent and easy accessibility, which are judgment about individuals, attitude and belief judgments, and judgments of set sizes and probability. Furthermore, there are issues with media effects and accessibility consequences. For example, effects of news reports on issue perceptions, effects of television viewing on social perceptions, and effects of media portrayals on aggression (Shrum, 2002).

Hetsroni and Tukachinsky (2006) expanded the idea of cultivation by classifying five groups of cultivation. The first is overcultivation, which is estimating the real world as a replica of the TV world, but overestimating the TV world (Hetsroni & Tukachinsky, 2006). The second group is simple cultivation, which is estimating the real world as a replica of the TV world and having a correct estimate of the TV world. Hetsroni and Tukachinsky stated the third group of cultivation is double distortion. This is overestimating of the TV world and incorrectly estimating the real world, which creates an inaccurate imitation. Simple no cultivation is the fourth group of cultivation, which is when there is a correct estimation of the real world and TV world. Distorted no

cultivation is the fifth group. Hetsroni and Tukachinsky discussed distorted no cultivation as when there is a correct estimation of real world and an incorrect estimation of the TV world.

Grabe and Drew (2007) stated there are two main dimensions of cultivation research: audience characteristics and message-specific characteristics. Grabe and Drew explained demographics, personal experience, perceived reality of message, information processing, and salience of issue are all components of audience characteristics. The components of message-specific characteristics are content, genre, and channel. Within cultivation research, there are two types of judgment outcomes. First-order judgments are measures of the perceptions about a nature of a crime. Second-order judgments are measures of risk estimates. The other two cultivation outcomes are fear and behavior. Fear is measured directly by the individual; behavior is an action done as a result of television (Grabe & Drew, 2007).

Hawkins and Pingree (1981) stated the varying television genres give different results in cultivating worldviews. Hawkins and Pingree recommended that television genres be examined individually instead of lumping them as one group. Grabe and Drew (2007) stated it appeared non-fiction genres might be more powerful than fiction in cultivating perceptions of crime, etc. Grabe and Drew confirmed there is a difference between television genres. Oliver and Armstrong (1995) reported differences between reality-based crime television shows and crime drama television shows in regard to perceived realism. It was determined that individuals perceived higher realism with reality-based crime television shows than with crime drama.

It is referenced that television is the cultural arm of American society (Gerbner & Gross, 1976). There are a lot of images that are displayed on television that are watched by millions. These sometimes-predictable images can influence society in a positive or negative way. Gerbner and Gross (1976) stated information is obtained through viewing television; however, it is mainly basic assumptions of the facts of life, etc.

Shapiro and Lang (1991) suggested the concept that individuals mistakenly remember something as reality when it was actually depicted on television; however, this was never tested. Mares (1996) furthered the idea of source confusion. Mares determined source confusions play a role in the effects of viewing television and social beliefs. Furthermore, it is supported that television shapes the viewers' perceptions of reality. Then the viewer begins to forget where the information obtained came from and tries to determine if it is reality or fiction from television (Mares, 1996; Van den Bulck, & Vandebosch, 2003). Television is able to take reality and speed it up into the multiple episodes, which reframes reality into a hyper-reality (Harvey & Derksen, 2009).

Television

Surette (2007) stated media and criminal justice have a marriage-like relationship. This is due to criminal justice topics being incorporated into all types of media, whether it is the newspaper, radio, movie, television, or other forms. Media is able to convey the most basic, common knowledge on a large scale to society. "Like candy to cavities, a diet heavy on media will rot your perception of reality" (Surette, 2007, p. 4). As a result, if there is a high viewing of reality, media will change your view on reality.

Surette (2007) stated print media in mass markets started around the 1830s. The daily newspapers during this time included police news. As a result, crime-related news

began to be popular. By the 20th century, there was a shift in print media to not only police news, but corruption, scandals, etc. in all versions of print (Surette, 2007). Surette stated the mass marketing of print media is what developed an early model of visual media.

Visual media became very prominent through the development of the film industry. A benefit that came from the film industry is that it was able to reach all individuals not limiting age, economic status, or ethnicity (Surette, 2007). As of 1917, the premier entertainment form in the world was the U.S. motion picture industry. Developing from the integration of crime in the film industry, the “Western Bandits” became the first media criminals (Surette, 2007). However, it was after World War II that television became the new media source for crime. Because of television, society became new and different. As time progressed, televisions entered each household. By the 1990s, television viewing became the third most time-consuming activity. In the 1950s, crime shows became prominent in the television visual media (Surette, 2007).

Sound media was able to link print and visual media in a linear fashion (Surette, 2007). The main sound media, radio networks, were very prominent in the 1920s. However, it was learned that “hearing is believing” because social panic was created after the airing of the War of the Worlds radio broadcast in 1938 (Surette, 2007, p. 10).

Finally, new media, such as the Internet and video games, formed addition to print, visual, and sound media. Target population is the difference between old and new media because it can be very specific. For example, websites can be targeted for individuals interested in serial killers (Surette, 2007). Because of computers, virtual

realities have started to be created, which has created the closest experience to actual reality.

Surette (2007) explained that most individuals do not have experience with crime and the justice system unless it is receiving a parking ticket. There is a significantly lower number of victims of violent crimes than non-violent crimes; therefore, a majority of the knowledge of crime and the justice system comes from a mediated experience. Individuals have a mediated experience when they have relatable experience of an event compared to an event in reality (Surette, 2007).

Shanahan and Morgan (1999) discussed the evolution of television; however, the constant concern was with its effects. Television has been blamed for many social issues; however, for a long time it was viewed only as a cluster of non-related entertainment units. If television is viewed as having commonality and consistency, then it can be concluded that media exposure shapes the views and images of the viewer (Shanahan & Morgan, 1999).

Shanahan and Morgan (1999) expounded upon the original idea of Gerbner's cultivation theory. Shanahan and Morgan (1999) explained cultivation analysis as the study of society's view of reality due to television. Shanahan and Morgan (1999) explained that cultivation is only about implications of repetitive patterns of images that television provides, especially drama and fictional television. Thus, it is important to start cultivation analysis by identifying those patterns before going any further. Cultivation analysis tests the relationships between an individual's amount of viewing of television and their views of social reality. Overall, Shanahan and Morgan (1999)

examined how fictional television affects the viewer's perceptions of reality, which affects their behaviors.

Valkenburg and Patiwaal (1998) expounded on Gerbner's cultivation theory and examined the relationship between viewing Court TV and the individuals' perceptions of crime. Additionally, their study had the goal of determining the reason the non-fiction crime-related television show was viewed. Valkenburg and Patiwaal (1998) discovered there are five reasons individuals acknowledged for viewing Court TV: (a) Voyeurism, (b) Boredom-avoidance, (c) Relaxation, (d) Information, and (e) Entertainment. Voyeurism encompasses the individual being excited, curious, and eager about the suspect's attitude and behavior. Boredom-avoidance encompasses the individual watching the television show because there is nothing better to do. Relaxation involves the individual watching the television show to help divert thinking on what needs to be done in reality. The fourth reason, information, includes the individual watching the television show to learn something, whether it is about the individual himself or herself or the criminal justice system. Lastly, entertainment encompasses the individual watching the television show for pure entertainment. Additionally, the hypothesis was supported that Court TV cultivates viewers' perceptions of crime. Higher frequency in viewing of Court TV was related to more negative perceptions of crime, even when the variables of sex, age, educational level, and place of residence were controlled for (Valkenburg & Patiwaal, 1998).

Ley, Jankowski, and Brewer (2010) explained that the concept of the CSI Effect is not enriched through theoretical foundations; therefore, it is not a fully developed concept. Ley et al. (2010) referenced cultivation theory as a potential theory that may

help explain the CSI Effect concept. Due to cultivation, attitude, and learning theories, it is believed that an individual who watches crime-related television shows may be influenced by these shows and believe they are reality. Finally, those who have no knowledge of the forensic science and criminal justice fields are believed to be impacted by television shows such as *CSI* (Podlas, 2006).

Student Satisfaction of College Major Selection

Academic majors are selected for a variety of reasons. Typically, the reason is less than rational (Beggs, Banham, & Taylor, 2008). No matter what the reason, students have a mental picture of what they expect in the major and job field. It is when there is a discrepancy between these expectations and reality that the students become less satisfied. Additionally, when expectations and reality do not align, confusion occurs especially with the student's identity (Balko, 2012). Galotti (1999) discussed that college majors are selected based on a criteria list. Additionally, Galotti stated it is easier for a major to be selected when the criteria list and options are as limited as possible. Leach and Patal (2013) mentioned the decision-making process involves creating a list of requirements and comparing the list to available options.

Beggs et al. (2008) explained there are four categories of factors that influence a student's major choice. The categories are (a) sources of information and influence, (b) job characteristics, (c) fit and interest in subject, and (d) characteristics of the major/degree. First, sources of information and influence include individuals and media that provide information and influence. Beggs et al. (2008) referenced parental influence as a hot topic in several studies; the topic is both supported and not supported as a factor of influence in a student's major choice. Secondly, job characteristics provide both

extrinsic and intrinsic rewards, which may influence a student's major choice (for example, whether a profession offers a competitive salary). An example of an intrinsic reward is the satisfaction of helping others. Third, fit and interest in the subject encompasses an individual's genuine interest in the field. Finally, characteristics of choosing a major/degree include the faculty reputation and course characteristics. Overall, all stakeholders are hindered when students base their major choice on perceived characteristics. This is because when the perceptions of the job and major are not accurate, the students as well as anyone else involved in the process are affected.

College major satisfaction has been positively linked to academic performance by measuring the individual grade point averages (Dandan, Shiye, Xin, & Jie, 2006; Nauta, 2007). Suhre, Jansen, and Harskamp (2007) provided evidence that academic program satisfaction on academic accomplishment and dropout rates is significant for men and women. Motivation to succeed academically is positively influenced by academic major satisfaction (Suhre et al., 2007). Withdrawal rates of college students are negatively related with their dissatisfaction with their college major selection (Kowalski, 1982; Suhre et al., 2007). Therefore, satisfaction appears to be a factor on retention.

Nauta (2007) stated major satisfaction could provide a more accurate value of career satisfaction. Nauta measured major satisfaction through the use of the Academic Major Satisfaction Scale (AMSS), which is a six-item scale measured on a five-point Likert scale. The entire purpose of the creation and development of the AMSS was to validate a measure of global satisfaction of an individual's college major selection (Nauta, 2007). It is important to note the AMSS scores were able to link students with their persistence in majors, which Nauta described as arguably one of the most important

functions a scale should do to measure major satisfaction. Overall, Nauta stated those who are dissatisfied with their major are more likely to have stress and lower academic performance.

Krimmel and Tartaro (1999) sought to gather demographic information on criminal justice students and their career choices. It was discovered that family and friends did not influence the selection of a criminal justice major; however, the selection of a criminal justice major was often due to the individual finding the subject matter interesting (Krimmel & Tartaro, 1999). Krimmel and Tartaro stated generally males are more interested in law enforcement careers and females are more interested in becoming lawyers. Additionally, females expressed more of an interest in the criminal justice field and believed strongly that criminal justice was relevant to the real world. Furthermore, Krimmel and Tartaro explained over half the respondents stated their career choice was law enforcement instead of a lawyer, which had a small response rate. Finally, minority students identified less with wanting to pursue a law enforcement career.

Martin and Hanrahan (2004) examined the certainty of criminology as the participants' major selection. Eighty-four percent of students reported they were certain a criminology degree was right for them (Martin & Hanrahan, 2004). However, it should be noted that the data was collected at the beginning of the students' education. Martin and Hanrahan stated students start their college experience with set expectations; if those expectations are realistic then there is a greater feeling of satisfaction with their choice of college and major.

Crampton, Walstrom, and Schambach (2006) explained how major selection satisfaction is career-oriented. Specifically, starting salary, prestige of profession, and

job security are examples of factors that influence major selection satisfaction. However, Crampton et al. (2006) found that the highest ranked information source for helping the respondents select their major was television or movie portrayal of the occupation. While television was not reported as being very important, it was nonetheless rated as the most important overall. Other sources of information that were seen as important besides television are websites, brochures, newspaper articles, and the Internet. The sources of information that were rated as low were presentations from faculty, students, alumni, and speakers in general (Crampton et al., 2006). Furthermore, Berry, Rettenmayer, and Wood (2006) explained that social contacts have no influence on a student selecting their major. While Berry et al. (2006) researched students pursuing information system business degrees, the study showed the lack of social contacts, such as counselors and teachers, as having an influence on the major selection.

Somewhat similar to the factors proposed by Beggs et al. (2008), Tontodonato (2006) denoted five top reasons the respondents selected criminal justice as their major. First was because they viewed the subject as being interesting. The second reason was because it was their career plan. Third was because they were interested in law school. Fourth, they were interested in policing. Finally, they wanted to help others. The top reason, which approximately half the sample identified, was they found the subject interesting.

Tontodonato (2006) explained that the majority of the respondents were satisfied with the criminal justice degree program. Examining further, there were some distinct characteristics noted. First, females were more likely to choose the criminal justice major because of their interest in attending law school (Tontodonato, 2006), which confirms

Krimmel and Tartaro (1999). Non-whites were more likely to chose the major due to their desire to want to help people (Tontodonato, 2006). Additionally, 90% of students were satisfied with their major selection and university selection, whereas 38% were dissatisfied with solely their major selection. Tontodonato (2006) stated university satisfaction was predicted by satisfaction in the criminal justice program. There were marginally significant relationships between satisfaction in the criminal justice program and the following: working while in college, gender, and plans to attend graduate school. Finally, Tontodonato (2006) concluded that the analysis of major satisfaction was not very successful in uncovering predictors.

CSI Effect and Higher Education

Lee (2007) explained that while there was an increase in educational programs, there was also an increase in crime-related television shows. These television shows were referenced as influencing student interest in the education programs.

Popular TV shows such as “CSI”, “Forensic Files”, “Trace Evidence” and “Cold Cases” have spurred a record number of students interested in a career of forensic science. The forensic science education programs have also increased from ten (10) universities in 1970 to thousands of forensic science training programs in United States today. (Lee, 2007, p. 5)

When examining the professor’s effect within the CSI Effect, the enrollment numbers of academic degree programs related to forensic science and criminal justice have been increasing over the years, especially since the turn of the century. Houck (2006) explained how it is very apparent that television shows, such as *CSI*, have had an impact in the educational setting by the increase in enrollment of forensic science degree

programs. Bergslien (2006) argued it is apparent that crime-related television shows like *CSI*, *Crossing Jordan*, and *Cold Case Files* have sparked student interest in the forensic science field. Kobus and Liddy (2009) examined the question of whether forensic science programs are more a student attraction strategy or more a value-adding addition to the industry field. The two strategies, attraction and value-adding addition, can actually work together to achieve a common goal if desired (Kobus & Liddy, 2009). To increase quality forensic scientists in the work field, the degree programs must be attractive, but also of quality substance. Kobus and Liddy discussed the issues of competing degree programs in the science field and making the forensic degree program look more attractive. While attractiveness might be successful in prompting interest in the program, it may also be a huge risk. Dale and Becker (2003) stated retention problems in forensic scientist positions are partially due to the employee misconceptions of what the position actually entails. However, the most frequent reason of departure from the position was due to employment. Finally, Kobus and Liddy (2009) concluded that students chose the forensic science degree program for the wrong reasons.

Barthe, Leone, and Lateano (2012) examined the impact media has on the selection of a criminal justice major. Barthe et al. (2012) stated there are two means by which criminal justice students are derived. The first is that the students come to college with the decision already made that they will be a criminal justice major. The second is that students change their major to criminal justice once they have taken an introductory course in the subject matter.

Barthe et al. (2012) sought to determine if the students who came to college with their major already in mind had a misguided view of the actual desired career. “65% of

the sample reported substantial television show influence on their decision to study criminal justice, with more than half of the ‘media oriented’ students selecting forensic shows as having the greatest impact” (Barthe et al., 2012, p. 19). Additionally, Barthe et al. (2012) discovered that specific television shows such as police, court, and forensic shows differ in the amount of influence. It is concluded that television viewing does influence students’ major selection significantly; however, the variable of “their potential for job status increase” also has an influence (Barthe et al., 2012, p. 23).

While these two survey elements (job status and crime related television shows) represent very different aspects of the decision-making process, they are linked in television shows, in that many of the characters in these shows have a significant educational history and some use their advanced degrees as part of their official title. (Barthe et al., 2012, p. 23)

Overall, Barthe et al. (2012) explained for many students media exposure significantly contributes to their educational goals, which may lead to disappointment later in life.

Besides choosing forensic science and criminal justice programs for the misinformed reasons, there is also a problem of students not being prepared for the rigorous standards set forth in collegiate level courses. Jackson (2009) discussed this ongoing issue of high-school students not being prepared for the academic standards in forensic science programs. As a result of the lack of preparedness, there is low retention within the forensic science degree programs and a high turnover. Jackson referenced the CSI Effect as a main factor in the increasing attrition rates seen within the degree programs. Jackson visually depicted the increasing of forensic science programs across

the country; Jackson also depicted one institution's experience of attrition, which was believed to be a result of the professor's effect.

However, there are always opposing views on a specific topic. While some articles reference forensic science and criminal justice students being influenced to choose the degree program by crime-related television shows, McManus (2008) responded to other articles by arguing that a person who wants to pursue a degree in forensic science is not more likely to watch the crime-related television shows. However, McManus confirmed the number of forensic science programs did increase as the CSI Effect phenomenon continued to grow.

Additionally, Martin (2008) disagreed with the professor's effect by stating there was not enough evidence to support such an effect. It is believed that academic goals and decisions are based more than on socio-economic, race, and gender backgrounds combined with the television shows (Martin, 2008). However, it is not known which background variable exerts the greatest influence on academic goals.

There are consistencies across various studies in that both forensic science degree programs as well as the number of crime-related television shows have increased alongside the emerging fascination of the CSI Effect phenomenon. Additionally, while there are studies that support the idea of the CSI Effect, there are studies that do not necessarily support the various versions of the CSI Effect. While there are differing views of the phenomenon and factors that may influence students majoring in a forensic science or criminal justice degree program, there is a lack of empirical research to support or reject such claims.

Overall, there has been an increase in crime-related television shows and enrollment/creation of forensic science and criminal justice degree programs since the turn of the century. CSI Effect has been blamed for the influence crime-related television shows have had on society. However, there is an array of literature with inconsistent results to support and disprove the phenomenon. However, much of that literature is not empirical in nature and lacks a theoretical foundation.

Cultivation theory helps frame the concept that viewing crime-related television shows has an influence on society in a variety of ways. With cultivation theory describing the relationship between the television world and reality, the CSI Effect can be better understood. Finally, due to this relationship between cultivation theory and the CSI Effect, empirical research can be performed to determine if Cole and Dioso-Villa's (2009) professor's effect exists. If the professor's effect exists, further examination of how much influence crime-related television shows have on a student's college major selection can be conducted and the satisfaction of the student of their major selection can be examined.

CHAPTER III

METHODOLOGY

Research Goals

The goals of this study were to examine the presence of the CSI Effect and whether it influences forensic science and criminal justice degree programs. Furthermore, another goal of this research was to determine how much influence the CSI Effect has and if there are any discrepancies between students' expectations and reality. Cultivation theory serves as the theoretical framework, which literature suggests should be examined through survey instruments. Cultivation is typically examined through analyzing the relationships between exposure to television and the messages by surveys (Shanahan & Morgan, 1999).

Participants

Undergraduate and graduate students, who currently declare a criminal justice or forensic science major, at an accredited institution through Forensic Science Education Programs Accreditation Commission (FEPAC) or certified through American Criminal Justice Society (ACJS), were sought as participants. The students were seeking bachelor's, master's, or doctoral degrees. All subjects sought for this study must have been at least 18 years old to participate. The institutions that participated which have accredited forensic science programs are the following: Cedar Crest College, The George Washington University, Indiana University-Purdue University Indianapolis, Marshall University, and Virginia Commonwealth University. The institutions that participated which have an accredited criminal justice program are the following: The Richard Stockton College of New Jersey and Radford University.

The students who declared a criminal justice or forensic science major at any of institutions that have programs, which are accredited or certified, were selected as participants. Due to the need for consistency among the institutions' programs, only accredited and certified programs at institutions were sought. Each institution that has a degree program accredited through FEPAC or certified through ACJS has to go through a certain process and incorporate specific aspects into their program, therefore producing some uniformity among programs. Standardized measurement is a component of a properly conducted survey process by which meaningful statistics can be produced (Fowler, 2009).

Design and Variables

The research design was non-experimental, specifically cross-sectional web-based surveys. Cross-sectional surveys are used to gather information at a given point in time and are considered to be versatile, efficient, and generalizable (Fowler, 2009). Survey research is versatile because it can be applied to several fields. Survey research is efficient because it typically does not require a lot of time and expense. Finally, survey research is generalizable because it can make inferences to a population using a sample.

The dependent variables in this research study were (a) reported crime-related television show influence on major selection, (b) discrepancy between expectations and reality, and (c) college major satisfaction. These three dependent variables were used to help answer the research questions. Crime-related television shows' influence on major selection was a dependent variable, which examined the professor's effect of the CSI Effect. Discrepancy between expectations and reality was a dependent variable for two reasons. The first was to determine whether there was a negative or positive influence of

crime-related television shows in the college major selection. The second was to compare the relationship between discrepancy and college major satisfaction. Finally, college major satisfaction was a dependent variable, which was measured through the Academic Major Satisfaction Scale

The independent variables in this research study included (a) gender, (b) classification, (c) number of hours of crime-related television viewed, (d) how many courses taken in the field, (e) working in field, (f) viewing of non-fiction versus fiction crime-related television shows, (g) reported reasons crime-related television shows are watched, (h) how the participant got interested in the field, (i) opinions of the crime-related television shows, and (j) opinions of crime-related television shows after completing a forensic science or criminal justice course. The independent variables regarding opinions of crime-related television shows and opinions after completing a forensic science or criminal justice course were used to assist in determining if the CSI Effect exists. All the other independent variables assisted in examining cultivation theory in regard to the CSI Effect, specifically, the relationship of television viewing and its influence on perceptions of reality.

Instrument

An electronic questionnaire was developed within Qualtrics® software. The questionnaire was composed of 33 questions that took approximately 35 minutes to complete (see Appendix A). Data were gathered through the 33 item questionnaire, which included demographic variables. The instrument had questions relating to crime-related television shows and participants' opinions in general as well as the selection of their major. Additionally, there were questions related to college major satisfaction.

Finally, there were questions related to potential discrepancies between the participants' expectations, and of reality within the degree program.

The Academic Major Satisfaction Scale, developed in 2007 by Dr. Margaret Nauta, is used within this instrument. Permission was granted to use and modify the Academic Major Satisfaction Scale as needed. The modification that occurred to the Academic Major Satisfaction Scale was strictly the addition of other questions, such as discrepancy related items and television influence items. Rudestam and Newton (2007) explained when using a previously standardized scale there are a few things that must be considered such as the appropriateness of the use of the instrument with the population, measurement characteristics of the instrument, and information about the administration and scoring of the scale.

The AMSS scale is a six-item measure of global satisfaction of a student's major selection, which is measured on a five-point Likert scale. Nauta (2007) surveyed college students who were enrolled in a basic psychology course; therefore, there were a variety of majors represented in the sample. Nauta stated the Cronbach's alpha for the AMSS was .90. It was validated through exploratory and confirmatory factor analysis. Nauta described the fit of the model as good with the following results reported: $\chi^2(2) = 9.364$, TLI = .95, CFI = .99, RMSEA = .12, SRMR = .02.

There were some questions used in the instrument that measure the influence crime-related television shows have on academic major selection. The researcher, to test for reliability of the questions, conducted a pilot study. Dutton (2013) determined the reliability for the academic major selection questions had a Cronbach's alpha of .96. Additionally, there are some questions used in the instrument that measure discrepancy

between the participants' expectations and reality. Dutton (2013) determined the reliability for discrepancy had a Cronbach's alpha of .74.

Data Collection

The researcher contacted all program coordinators of the accredited FEPAC and ACJS institutions to seek approval to include their students as participants. Once approval was granted, the researcher worked with each program coordinator to determine the best means of dissemination of the instrument, whether it was through the researcher obtaining the email addresses and directly contacting the students or the program coordinator sending out the email drafted by the researcher. All institutions stated they preferred for their administration to contact the students. All undergraduate and graduate students who were currently enrolled in the degree programs received a Qualtrics® electronic questionnaire via their university email. Once the forensic science or criminal justice student received the email, participation in the research was voluntarily. The electronic questionnaire also included an informed consent section. Furthermore, consent gathered initially allowed the researcher to communicate with the potential undergraduate and graduate participants. This informed consent explained the participation in the research study was completely voluntary and the participant could stop at any point. The next question served as a screening question to ensure the participant was a criminal justice or forensic science student. Then the participants in the study were asked to complete the questionnaire in its entirety by marking the response that they believed was the most appropriate. If at any point the participant wanted to stop the questionnaire, they were able to.

Data were gathered over a three-week period. G*Power was used to calculate an approximate desired sample size. The statistical analyses that were chosen as possible tests were bivariate correlation and linear regression. With a desired alpha level of .05, statistical power of .95, and a medium effect size of .3, the calculated sample size was 150. This sample size varied depending on the statistical analyses; however, the sample size of 150 was the largest. Due to online surveying having a low response rate of approximately 5% or less, the overall population of potential respondents needed to be approximately 3,000. Due to this expected low response rate, email reminders were sent to help combat this known issue.

Sampling error and bias are two types of error that researchers must attempt to reduce as much as possible. Fowler (2009) explained sampling error, which is random error, is when the data is collected from a sample and not from the total population. There will be differences between the sample and population and it is important the sample mirrors the characteristics of the population. A carefully designed sampling frame helps reduce both types of error.

Data Analysis

There were three hypotheses for the research. The first hypothesis, that there was significant relationship between crime-related television shows and the selection of a college major, was tested using a multiple regression. Multiple regression was chosen as the statistical analysis due to the independent variables being both continuous and categorical. Furthermore, regression is appropriate for non-experimental research. The second hypothesis, that there were discrepancies between students' expectations and reality within the degree program, was tested using a correlational analysis and a multiple

regression. Correlational analysis measured the extent to which two variables were related. The third hypothesis, that discrepancies influenced major satisfaction, was tested through linear regression.

Institutional Review Board (IRB) permission was obtained and ensured that the survey process was done with discretion and with the safety of the subjects in mind (Appendix B). This study ensured the safety of the subjects; the subjects' identities were protected.

CHAPTER IV

RESULTS

Sample

A total of 196 participants started the survey with 158 participants completing the survey, resulting in a completion rate of 81%. After taking into account responses that had a large number of missing values, a total of 152 responses were used in the data analysis. Responses came from the following institutions: Cedar Crest College, The George Washington University, Marshall University, Radford University, The Richard Stockton College of New Jersey, Virginia Commonwealth University, and Indiana University Purdue University, Indianapolis.

Descriptives

A total of 49 items were analyzed for descriptive statistics. Table 1 depicts means and standard deviations for the interval scale variables, which were on a 5-point Likert scale. Missing values were present in the data set and were reduced by completing a linear trend at point. Linear trend at point replaces all missing values with their predicted values. The categorical variables involving specific television shows were coded as 0 and 1, yes the television show is watched and no, the television show is not watched, respectively. Frequencies for these are presented in Table 2.

Table 1

Means and Standard Deviations for Interval Variables

	N	M	SD
Whenever you watch television, you are more likely to watch crime-related television show.	150	3.47	1.109
While watching crime-related television shows, you thought it would be cool to have one of the jobs...	149	3.95	.828

Table 1 (continued).

	N	M	SD
Crime-related television shows have made an impression on you in deciding upon your major in forensic...	150	3.11	1.238
You chose forensic science/criminal justice as your major because you wanted to do the things depicted...	151	2.80	1.189
Crime-related television shows have played a part in your desire to have a career in the field of forensic...	152	3.22	1.175
Forensic science and/or criminal justice has fascinated you due to crime-related televisions shows.	151	3.27	1.172
before - Forensic science is mostly investigative.	152	3.72	.931
before -Forensic science/criminal justice field has a high salary.	152	3.17	.926
before -Class involves processing crime scenes.	151	3.42	1.092
before -Class involves examining real crimes.	151	2.99	1.216
before -The forensic field is science based.	150	4.31	.687
before -Going to get to do what is on television.	152	2.86	1.163
before -The field of criminology/forensic science is for you.	152	4.23	.676
before -You experience frustration with the actions of law enforcement officers depicted in crime-related television shows.	152	3.35	.992
before -You felt mislead by a crime-related television show.	152	2.89	.953
while -Forensic science is mostly investigative.	151	3.15	1.116
while -Forensic science/criminal justice field has a high salary.	152	2.75	.863
while -Class involves processing crime scenes.	152	3.01	1.148
while -Class involves examining real crimes.	151	2.77	1.208
while -The forensic field is science based.	152	4.44	.770
while -Going to get to do what is on television.	152	2.18	1.017
while -The field of criminology/forensic science is for you.	152	4.34	.709
while -You experience frustration with the actions of law enforcement officers depicted in crime-related television shows.	151	3.87	.995
while -You felt mislead by a crime-related television show.	152	3.22	1.115
I often wish I hadn't gotten into this major.	152	1.64	.858
I wish I was happier with my choice of an academic major.	152	1.83	1.041
I am strongly considering changing to another major.	152	1.42	.646
Overall, I am happy with the major I've chosen.	151	4.40	.664
I feel good about the major I've selected.	152	4.38	.709

Table 1 (continued).

	N	M	SD
I would like to talk to someone about changing my major.	152	1.49	.822
Valid N (listwise)	141		

Table 2

Frequencies of Crime-Related Television Shows

	%Yes	%No
CSI	50.7	49.3
Criminal Minds	45.4	54.6
NCIS	55.3	44.7
Law & Order	49.3	50.7
COPS	27.6	72.4
Forensic Files	34.9	65.1
American Justice	1.3	98.7
Forty-eight Hours	36.8	62.2
Court TV	14.5	85.5

The other categorical variables were examined frequencies. There were 9.9% criminal justice majors and 90.1% forensic science majors. There were 83.6% females and 16.4% males. There were 13.2% freshmen, 9.9% sophomores, 12.5% juniors, 18.4% seniors, and 46.1% graduate students. There were 2.6% with a grade point average of 1.0-2.0, 17.1% with a grade point average of 2.1-3.0, and 78.9% with a grade point average of 3.1-4.0. There were 20.4% who watched crime-related television shows because of curiosity of suspects' behavior and attitude, 6.6% who watched crime-related television shows because of boredom, 8.6% who watched crime-related television shows because of relaxation, 13.2% who watched crime-related television shows because of

wanting to learn something new, and 51.3% who watched crime-related television shows because of entertainment. Finally, 18.0% became interested in the degree field due to family, 6.7% became interested in the degree field due to friends, 23.3% became interested in the degree field due to television, 1.3% became interested in the degree field due to the job salary, 5.3% became interested in the degree field due to job mobility, and 45.3% became interested in the degree field due to wanting to help others.

Four variables, television influence on major selection, major satisfaction, students' expectations before entering the degree program, and students' attitudes while in the degree program were created. Television influence on major selection, a composite variable, was created from the mean of the following variables: Desire, Cool, Impression, Fascination, and Want to do. Another composite variable, major satisfaction, was created from the mean of the variables in the Academic Major Satisfaction Scale. Students' expectations before entering the degree program and students' attitudes while in the degree program were created from the mean of 7 variables of before and while group respectively. The concept of before is defined as expectations the respondent has before entering their academic degree program. The concept of while is defined as attitudes the respondent has while in the degree program. The concepts should not be confused with a pre-post test, but as a way to measure a change in the respondents' beliefs once they are exposed to their academic degree program.

A correlational analysis was run on the independent variables including the four new variables. Tablex 3a and 3b depict parts of the correlational analysis. Significant correlations between variables are denoted with either a single asterisk or a double asterisk.

Table 3a

Correlations of Crime-Related Television Shows, Classification, Gender, GPA and Dependent Variables

	CSI	CM	NCIS	LO	COPS	FF	AJ	FE	CT
Gender	-.059	-.119	-.101	-.012	.162*	.048	-.051	.029	.120
Class	.120	.203*	.141	.080	.012	.051	.019	.128	.095
GPA	.127	-.094	.035	.085	.183*	.191*	-.049	.116	.014
Major_Sat	-.137	.003	-.036	-.042	-.112	.053	.097	.067	-.072
TV_Inf	-.414**	-.264**	-.283**	-.282**	-.088	-.234**	-.077	-.215**	-.100
Expectations	-.103	-.095	-.024	-.055	-.125	-.205*	.022	-.254**	-.261**
Attitudes	.052	-.095	.002	-.026	-.047	-.242**	-.030	-.244**	-.226**

Note: CM= Criminal Minds; LO=Law & Order; FF=Forensic Files; AJ=American Justice; FE=Forty-eight Hours; CT=Court TV; Class=Classification; Major_Sat=major satisfaction; TV_Inf=television influence on major selection; Expectations=students' expectations before the degree program; Attitudes=students' attitudes while in the degree program; N=152; Gender: 0=Male; 1=Female; Classification: 1=Freshmen; 2=Sophomore; 3=Junior; 4=Senior; 5=Graduate Student; GPA: 1=Below 1.0; 2=1.0-2.0; 3=2.1-3.0; 4=3.1-4.0; 5= I do not know; All television shows: 0=I watch; 1=I do not watch; * = Correlation is significant at the .05 level; ** = Correlation is significant at the .01 level.

Table 3b

Correlations of Gender, Classification, GPA and Dependent Variables

	Gender	Class	GPA	Major_Sat	TV_Inf	Expectations	Attitudes
Gender	1						
Class	-.115	1					
GPA	.026	.126	1				
Major_Sat	-.090	.041	-.217**	1			
TV_Inf	-.024	-.277**	-.160*	.080	1		
Expectations	-.103	-.088	-.016	.070	.281**	1	
Attitudes	-.062	-.214**	.015	-.162*	.087	.553**	1

Note: Class=Classification; Major_Sat=Major Satisfaction; TV_Inf=television influence on major selection; Expectations=students' expectations before the degree program; Attitudes=students' attitudes while in the degree program; N=152; Gender: 0=Male; 1=Female; Classification: 1=Freshmen; 2=Sophomore; 3=Junior; 4=Senior; 5=Graduate Student; GPA: 1=Below 1.0; 2=1.0-2.0; 3=2.1-3.0; 4=3.1-4.0; 5= I do not know; * = Correlation is significant at the .05 level; ** = Correlation is significant at the .01 level.

Research Question 1

To test hypothesis one, there will be a significant influence of crime-related television shows on the selection of a college major, a regression analysis was run. The overall model was significant; $F(12, 137) = 5.98, p < 0.001$. There were no violations of assumptions for this regression. The variables included in the model account for 34.4% of the variability of the dependent variable, television influence on major selection. The variables, if a student watches CSI, the number of hours spent watching crime-related television shows, and the student's classification were all statistically significant (see Table 4). The variable, if a student watches CSI, was the most influential variable due to the beta value being the largest absolute value ($\beta = -.283$) and having the largest value of the squared structural coefficient ($r^2_s = .482$). Students who state they do not watch CSI result in a .532 unit decrease in television influence on a student's major selection. For every one unit increase in amount of television watched there is a .192 unit increase in television influence on a student's major selection. Every one unit increase in classification results in a .121 unit decrease in television influence on a student's major selection.

Table 4

Coefficients for Television Influence on Major Selection

Model	Unstandardized Coefficients		Standardized Coefficients		t	p
	B	SE	β	r_s^2		
(Constant)	4.198	.733			5.729	<.001
CSI	-.532	.146	-.283	.482	-3.647	<.001
CrimMinds	-.007	.152	-.004	.195	-.044	.965
NCIS	-.253	.153	-.134	.216	-1.650	.101
LawOrder	-.084	.150	-.045	.216	-.560	.576
COPS	-.190	.163	-.090	.036	-1.171	.244
ForFiles	-.274	.158	-.139	.154	-1.735	.085
AmJust	.157	.591	.019	.017	.266	.791
FEhours	-.175	.170	-.090	.162	-1.025	.307
Courttv	.149	.221	.056	.028	.674	.502
Hourstv	.192	.073	.202	.353	2.625	.010
Gender	-.157	.180	-.062	.001	-.873	.384
Class	-.121	.047	-.187	.213	-2.592	.011

Research Question 2

To test hypothesis two, there will be statistically significant discrepancies between expectations and reality, a dependent t-test was run. A Bonferroni correction was considered when examining significant differences between the pairings. Due to the critical alpha level being 0.05 and there being 10 pairings, the Bonferroni correction was .005. There were significant differences between all the pairings of variables except for if the respondent believed the field was for them, if the respondent believed class would involve examining real crime scenes, and whether the forensic science field is science based (see Table 5).

Table 5

Paired Samples Test for Discrepancy Between Expectations and Attitudes

	M(While)	M(Before)	M Diff	SD	<i>p</i>
While: Forensic science is mostly investigative – before: Forensic science is mostly investigative.	3.15	3.72	-.57	1.06	<.001
While: Forensic science/criminal justice field has a high salary. – before: Forensic science/criminal justice field has a high salary.	2.75	3.17	-.42	1.13	<.001
While: Class involves processing crime scenes. – before: Class involves processing crime scenes	3.01	3.42	-.42	1.07	<.001
While: Class involves examining real crimes. – before: Class involves examining real crimes	2.77	2.99	-.219	1.04	.010
While: The forensic field is science based. – before: The forensic field is science based	4.44	4.31	.13	.70	.025
While: Going to get to do what is on television. – before: Going to get to do what is on television.	2.18	2.86	-.68	1.01	<.001
While: The field of criminology/forensic science is for you. – before: The field of criminology/forensic science is for you.	4.34	4.23	.11	.66	.052
While: You experience frustration with the actions of law enforcement officers depicted in crime-related television shows – before: You experience frustration with the actions of law enforcement officers depicted in crime-related television shows.	3.87	3.35	.53	1.06	<.001
While: You felt misled by a crime-related television show. – before: You felt misled by a crime-related television show.	3.22	2.89	.33	.84	<.001
Students' attitudes while in the degree program- students' expectations before the degree program	3.23	3.53	-.30	.48	<.001

Research Question 3

A new variable, discrepancy, was created to assist in testing research question three. The variable was created by subtracting the students' expectations before their degree program from the students' attitudes while in the program. To test hypothesis three, discrepancy has a significant influence on major satisfaction, linear regression was used. The overall model is significant; $F(1, 150) = 9.192, p = 0.003$. When checking the assumptions there were violations of homoscedasticity and normality of residuals due to skewness. The variables included in the model account for 5.8% of the variability of the dependent variable, major satisfaction. The variable, discrepancy, significantly influences the dependent variable, Major Satisfaction (see Table 6). As there is a one-unit increase in discrepancy, there is a .235 unit decrease in major satisfaction.

Table 6

Coefficients for Major Satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	SE	β	t	p
1	(Constant)	1.992	.044		45.511	.000
	Discrepancy	.235	.077	.240	3.032	.003

Factor Analysis

Due to the exploratory nature of this research, an exploratory factor analysis using principal axis factoring with varimax rotation was completed using all items from the questionnaire. The overall model contained six factors from the 28 items. Table 7 depicts the six factors, the factor loadings, and their respective alpha levels.

The first factor, Fiction/TV Influence, encompasses the fiction crime-related television shows as well as the items that were combined together in the composite

variable, TV Influence. Finally, the number of hours watching crime-related television shows is also part of the first factor. The second factor, Degree Expectations, encompasses items that relate to the respondents' expectations before entering their academic degree program and while enrolled in their academic degree program. The third factor, Nonfiction, incorporates the four non-fiction crime-related television series. The fourth factor, Feelings, includes the respondents' personal feeling items. Field Expectations, which included expectations of the respondents' field before and while in the degree program, was the fifth factor. Finally, For You, is the respondents' belief that the program/field are for them before and while in the degree program. This factor relates to the sense of belonging.

Table 7

Exploratory Factor Analysis

Factor and items	Alpha Level	Factor Loading
Fiction/TV Influence	.724	
CSI		-.512
Criminal Minds		-.373
NCIS		-.454
Law & Order		-.405
Desire		.805
Want to do		.760
Cool		.630
Impression		.822
Fascination		.743
Number of hours watching crime-related television shows		.414
More likely to watch crime- related television shows		.578
Degree Expectations	.727	
Believing class will involve processing crime scenes (before)		.592
Believing class will involve processing crime scenes (while)		.487

Table 7 (continued).

Factor and items	Alpha Level	Factor Loading
Believing class will involve examining real crime scenes (before)		.837
Believing class will involve examining real crime scenes (while)		.578
Non-fiction	.625	
COPS		.377
Forty-eight hours		.665
Forensic Files		.516
Court TV		.597
Feelings	.609	
Mislead (before)		.791
Mislead (while)		.608
Frustration (before)		.412
Frustration (while)		.408
Field Expectations	.547	
Forensic science is science based (before)		.543
Forensic science is science based (while)		.667
Forensic science is investigative (while)		.306
For You	.700	
The field is for you (before)		.720
The field is for you (while)		.706

Structural Equation Modeling

Structural equation modeling was completed to attempt to further explore the results found through the exploratory factor analysis. Relationships among the six factors were explored using Mplus. Each model resulted in an inadmissible solution, and the researcher decided to cease this analysis.

Regression and Path Analysis

As stated previously, this research is exploratory in nature. As a result, the examination of relationships in data beyond the original the research questions was

explored. A multiple regression analysis was performed to analyze the specific regression equation where major satisfaction was the dependent variable. The goal was to determine the overall effects of major satisfaction while taking into account all variables. The independent variables were selected due to various potential variables that could influence major satisfaction. The independent variables were selected due to the research questions and previous literature, such as academic performance is linked to major satisfaction. The research questions were does television influence a major selection, are there discrepancies between the expectations and attitudes, and do those discrepancies influence major satisfaction. As a result, the variables were run in a multiple regression to determine any influence on the dependent variable, major satisfaction. There was a violation of homoscedasticity and normality of residuals due to skewness.

The overall model explains 14.1% variability of the dependent variable, major satisfaction. Additionally, the model is statistically significant, $F(6,145) = 3.963, p = 0.001$. However, there are two variables that are not statistically significant, classification and television influence on major selection (see Table 8). When examining the largest absolute value for the beta ($\beta = -0.298$), the student's attitudes while in the degree program would have the most influence on major satisfaction. However, due to the assumption violation, the squared structural coefficient was selected as the method to determine the most influential variable on major satisfaction. As a result, the variable with the largest value for the squared structural coefficient was grade point average ($r^2_s = .335$).

The following interpretations can be gathered from the results. As there is a one-unit increase in expectations before the degree program, there is a .208 unit increase in major satisfaction. As there is a one-unit increase in attitudes while in the degree program, there is a .287 unit decrease in major satisfaction. As there is a one-unit increase in number of hours crime-related television shows are watched, there is a .094 unit increase in major satisfaction.

Table 8

Coefficients on Major Satisfaction

Model	Unstandardized Coefficients		Standardized Coefficients			t	p
	B	SE	β	r_s^2			
(Constant)	2.812	.435				6.463	.000
GPA	-.184	.075	-.194	.335	-2.461	.015	
Class	.009	.027	.028	.012	.344	.731	
TV_Influence	-.025	.045	-.050	.046	-.557	.578	
B_Expectations	.208	.087	.233	.034	2.390	.018	
W_Attitudes	-.287	.093	-.298	.186	-3.105	.002	
Hourstv1	.094	.040	.197	.254	2.375	.019	

a. Dependent Variable: Major_Satisfactio

Note: Class=Classification; TV_Influence=television influence on major selection; B_Expectations=students' expectations before the degree program; W_Attitudes=students' attitudes while in the degree program; Hourstv1= Number of hours a student watches crime-related television shows; N=152; GPA: 1=Below 1.0; 2=1.0-2.0; 3=2.1-3.0; 4=3.1-4.0; 5= I do not know; Classification: 1=Freshmen; 2=Sophomore; 3=Junior; 4=Senior; 5=Graduate Student; Hourstv1: 1= Less than 1; 2= 1 to 3 hours; 3= 4 to 6 hours; 4= 7 to 9 hours; 5= more than 9 hours.

Another multiple regression analysis was conducted by examining the influence of classification and number of hours of viewing crime-related television shows on television influence on a student's major selection. This was completed due to the results in Table 8. Specifically, television influence on major selection and classification were not statistically significant. Table 4 displayed significant influence of number of hours a

student watches crime-related television shows on television and classification influence on major selection. As a result, classification and number of hours were selected as independent variables for the second multiple regression analysis.

The overall model explains 17.8% variability of the dependent variable, television influence on major selection. Additionally, the model is statistically significant, $F(2,149) = 16.105, p = <0.001$ (see Table 9). The number of hours a student watches crime-related television shows is the most influential variable for television influence on a student's major selection due to the variable having the largest absolute value for beta ($\beta = .319$) and largest value for squared structural coefficients ($r^2_s = .667$). Both variables are statistically significant, so the following provides interpretation. As there is a one-unit increase in classification, there is a .159 unit decrease in television influence on major selection. As there is a one-unit increase in number of hours watching crime-related television shows, there is a .307 unit increase in television influence on major selection.

Table 9

Coefficients for Television Influence on Major Selection

Model	Unstandardized Coefficients		Standardized Coefficients			t	p
	B	SE	β	r^2_s			
(Constant)	3.251	.253				12.861	.000
Class	-.159	.049	-.245	.431	-3.274	.001	
Hourstv1	.307	.072	.319	.667	4.278	.000	

a. Dependent Variable: TV_Influence

Based on literature (Dandan et al., 2006; Dutton 2013; Nauta, 2007) and results depicted in Tables 3, 8, and 9, path analysis was completed to statistically test the relationships between the variables (see Figures 1 and 2). Academic performance has

been linked to major satisfaction. Additionally, television influence has been linked the expectations an individual has before the degree program, which is linked to the attitudes an individual has while in the degree program. Attitudes while in the degree program have been linked to major satisfaction. Finally, classification and number of hours an individual watches are linked to television influence. Due to there being no significant influence noted in Table 8 for television influence and classification, a theoretical model was developed by the researcher to test the idea that television influence and classification do not directly influence major satisfaction, but do so indirectly.

As a result, a path analysis was designed testing all the variables together to find the best model fit. The model fit results were poor, $\chi^2_8 = 60.75, p < .05$, RMSEA = .208 (90% CI = .161 to .259), TLI = .105, CFI = .523.

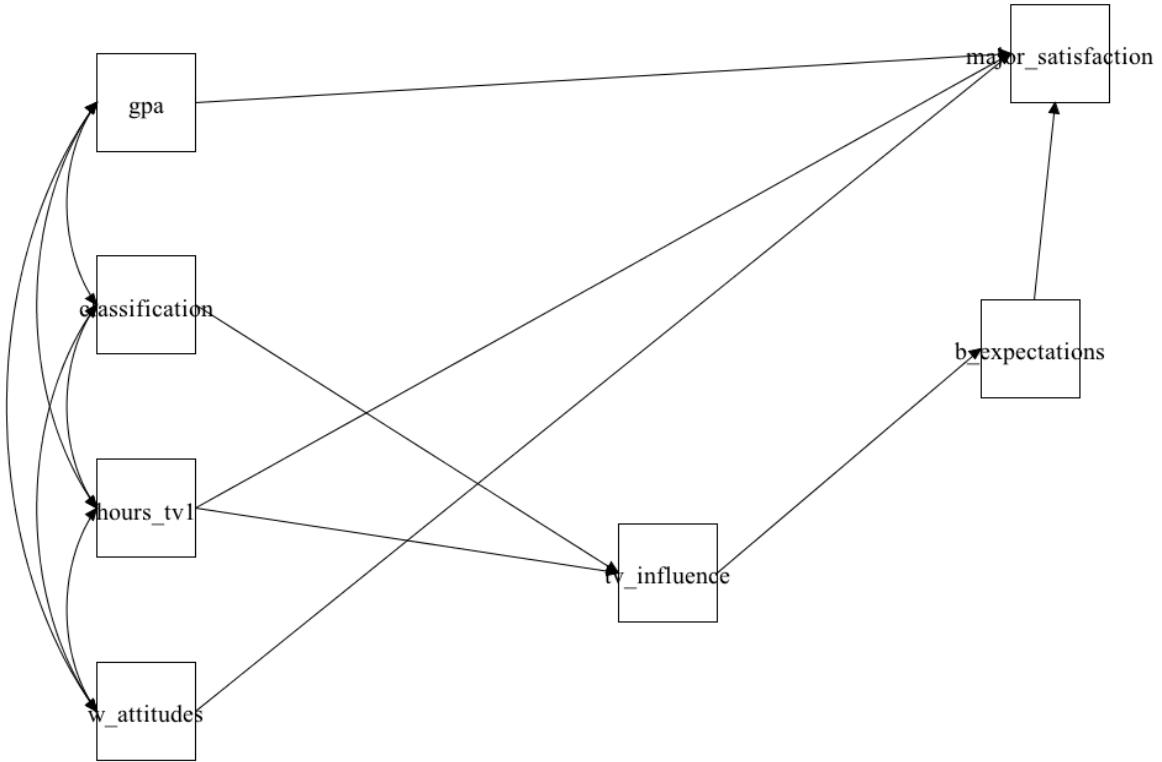


Figure 1. Path Analysis #1. Note: GPA* = grade point average; hours_tv1* = number of hours a student watched crime-related television shows; tv_influence* = television influence on major selection; b_expectations* = students' expectations before the degree program; w_attitudes* = students' attitudes while in the degree program; major_satisfaction* = major satisfaction, * $p < .05$

Due to the poor model fit results from Figure 1, a direct path was added to the path analysis to attempt to increase the model fit results. Table 3b displayed results of a positive correlation between expectations before entering the degree program and attitudes while in the degree program. Perhaps because of the positive correlation between expectations before the degree program and attitudes while in the degree program, it may be expectations have an influence on attitudes. As a result, a direct path was created between the two variables (See Figure 2). This alternate model now has three variables that directly influence the dependent variable, major satisfaction. The three variables are academic achievement, number of hours a student watches crime-

related television shows, and the students' attitudes while in the degree program. These three variables were confirmed as being significant influences on major satisfaction through the results as shown in Table 8. Once the direct path for the expectations was placed towards the attitudes while in the degree program, the model fit results became adequate, as reported. The model fit adequately, $\chi^2_{11} = 19.72, p < .05$, RMSEA = .07 (90% CI = .004 to .123), TLI = .877, CFI = .925, results. Therefore, Figure 2 displays the better-fit model due to the results of a chi-squares difference test; $\Delta \chi^2(3) = 41.03, p < 0.05$.

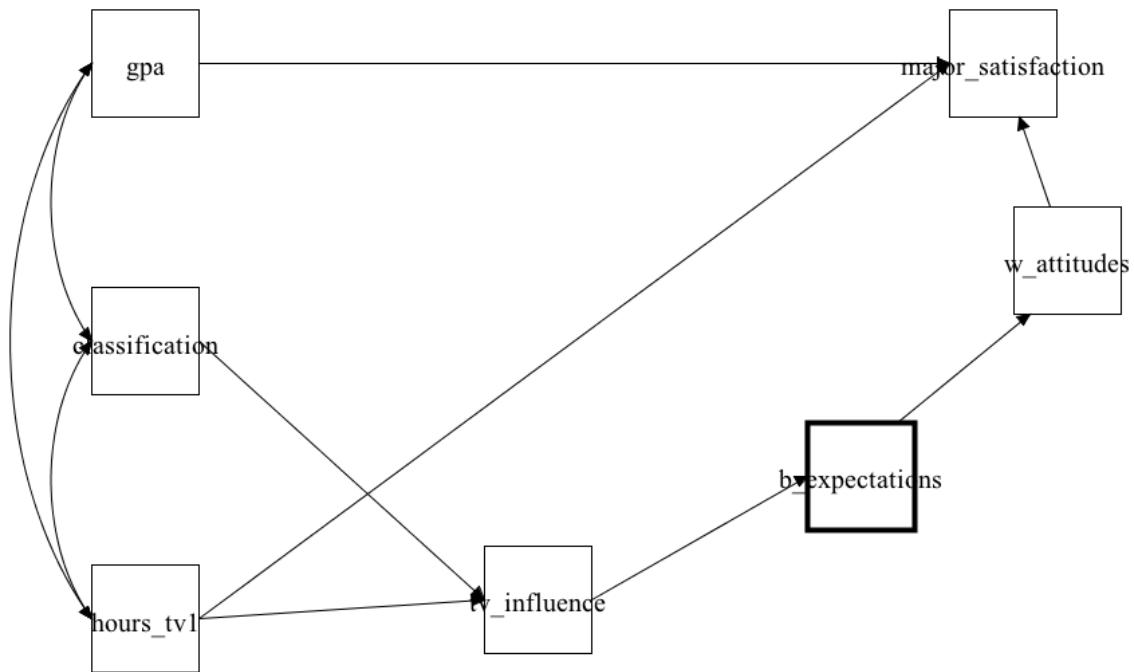


Figure 2. Path Analysis #2. Note: GPA* = grade point average; hours_tv1* = number of hours a student watched crime-related television shows; tv_influence* = television influence on major selection; b_expectations* = students' expectations before the degree program; w_attitudes* = students' attitudes while in the degree program; major_satisfaction* = major satisfaction, * $p < .05$

CHAPTER V

DISCUSSION

The hypothesis for the first research question was there will be a significant influence of television on the selection of a student's major. The results confirm the hypothesis, specifically for variables if the respondents watch *CSI* or not, the classification, and number of hours a student watches crime-related television shows. The independent variable with the greatest influence on a student's major selection is if a student watches *CSI* or not.

The second research question sought to determine if there are discrepancies between the expectations before the degree program and the attitudes while in the degree program. The results confirm the hypothesis that there was significant discrepancy between expectations before the degree program and attitudes while in the degree program. Overall, the expectations students had before the degree program were not met once they got into the degree program.

The third research question sought to determine the students' satisfaction in their forensic science or criminal justice major. The hypothesis for the third research question was that there would be discrepancies between the students' expectations before the degree program and attitudes while in the degree program which would influence major satisfaction. Due to the model and individual variables being statistically significant, it was concluded that discrepancy does influence major satisfaction when it remains alone.

Reflecting on the three research questions and the resulting analyses, there are some general conclusions that result. First, if students watch *CSI* or not, the student's classification, and number of hours a student watches crime-related television shows

influence major selection. Furthermore, a model suggests that the student's grade point average, number of hours a student watches crime-related television shows, the student's classification, television influence on a major selection, expectations before entering the degree program, and attitudes while in the degree program all influence major satisfaction. Additionally, there appears to be an overall set of expectations higher than what is later reported while actually in the program. Finally, when completing the exploratory factor analysis there were six factors. Those factors were TV influence/Fiction, Degree Expectations, Nonfiction, Field Expectations, Feelings, and For You.

Additionally, there were several correlations that should be noted. As there is more of an influence of television on a student's major selection, *CSI*, *Criminal Minds*, *NCIS*, *Law & Order*, *Forensic Files*, and *Forty-eight hours* were all watched. Additionally, as there was more of an influence of television on a student's major selection, there was a lower grade point average and classification. As there is an increase in expectations before the degree program, *Forensic Files*, *Forty-eight hours*, and *Court TV* are viewed. Additionally, as there is an increase in expectations before the degree program, there is an increase in television influence on a student's major selection. As there is an increase in attitudes while in the degree program, *Forensic Files*, *Forty-eight hours*, and *Court TV* are viewed. Additionally, more positive attitudes while in the degree program, are associated with lower classification and major satisfaction. Finally, higher expectations before the degree program are related to higher scores on attitude while in the degree program

As stated previously, due to the exploratory nature of the research an exploratory factor analysis was run. Even though there was no further analysis completed, the results of the exploratory factor analysis are beneficial. The six factors that resulted from the exploratory factor analysis are tied to the literature review. Beggs et al. (2008) referenced factors of influence on students' major choice were items such as job characteristics, fit and interest, and characteristics in the degree/major. Additionally, there was the idea that fiction and nonfiction television shows should not be lumped together as it was believed they impacted society's beliefs differently (Grabe & Drew, 2007; Hawkins & Pingree, 1981). With the six factors being: (a) Fiction/TV Influence, (b) Degree Expectations, (c) Nonfiction, (d) Feelings, (e) Field Expectations, and (f) For You, there are some similarities between the results and literature that could be further explored.

To further analyze the data, a path analysis was performed. Some conclusions that can be made are as follows. Grade point average directly influences major satisfaction. Classification directly impacts television influence on major selection. Number of hours watching crime-related television shows directly influences television influence on major selection and major satisfaction. Television influence directly relates to expectations before the degree program. Expectations before the degree program directly influence attitudes while in the degree program and attitude while in the degree program directly influences major satisfaction. These results are confirmed through correlations and results from regression analysis.

The results support Gerbner (1972) who described cultivation theory as a positive correlation between amount of television viewed and the perceptions of the items being

watched. The results also confirm prior research due to the statistically significant positive correlation between amount of television viewed and television influence on major selection ($r = .344$; $p < 0.001$). In other words, as the number of hours crime-related television is watched increases, so does the influence television has on major selection. Barthe et al. (2012) explained that media exposure significantly contributes to students' educational goals and major selection. The results of this research confirm that the amount of media exposure does relate to major selection.

Cultivation theory was expanded after Gerbner's initial explanation of the theory and individuals such as Hawkins and Pingree (1981) provided further description of what cultivation theory is. Hawkins and Pingree (1981) stated that the type of television should be examined such as reality versus fiction. Table 3a depicts the relationships between the specific crime-related television shows and television influence on a student's major selection. The results display the significant relationships between the four fiction television shows and two of the nonfiction and with the television influence. However, when further analysis is completed through multiple regression, only one crime-related television show is statistically significant. As a result, when the specific television shows are individually paired with television influence on a student's major selection, there were more significant relationships than all the specific television shows being analyzed for their relationship with television influence at one time.

College major selection was also noted as being influenced by four general factors, which were sources of information and influence, job characteristics, fit and interest in the subject, and characteristics of the major/degree (Beggs et al., 2008). While the results from the exploratory factor analysis were not successful in further analyses

such as structural equation modeling, it is important to reference the results being similar to the four general factors stated by Beggs et al. (2008). The factors have the start or adequate reliability depending on the specific factor.

Additionally, college major satisfaction was referenced as being linked to academic performance (Dandan et al., 2006; Nauta, 2007). The results confirm that as a student's grade point average increases there is an increase in major satisfaction. According to the path analysis and multiple regression, there is direct influence of academic performance on college major satisfaction.

Finally, the CSI Effect is a relatively new term that has been used throughout the past decade. The CSI Effect in its purest form states crime-related television shows influence the viewer's beliefs about forensic science. There are six versions of the term, but the professor's effect has not been the main focus in literature. This research examines the professor's effect of the CSI Effect by examining crime-related television shows influencing the academic field. The professor's effect occurs when students are selecting their major of forensic science or criminal justice due to being influenced by the crime-related television shows they are viewing. The results of the research combined with cultivation theory confirm that the professor's effect exists. There is a television influence on students' major selection. Additionally, the students' expectations before entering the degree program, which they obtained due to watching the crime-related television shows, are higher and not being met while in the degree program. The students' attitudes while in the degree program are lower than their expectations before entering the degree program. Finally, college major satisfaction is being influenced by grade point average, number of hours of crime-related television watched, television

influence, expectations before the degree program and attitudes while in the degree program.

Implications

These conclusions are important to society for a variety of reasons. First, as students are selecting their major it is important for them to realize that selecting their major for the right reasons is vital. It is necessary to explain to students that while changing their major can occur, it can have potentially negative effects such as financially and in terms of timing.

Additionally, these conclusions can assist an advisor when communicating with students. By being aware that crime-related television shows are influencing students to select a forensic science or criminal justice major, advisors can check with the students throughout their academic career to ensure they are satisfied with their college major selection. Then if a student indicates their lack of satisfaction, the advisor can attempt to direct the student in the right direction.

The forensic science and/or criminal justice programs can also use this information in a variety of ways. First, information, such as there not being a significant difference in expectations and attitudes while in the degree program for students believing the forensic science field is science based, makes the program/department chair know that the students are experiencing what they thought in regard to the amount of science that is in forensic science. Additionally, the program/department chair should be aware that the students have a higher expectation that they will be able to do things that are on television. As a program/department chair, it is critical to know that the students envision their academic program incorporating the glitz and glamour that television

portrays. With this knowledge, the program and department chairs can structure their programs, recruitment efforts, and any retention efforts to making sure their students know exactly what their academic degree program entails compared to television.

Finally, with this information professionals in the criminal justice and forensic science fields could attempt to contact the crime-related television shows to try to work together. With the knowledge that television shows in general are having an influence on society's realities, tweaking the shows to still have their glitz and glamour, but with a little more reality could be beneficial.

Limitations

There were a couple of limitations to this research that should be noted. The first is the sample size. While the sample size was sufficient for the purposes of the hypothesized statistical analyses, the sample size did hinder further analyses from occurring. Additionally, a limitation to the study was that a majority of the respondents were females and had a declared major in forensic science. Female respondents accounted for 83.6% of the total participants. Forensic science majors accounted for 90.1% of the total participants.

Future Research

After examining the results of this research, there are other areas of research that could be pursued. First, the instrument could be altered to focus more on the discrepancy aspect. The Cronbach's alpha levels were lower in the area of expectations, so further research should be done to strengthen the internal consistency component of reliability.

Furthermore, a larger sample size would be beneficial to ensure all possible statistical analyses could be performed. The larger sample size could be obtained through

more follow up with the institutions. A large portion of institutions did not respond back to express interest in participating so the sample size was smaller than anticipated.

Additionally, further research could be done in expanding the specific television shows to be analyzed. It has been made clear that television shows such as *CSI* contribute to television's influence on major selection; however, further research could occur to determine if with a larger sample size there are other crime-related television shows.

Finally, it is clear that crime-related television shows are influencing not only the court system, but academia as well. Due to the apparent influence on major selection, future research should be conducted in recruitment and retention in forensic science and criminal justice fields. This research study starts the journey of examining the recruitment of the students in the degree program, but future research could examine what recruitment efforts are made at specific institutions. Furthermore, since there are apparent discrepancies between students' expectations and attitudes once they are in the program, retention could be examined. Due to retention being a focus at many institutions, examining the retention of the forensic science and criminal justice degree programs' retention could be beneficial, especially knowing there are apparent discrepancies as well as a television influence on students' major selection.

APPENDIX A

INSTRUMENT

This questionnaire's purpose is to assist in determining if there is a relationship between the CSI Effect and a student making the decision to obtain a criminal justice or forensic science degree. As a participant of the research study, it is requested that you answer each question with the answer you believe most applies.

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

AUTHORIZATION TO PARTICIPATE IN RESEARCH PROJECT

Consent is hereby given to participate in the study titled: CSI Effect and Forensic Science/Criminal Justice Degree Programs

1. **Purpose:** The goal of this research is to determine if there is a relationship between the CSI Effect and a student making the decision to obtain a criminal justice or forensic science degree. Specifically, this empirical study seeks to determine if watching crime-related television shows will influence a college student's decision in choosing a major in the criminal justice or forensic science field.

2. **Description of the Study:** In this study you will be asked to participate in a survey by completing a thirty-eight item questionnaire. The completion of the questionnaire should take approximately forty minutes in duration. Any information you provide will be kept confidential your identity will not be revealed, by name or description.

3. **Benefits:** While there may be no immediate direct benefits for the participants in the study, it is hoped that a better understanding of how the CSI Effect might influence undergraduate and graduate students' decisions in selecting a criminal justice or forensic science major. In addition, it is hoped that dissemination of the results of this study may eventually assist in understanding how crime-related television shows may affect college major decisions.

4. **Risks:** Participation in this study poses minimal risk to the participants. All data collected will be kept confidential and data collection is anonymous. All data will be locked in a filing cabinet in the primary researcher's apartment. Participation is completely voluntary, and the participant may withdraw at any time without fear of consequence. The participant must be at least 18 years old. Every effort to maintain the participants' anonymity and confidentiality will be made. Research participants will be informed that they have the right to withdraw from the study at any time, and any information collected about them will be returned.

5. **Confidentiality:** All information shared with the researcher will be kept private and confidential. Every effort to maintain the participants' anonymity and confidentiality will be made.

6. **Participant's Assurance:** Whereas no assurance can be made concerning results that may be obtained (since results from investigational studies cannot be predicted) the researcher will take every precaution consistent with the best scientific practice. Participation in this project is completely voluntary, and participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits. Questions concerning the research should be directed to Megan Dutton at 601-266-2275. This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820. A copy of this form will be given to the participant.

7. **Signatures:** In conformance with the federal guidelines, the signature of the participant must appear on all written consent documents.

You understand you are giving consent to participate in this study. Your selection of this option is serving as your electronic signature.

Are you currently a forensic science or criminal justice major?

- Yes
- No

Whenever you watch television, you are more likely to watch a crime-related television show.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree

Strongly Agree

While watching crime-related television shows, you thought it would be cool to have one of the jobs portrayed on the show.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Crime-related television shows have made an impression on you in deciding upon your major in forensic science or criminal justice.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

You chose forensic science/criminal justice as your major because you wanted to do the things depicted on the crime-related television shows.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Crime-related television shows have played a part in your desire to have a career in the field of forensic science or criminal justice.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Forensic science and/or criminal justice has fascinated you due to crime-related televisions shows.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

How did you become interested in forensic science/criminal justice as a college major?

- Family
 - Friends
 - Television
 - Job Salary
 - Job Mobility
 - To Help Others

Why do you watch crime-related television shows?

- Voyeurism: curious about the suspect's behavior and attitude
 - Boredom-avoidance: because there is nothing else better to do
 - Relaxation: to focus on something else besides what you have to do
 - Information: to learn something
 - Entertainment: for fun

Please read the statement and mark your level of agreeance for both as an expectation before starting your degree program and while you are currently in your degree program.

a crime-related television show.



Please read the statement and mark your level of agreeance.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I often wish I hadn't gotten into this major?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wish I was happier with my choice of an academic major.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am strongly considering changing to another major.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall, I am happy with the major I've chosen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel good about the major I've selected.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would like to talk to someone about changing my major.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you watch any of the following forensic dramas?

	I watch	I do not watch
CSI	<input type="radio"/>	<input type="radio"/>
Criminal Minds	<input type="radio"/>	<input type="radio"/>
NCIS	<input type="radio"/>	<input type="radio"/>
Law and Order	<input type="radio"/>	<input type="radio"/>
COPS	<input type="radio"/>	<input type="radio"/>
Forensic Files	<input type="radio"/>	<input type="radio"/>
American Justice	<input type="radio"/>	<input type="radio"/>
48 Hours	<input type="radio"/>	<input type="radio"/>
Court TV	<input type="radio"/>	<input type="radio"/>

Are you currently working in any position in the forensic science/criminal justice field (i.e. intern, full-time, part-time)?

- Yes
- No

How many criminal justice courses have you been enrolled in during your college career?

- 0
- 1
- 2
- 3
- 4
- 5+

How many forensic science courses have you been enrolled in during your college career?

- 0

- 1
- 2
- 3
- 4
- 5+

How many hours per week do you watch crime-related television shows?

- Less than 1
- 1 to 3
- 4 to 6
- 7 to 9
- More than 9

What is your gender?

- Male
- Female

What is your classification?

- Freshman
- Sophomore
- Junior
- Senior
- Graduate Student

APPENDIX B

IRB APPROVAL LETTER



INSTITUTIONAL REVIEW BOARD
 118 College Drive #5116 | Hattiesburg, MS 39406-0001
 Phone: 601.266.5997 | Fax: 601.266.4377 | www.usm.edu/research/institutional-review-board

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
 - The risks to subjects are reasonable in relation to the anticipated benefits.
 - The selection of subjects is equitable.
 - Informed consent is adequate and appropriately documented.
 - Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
 - Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
 - Appropriate additional safeguards have been included to protect vulnerable subjects.
 - Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
 - If approved, the maximum period of approval is limited to twelve months.
- Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: CH13120402
 PROJECT TITLE: CSI Effect and Forensic Science/Criminal Justice Degree Programs
 PROJECT TYPE: Change to a Previously Approved Project
 RESEARCHER(S): Megan Dutton
 COLLEGE/DIVISION: College of Education and Psychology
 DEPARTMENT: Educational Studies and Research
 FUNDING AGENCY/SPONSOR: N/A
 IRB COMMITTEE ACTION: Exempt Review Approval
 PERIOD OF APPROVAL: 01/02/2014 to 01/01/2015

**Lawrence A. Hosman, Ph.D.
 Institutional Review Board**

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