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College student perceptions of system-culpability in the frequency of wrongful convictions: gauging the importance of respondent characteristics

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College Student Perceptions of System-Culpability in the Frequency of Wrongful Convictions: Gauging the Importance of Respondent Characteristics

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Abstract

Prior literature has highlighted several factors that contribute to wrongful convictions and described the frequency in which these factors influence wrongful convictions; they include mistaken eyewitness identification, mishandling of forensic evidence, and misconduct among criminal justice professionals. The literature concerning perceptions of the influence of these factors on wrongful convictions is limited, however, by its failure to consider the impact of respondent characteristics on their perceptions. In this study, I extend this line of research by examining the influence of respondent characteristics on perceptions of the culpability of criminal justice actors, contamination of forensic evidence, and mistaken eyewitness identification in the frequency of wrongful convictions. Results of Pearson's correlation suggest that perceptions are shaped by sex, political affiliation, college major, having a friend or close friend or family member employed in criminal justice, perceptions of race-based sentencing disparities, and perceptions of the frequency of wrongful convictions.

Introduction

In Oregon 2011, Nicholas McGuffin was wrongly convicted of murdering his girlfriend and was sentenced to prison for ten years. His appeals for a new trial was denied, therefore, in 2014 McGuffin reached out to the Oregon Innocence Project for their help. In 2019, McGuffin was granted a new trial, however, he would not need to participate in a new trial because of several errors noticed by the appeals judge in his first trial. The appeals judge noted several errors in his original trial including failure to disclose exculpatory evidence, inadequate legal defense, wrongful or misleading forensic evidence, mistaken eyewitness identification, and false accusation. As a result of several legal shortcomings and the prosecutions' failure to disclose exculpatory evidence, in December 2019, the prosecutor dismissed the case and McGuffin was officially exonerated (National Registry of Exonerations, 2020). Nicholas McGuffin is only one of the thousands who have been wrongfully convicted, but one of the few who have been exonerated for a crime he did not commit.

As of March 2020, there have been 2,568 exonerations in the United States (National Registry of Exonerations, n.d.). Of those, 367 were exonerated by DNA evidence ("Exonerate the Innocent", n.d.); however, there are a number of factors that contribute to wrongful convictions. The extant literature has identified a number of contributing factors leading to wrongful convictions including mistaken witness identification, perjury or false accusation, false confession, false or misleading forensic evidence, and official misconduct; however, the role these factors play has been inconsistent within the literature (National Registry of Exonerations, n.d.; DNA Exonerations in the United States, n.d.). Several studies have identified mistaken eyewitness identification as the leading contributor (Gross, Jacoby, Matheson, Montgomery, & Patil, 2005; Huff, Rattner, & Sagarin, 1996; Scheck, Neufeld, & Dwyer, 2000; Wells, Small,

Penrod, Malpass, Fulero, & Brimacombe, 1998); this is also the most occurring contributing factor reported in DNA exonerations ("DNA Exonerations in the United States", n.d.). In contrast, the National Registry of Exonerations (n.d.) has identified perjury as the leading contributor to wrongful convictions and official misconduct, an umbrella term for criminal justice actors engaging in unethical behavior, as a close second. These discrepancies within the literature are likely related to the relationship with the different crimes examined. For example, those exonerated for homicides were more likely to experience official misconduct and perjury, respectively. Sexual assault exonerations were significantly more likely to experience mistaken eyewitness identification. In contrast, child sex abuse exonerations were considerably more likely than other factors to experience false accusations (National Registry of Exonerations, n.d.). These data, however, only include those cases in which an error has been identified and an exoneration granted. There is no knowledge on the cases that have not resulted in an exoneration. Regardless, it is important to recognize and understand the leading contributors to wrongful convictions.

Research has attempted to gauge the regularity of such errors by surveying different samples of criminal justice professionals. To date, there have been three studies that examined criminal justice respondents' perceptions toward the frequency of factors that contribute to wrongful convictions. While these studies established a foundation for understanding criminal justice respondent perceptions', the only contributing factors considered in these studies include: forensic error, mistaken eyewitness identification, police error, prosecutor error, judicial error, and defense attorney error. Additionally, each of these studies were comprised of descriptive analyses which does not allow for inferences to be made regarding the data (Huff et al., 1986; Ramsey & Frank, 2007; Smith et al., 2011). There have been studies to examine the public's

perception of wrongful convictions, but they did not probe respondents' perceptions regarding the factors responsible for wrongful convictions (Unnever & Cullen, 2005; Zalman, Smith, & Kiger, 2008; Zalman, Larson, & Smith, 2012). Therefore, absent from the literature is the exploration of the public's perceptions of the factors responsible for wrongful convictions. This prompted the current study to explore college student perceptions of the factors responsible for most wrongful convictions. This exploratory study will provide a baseline for future research involving college student samples and may help identify ways in which teaching methods or curricula could be adjusted to appropriately educated students on wrongful convictions, their possible causes, and their consequences.

Review of Literature

There are numerous factors that may contribute to wrongful convictions. My review of the literature will only discuss the factors asked about in my survey, which includes mistaken eyewitness identification, police misconduct, prosecutorial misconduct, judicial misconduct, and forensic evidence errors. These factors have been identified as some of the most influential contributing causes to wrongful convictions (Bedau & Radelet, 1987; Borchard, 1932; Innocence Project, n.d.; National Registry of Exonerations, n.d.; Rattner, 1983).

Mistaken Eyewitness Identification

Mistaken eyewitness identification has been identified by some researchers as the primary factor in causing wrongful convictions. The misidentification by a witness can be influenced by factors such as inadequate police investigation, faulty identification procedures, and an individual's inability to retain and remember accurate information (Conners, Lundregan, Miller, & McEwen, 1996; Estes, 1997; Loftus, 2005; Shiffrin & Steyvers, 1997; Wells & Olson, 2003). An inadequate police investigation can occur when police fail to search for other types of

evidence beyond the identification. For example, Gross and his colleagues (2005) point out that investigations of rape may lead to more frequent misidentifications by a witness because, more often than not, the victim of the rape is still alive and able to participate in suspect identification. However, in murder cases that lack witnesses other than the deceased, the police are forced to search for more information to identify the suspect (Gross et al., 2005).

Faulty identification procedures occur when a witness is exposed to bias during questioning, lineups, or other forms of identification procedures. During questioning, officers may use suggestive language to influence which suspect a witness may identify and believe to be the perpetrator. This could include an officer telling a witness "good job" or thanking the witness for confirming the officer's suspicions (Gould & Leo, 2010). As a result, this suggestive language is problematic because the witness may feel more confident in their identification, even though they may be incorrect (Wells & Murray, 1983). Other common identification procedures include show-ups and lineups. Show-up identification tests are a form of "yes" or "no" test in which a witness is presented with a single suspect and is asked to respond "yes" or "no" if the person they are being presented with is the perpetrator of the crime. This type of identification test is usually administered shortly after the police identify a suspect (Clark & Godfrey, 2009). The lineup procedure can involve a photographic listing or a live assembly of suspects. In this procedure, the witness is presented with a lineup of pictures of individuals or a lineup of physical individuals and asked to identify the suspect. This identification procedure emphasizes that witnesses can respond with 'none of the above' (Clark & Godfrey, 2009). Error or bias can be introduced during either identification procedure if proper instructions are not given. For example, witnesses should be told that the perpetrator may or may not be in the lineup and that the witness is not obligated to pick anyone. However, instructions may be biased if the officers

state or imply that the perpetrator is in the lineup or if they fail to express that a ‘none of the above’ response is an appropriate answer (Clark & Godfrey, 2009).

Witnesses may also make inaccurate identifications because of a lack of memory or memory distortion. A witness’s memory may be incomplete or inaccurate due to the brain’s failure to store the memory or as a consequence of storing incorrect information (Shiffrin & Steyvers, 1997). Also, as time goes on, the brain prioritizes memories and removes information it deems unimportant (Estes, 1997). Post-event information includes exposure to such things as interviewer questions, news reports, and photographs of the suspect. These can alter a witness’ memory by adding specific information to memory that is detailed about the suspect (Loftus, 2005). Information a witness is told or hears during or after an incident may cause memory distortion. During an event, factors such as the duration of the event, the presence of a weapon, the lighting surrounding or distance from the perpetrator, the presence of alcohol, race, and age can distort victim’s or witness’s perception of the appearance of the perpetrator (State v. Henderson, 2011). The characteristics of the perpetrators and lighting surrounding them may further exacerbate the potential for misidentification, particularly if the perpetrator is of a different race than the witness. Research suggests that individuals have more difficulties identifying someone of a different race than their own (Meissner & Brigham, 2001). This pattern is seen in the Innocence Projects data, where 41% of the cases involve cross-racial misidentification (West & Meterko, 2016). Witness susceptibility to inaccurate identification is frequent, but often aggravated through identification procedures or questioning with the police. Therefore, mistaken eyewitness identification along with other procedures can be greatly influenced by police misconduct.

Police Misconduct

Police misconduct has frequently been described as a form of official misconduct that significantly contributes to wrongful convictions (Bedau & Radelet, 1987; Borchard, 1932; Conners et al., 1996; Gross et al., 2005; Huff et al., 1986; Gudjonsson, 1992; Leo & Ofshe, 1998; McCloskey, 1989; Radelet, Bedau, & Putnam, 1992; Scheck et al., 2000; Yant, 1991). Behaviors that may contribute to wrongful convictions include improper administration of identification procedures (Clark & Godfrey, 2009; Conners et al., 1996; Loftus, 2005; Wells & Olson, 2003), falsifying reports or not making reports (Covey, 2013), coercing witnesses or suspects (Leo, 2008; Ofshe & Leo, 1997), improper or lack of investigation (Conners et al., 1996), and perjured testimony (Covey, 2013; Gross et al., 2005). Police misconduct has also been linked with false statements and perjured testimony among witnesses (Covey, 2013), as well as false confessions (Covey, 2013; Gross et al., 2005; Leo & Ofshe, 1998; Scheck et al., 2000).

Donovan and Klahm (2018) examined how priming respondents on the issues of innocence influenced their perceptions toward police misconduct. The innocence prime provided to participants introduced them to the Innocence Project while emphasizing that the efforts of the organization helped over 300 individuals become exonerated. Half of their sample received the innocence prime while the other half did not. Perceptions of police misconduct were measured by asking respondents how often they believed police misconduct occurred in their city. Examples of police misconduct provided in the study included police using force to get wrongful confessions and police contributing to someone being found guilty for a crime they did not commit. Results from their study indicated that the innocence prime increased participants' responses to police misconduct occurring "sometimes" or "rarely" compared to "never." A surprising result revealed that conservatives were responsive to the prime, while liberals were

not. Conservatives who received the prime shared similar responses with liberals and were significantly less likely to say police misconduct never occurs. Conservatives who did not receive the prime indicated opposing results (Donovan & Klahm, 2018). These findings challenge previous research that indicates conservatives favor the police, while liberals maintain harsher judgments toward the police (Dugan, 2015; Ekins, 2016; Jones, 2015; Newport, 2016; Norman, 2017). Some may view the police as the most influential individuals toward wrongful convictions because of their direct influence on witnesses and suspects, however, prosecutors hold the same influence if not more because of their power to criminally convict an individual.

Prosecutorial Misconduct

Prosecutors are, by far, the most powerful actors in the criminal justice system (Luna, 2014; Stuntz, 2011; Wright & Levine, 2014). The most important roles of the prosecutor involve deciding whether or not to bring charges against someone and what charges the person should receive (Burke, 2007). Prosecutorial error can occur internally or externally of a trial; though it occurs more frequently during a trial. Error that may occur during a trial include suppression of exculpatory evidence (Brady v. Maryland, 1963; Davis, 2001); witness tampering such as, coaching, improper witness examination, intimidation of witnesses, and threatening witnesses with loss of immunity if they testify for the defense (Davis, 2001;Gershman, 2002; Ridolfi & Possley, 2010; United States v. Schlei, 1997); knowingly using perjured testimony (Mooney v. Holohan, 1935; United States v. Basurto, 1974); improper jury selection (Batson v. Kentucky, 1986; Kirchmeier, Greenwald, Reynolds, & Sussman, 2009; People v. Davis, 2009;); improper arguments such as, misstating the law, offering personal opinion, questioning the defense to the jury, or appealing to religious authorities (Caldwell v. Mississippi, 1985; Elliott & Weiser, 2004;

Ridolfi & Possley, 2010; Sandoval v. Calderon, 2000); and introducing improper or false evidence (Good v. State, 1986; United States v. Alzate, 1995).

West (2010) conducted a study on the first 255 DNA exonerations within the United States and examined the courts' rulings on cases claiming prosecutorial misconduct which led to their conviction. Of the cases that filed appeals or suits claiming prosecutorial misconduct, 48% of them resulted in the court finding errors, either harmless or harmful errors. 18% were concluded to involve harmful errors, and 29% were concluded to involve harmless errors. Some of the allegations of prosecutorial misconduct included prosecutors giving improper arguments and questions during the trial, withholding exculpatory evidence, prosecutors using bias in peremptory challenges to dismiss a juror, prosecutors using perjured testimony, prosecutors destroying or fabricating evidence, and improper use of jailhouse snitches. Of all these allegations, the courts were most likely to identify prosecutors giving improper arguments and/or withholding exculpatory evidence. Specifically, the courts identified 56% of cases as involving improper arguments of the prosecution. Of those, 9% were found to be harmful errors and resulted in an overturned conviction. For exculpatory evidence, the courts identified 28% of cases as instances in which prosecutors withheld exculpatory evidence. A majority of those (24%) were found to be harmful errors and resulted in overturned convictions. Most of the other accusations were not identified by the courts or were only found within a few of the cases (West, 2010). Prosecutors are not the only member within the courtroom whose actions may contribute to a person's wrongful conviction; judges may also play an important role in causing a wrongful conviction.

Judicial Misconduct

Judicial misconduct has been infrequently examined as a contributor to wrongful convictions. There has been research that has linked judicial error and bias with wrongful convictions (Huff et al., 1986; Rattner, 1983). Judges may contribute to wrongful convictions by allowing questionable evidence to be entered, allowing their biases to influence their decisions, and permitting prosecutors and police to act overzealously (Ramsey & Frank, 2007). Judges' duties related to evaluating evidence is to examine the credibility and reliability of the evidence. It is the duty of the prosecution and defense to argue its reliability (Brown, 2012). When confessions are introduced as evidence during trial, judges rarely suppress them, even if they are highly questionable (Givelber, 2000). When it comes to judicial bias, it is expected that judges make decisions based solely on facts, evidence, and the law while suppressing their personal beliefs and attitudes (Wilentz, 1985). However, human beings are rarely able to do so (Bodenhausen, 1988; Saks & Kidd, 1980; Tversky & Kahneman, 1982). As mentioned, judicial misconduct is infrequently studied, and most acts of misconduct identified are attributed to a judge's discretionary powers. Judges have discretion in deciding what can and cannot be argued in court including forensic evidence. While the decision to allow forensic evidence that may be incorrect or faulty is up to the judge, the judge is not responsible for any inaccurate forensic testing or reporting.

Forensic Evidence

In data from the Innocence Project, 47% of cases of wrongful convictions involved the misapplication of forensic science (West & Meterko, 2016). Forensic science errors that result in wrongful convictions may include mishandling of evidence, misrepresenting evidence or lack thereof in testimony, or misconduct in the form of purposefully withholding exculpatory

evidence. Further, evidence can be contaminated during transfer from the crime screen to the lab or from the lab to storage (Scheck et al., 2000). Biological evidence that may hold DNA evidence has been found to be highly susceptible to mishandling or contamination (Garrett, 2011; Naughton & Tan, 2011). While this may be accidental, it is no less harmful.

Regarding the misrepresentation of forensic evidence, there is currently no set of standards that clarifies what forensic scientists' testimonies can and cannot include and how they must deliver their testimony. Since 2017, standards have been in development by the Department of Justice (DOJ), and those standards will apply to all of the department's forensic examiners, including those working at the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), the Drug Enforcement Administration (DEA), and the Federal Bureau of Investigations (FBI) ("Forensic Science", n.d.). These new standards, which the DOJ names the Uniform Language for Testimony and Reports (ULTRS), will include guidance for forensic scientists on the submission of scientific statements, such as what words to use to explain the scientific findings when drafting reports or testifying ("Forensic Science", n.d.). Examples of misrepresentations of forensic science in testimony include: interpreting nonprobative evidence as inculpatory evidence, discounting exculpatory evidence, inaccurately presenting frequencies or statistics, stating statistics without empirical support, stating non-numerical statements without support, and concluding that the evidence originated from the defendant without providing empirical data to support it (Garrett & Neufeld, 2009). Specifically, for DNA evidence, forensic scientists may misinterpret DNA as a *prima facie* proof of guilt. In other words, forensic scientists may believe that simply because the defendant's DNA was at a crime scene their guilt is conclusive (Scheck et al., 2000). Misrepresenting forensic testimony may not necessarily occur intentionally, but

rather as the result of inexperience, poor training, or inadequate supervision (Gross, 1991). There are, however, purposeful intents to misrepresent or withhold evidence.

Identified forms of forensic science misconduct include, but are not limited to, withholding forensic evidence, error in analysis, or failing to conduct elimination or comparison testing (Garrett & Neufeld, 2009). 'Withholding forensic evidence' is a similarly broad umbrella that encompasses withholding lab reports, analyses, or the existence of evidence and fabricating evidence by falsifying or altering lab reports (Bibbins v. City of Baton Rouge, 2007; Garrett & Neufeld, 2009; Washington v. Commonwealth, 1984). Common errors include mistyping of evidence, failing to identify elements of evidence, failing to note differences in comparison tests, and improper use of equipment. While failing to conduct elimination or comparison testing is a form of ethical misconduct, neither forensic analysts nor prosecutors maintain a legal duty to search for exculpatory evidence (Garrett & Neufeld, 2009). Thus far, my discussion has included examining different types of errors that may contribute to wrongful convictions. With that said, the current study is exploring the perceptions of college students on these types of error, thus I must examine previous research on perceptions of wrongful convictions and their contributing factors.

Perceptions of Contributing Factors

There have been relatively few studies of perceptions of wrongful convictions (Huff et al., 1986; Ramsey & Frank, 2007; Smith et al., 2011; Unnever & Cullen, 2005; Zalman et al., 2012; Zalman et al., 2008). Huff et al (1986) conducted the first study that surveyed respondents' perceptions toward wrongful convictions. Their sample was limited to criminal justice professionals (attorney generals, judges, prosecutors, defense attorneys, sheriffs, and chiefs of police) from the state of Ohio. Respondents were asked to rank four leading causes of wrongful

convictions from a prescribed list: police error, prosecutorial error, eyewitness error, and judicial error. Respondents ranked eyewitness error as the leading cause of error followed by police error, prosecutorial error, and finally judicial error. This study did not consider the relationship between respondents' specific profession in the criminal justice system and their perception of the leading cause of wrongful conviction (Huff et al., 1986).

Ramsey and Frank's (2007) study and Smith, Zalman, and Kiger's (2011) study replicated parts of Huff et al.'s (1986) study. Ramsey and Frank's (2007) study also involved Ohio criminal justice professionals, but only gauged their perceptions in terms official misconduct committed by criminal justice actors (police, prosecutors, defense attorneys, and judges) that have been associated with wrongful convictions. A major aspect of the study included examining respondents' perceptions of how frequently official misconduct was committed by criminal justice actors. Their analyses were broken down by each criminal justice actor's misconduct. Regarding police error, on average, respondents believed police error to occur more than 'infrequently', but less than 'moderately infrequent.' Defense attorneys believed police error occurred most frequently, while police and prosecutors believed police error to occur least frequently. For prosecutorial error, the average response toward how often it was perceived to occur was between 'infrequent' and 'less than moderately frequent.' Again, defense attorneys perceived prosecutorial misconduct to occur 'more than infrequently.' When looking at defense attorney error, the average response for all groups was between 'more than infrequent' and 'moderately frequent.' Defense attorneys are the only ones to consider their groups' error to occur more than 'moderately frequent.' Lastly, for judicial error, the mean response was between 'infrequent' and 'moderately frequent' with defense attorneys' responses being the highest around 'moderately frequent.' Overall, defense attorneys perceived each criminal justice actor's

misconduct to occur more frequently in comparison to the other groups. Prosecutors' responses to each criminal justice actor's misconduct were the lowest in comparison to the other groups' responses (Ramsey & Frank, 2007).

Smith, Zalman, and Kiger's (2011) study utilized methods similar to those of Huff et al. (1986) and Ramsey and Frank (2007), but expanded their study to include participants' perceptions of the reliability of eyewitnesses, forensic experts, police error, prosecutorial error, defense attorney error, and judicial error while also gathering respondent perceptions of the frequency of each criminal justice actor's misconduct. Again, this study's sample was limited to criminal justice professionals from a single state: Michigan. The results for reliability revealed police, prosecutors, and judges were each more trusting of eyewitnesses than defense attorneys. Defense attorneys believed eyewitnesses to often make misidentifications. Police, prosecutors, and judges were also similar in their perceptions of forensic experts and believed them to be very reliable. Defense attorneys again were more skeptical of forensic experts and believed that they intentionally misrepresent evidence. When looking at criminal justice actor's misconduct, there were similar results to Ramsey and Frank's (2007) study, in that police and prosecutors believed each type of error to occur 'infrequently.' Defense attorneys, however, were likely to believe each type of error occurs 'more than infrequently' (Ramsey & Frank, 2007). Considering the reliability of system actors, police and prosecutors ranked evidence presented by the police as 'very reliable', judges ranked it 'usually reliable', and defense attorneys 'below usually reliable'. Evidence presented by prosecutors was also ranked 'highly reliable' by police and prosecutors and 'least reliable' by defense attorneys. For defense attorney reliability, defense attorneys themselves rated their reliability lower than did police, prosecutors, and judges. Again, similar to

Frank and Ramsey (2007), this study illustrated defense attorneys as being most critical of criminal justice actor's misconduct (Smith et al., 2011).

To date, there have been three studies to survey general citizens in the United States regarding wrongful convictions (Unnever & Cullen, 2005; Zalman et al., 2008; Zalman et al., 2012). Zalman, Smith, and Kiger's (2008) study looked only at citizens' perceptions of the frequency of wrongful conviction. Unnever and Cullen's (2005) and Zalman, Larson, and Smith's (2012) studies examined perceptions beyond the frequency of wrongful conviction. Unnever and Cullen (2005) examined if people were less likely to support capital punishment if they believed that an innocent person had been executed. From their study, 74.6% of their respondents believed that an innocent person had been executed within the last five years. Those who believed innocent people had been executed were significantly less likely to support capital punishment. Blacks were substantially less likely to support capital punishment than Whites if they believed an innocent person had been executed (Unnever & Cullen, 2005).

Similar to Smith et al (2011), Zalman, Larson, and Smith's (2012) asked respondents to rate the reliability and competence of system actors. Most respondents believed police, forensic experts, prosecutors, judges, juries, and defense attorneys to be 'usually reliable.' In no instance did more than 16% of the citizens believe that system actors were 'usually' or 'very unreliable,' which suggests general confidence in system actors. Forensic experts were rated the most reliable by all demographic categories. However, non-White respondents, compared to White respondents, felt that decisions made by police, prosecutors, judges, and juries were less reliable and that lawyers were not competent. Sex was not a major predictor of opinion, but those with higher levels of education had greater confidence in the reliability of judges (Zalman et al., 2012).

The Current Study

While a number of studies have examined perceptions of wrongful convictions, scholars have failed to examine perceptions of college students on the issue. It is important to understand college students' perceptions of contributing factors of wrongful convictions because discovering what they do or do not know about wrongful convictions and their contributors can help influence teaching methods and curricula, especially for students studying criminal justice. Also, regardless of college major, all students are possible voters, politicians, criminal justice professionals, and so on, and knowing the factors that contribute to wrongful convictions before they enter these positions may help reduce the likelihood of wrongful convictions persisting.

Of the perceptions of wrongful convictions that have been examined, most belong to criminal justice professionals (Huff et al., 1986; Ramsey & Frank, 2007; Smith et al., 2011); people whose opinions may have been influenced by their career. Further, prior perception-based studies have only been descriptive in nature and lacked exploration of the potential relationships between respondents' demographics and their perceptions of the factors responsible for wrongful convictions. Of the studies that have examined public perceptions, exploration has been limited to the beliefs that an innocent person has been executed (Unnever & Cullen, 2005) or levels of confidence/reliability in criminal justice system actors (Zalman et al., 2012). Examination of public perceptions concerning the culpability of several factors in wrongful convictions appears altogether lacking from the literature (Unnever & Cullen, 2005; Zalman et al., 2012).

This exploratory study aims to add to the literature by using a college student sample and asking them what they perceived to be the most important factor responsible for most wrongful convictions. The findings in this study will highlight students' perceptions prior to their entering into the workforce – particularly within criminal justice professions. In other words, this study

will provide a baseline of college student perceptions found concerning the factor responsible for most wrongful convictions. Further, results may be used to make adjustments to teaching methods or current curricula as a means of ensuring students are appropriately educated on wrongful convictions, their possible causes, and their consequences.

The aforementioned gaps in the literature prompted the current study to ask: what characteristics influence college student perceptions on the factor responsible for most wrongful convictions? Before the primary question can be addressed, a series of research questions must first be answered. These include: (RQ1) what factor do college students perceive is responsible for most wrongful convictions; (RQ2) what is the relationship between student race and perceptions of the factor responsible for most wrongful convictions; (RQ3) what is the relationship between college student major and perceptions of the factor responsible for most wrongful convictions; (RQ4) what is the relationship between political affiliation and perceptions of the factor responsible for most wrongful convictions; (RQ5) what is the relationship between sex and perceptions of the factor responsible for most wrongful convictions; (RQ6) what is the relationship between having a family member work in the criminal justice system and perceptions of the factor responsible for most wrongful convictions; (RQ7) what is the relationship between punitive attitudes and perceptions of the factor responsible for most wrongful convictions; (RQ8) what is the relationship between perceptions of race-based sentencing disparities and perceptions of the factor responsible for most wrongful convictions; and (RQ9) what is the relationship between perceptions of the frequency of wrongful convictions and perceptions of the factor responsible for most wrongful convictions?

Methodology

Data

The current study collected data from a mid-sized university in the Southeastern United States. The study is exploratory in nature because research has failed to examine the perceptions of college students regarding the factors responsible for wrongful convictions. At the time of the study, there were a total of 10,176 undergraduate students enrolled at the sample university. Initially, the study considered a stratified random sampling technique where the sampling frame would have been defined by department and course level (e.g., 1000-4000), and units would be randomly chosen from within the sampling frame. However, due to scheduling conflicts and unreturned emails from professors of the selected courses, this study adopted a convenience sampling technique. Thus, the classes that were sampled included those in which the professor gave me permission to administer my survey. As a result, the sample included 16 different courses largely from the social sciences. They included five 1000-level, three 2000-level, six 3000-level, and two 4000-level courses from 6 separate programs. Therefore, survey methodology was used to analyze college students' perceptions of the predictors of wrongful convictions.

During survey administration, I met with professors and students during their scheduled course time and explained the purpose and voluntary nature of the study. All students aged 18 and over were asked to participate in the survey. In total, 974 surveys were delivered to the 16 selected courses based on their enrollment records. 523 of these surveys were completed by the students and the remaining 451 were returned blank as a result of absenteeism or prior completion of the survey. As a result of incomplete responses in 49 surveys, the final sample comprised of 474 completed surveys.

Dependent Variables

For the purpose of this study, *factors responsible for wrongful convictions* is conceptualized as those actors within in the criminal justice process that are most likely to impact the probability of wrongful convictions. In turn, this study operationalizes these actors as police, prosecutors, judges, forensic technicians, and witnesses. In accordance with this operationalization, the current study includes 5 dependent variables. Specifically, respondents were asked "which of the following factors do you believe is responsible for the most wrongful convictions (choose one)": (1) police misconduct, (2) prosecutorial misconduct, (3) judicial misconduct, (4) contamination of forensic evidence, and (5) mistaken eyewitness testimony. Each dependent variable is a dichotomous variable, meaning that there are only two possible responses (1= yes, 0= no). Although technically a nominal level of measurement, this coding scheme allows for each of these dependent variables to be treated as an interval level of measurement (Walker & Maddan, 2009). Specifically, the attributes of each are mutually exclusive, exhaustive, have no true zero and maintain equal distances in between.

Independent Variables

Student's *race* is conceptualized as the racial group with which the student identifies. This concept was operationalized through the question, "please indicate your race" (white =1; black =2; Asian/Pacific islander =3; native American =4; multi-racial =5; other = 6). Due to insufficient variance among the choices, however, this variable was collapsed into a dichotomous variable: white (1) and other (0). Since this variable is a dichotomous nominal measure, it may be treated as an interval level of measurement. It is exhaustive and mutually exclusive, and there are equal intervals between the variables. However, the attributes cannot be logically rank ordered.

College major is conceptualized as the students' selected field of study. College major is operationalized as a dichotomous indicator of the students' selected field of study (CJ = 1; other = 0) This is a dichotomous nominal measure that may be treated as an interval-level measure. The attributes are exhaustive and mutually exclusive.

Student *political affiliation* is conceptualized as the students' selected political party. This is operationalized through the question, "please indicate your political affiliation" (Democrat =1; Republican =2; Libertarian =3; Green =4; Socialist =5; other =6). Again, this variable had insufficient variance among the choices and was therefore collapsed into a dichotomous variable: Republican (1) and other (0). This is a dichotomous nominal variable that can be treated as an interval level of measurement. This variable cannot be logically rank ordered, but is mutually exclusive, exhaustive, and there are equal intervals between the variables.

Student *biological sex* is conceptualized as the reproductive anatomy with which the student was born. This concept will be operationalized through the question, "please indicate your biological sex" (male =1; female =2; other =3). This variable is nominal because it is exhaustive and mutually exclusive.

A *student's family or friend employment in the criminal justice field* is conceptualized as a family member or a friend of the student who has or currently works in the field of criminal justice. This is operationalized through the question, "do you have a family member or close friend who was/is employed in the field of criminal justice" (yes =1; no=0). This is a dichotomous nominal variable that can be treated as an interval-variable. The attributes are mutually exclusive and exhaustive. The attributes can be rank-ordered and there are equal intervals between the attributes.

Student's *punitive attitudes* are conceptualized as the degree to which the student supports the use of the death penalty. This is operationalized through the question, "If both of the following sentencing options were available in a 1st degree murder case, which would you prefer" (Life with no chance of parole = 0, Death penalty = 1). This is a dichotomous nominal variable that can be treated as an interval level of measurement. This variable cannot be logically rank ordered, but is mutually exclusive, exhaustive, and there are equal intervals between the variables.

Student *perceptions of race-based sentence disparities* is conceptualized as the degree to which students perceive that racial and ethnic minorities receive harsher sentences. This is operationalized through a series of Likert statements, "Blacks are more likely to receive harsher sentences than Whites for the same crime;" "Blacks are more likely to receive a harsher sentence if the victim of their crime is White;" "Blacks are more likely than Whites to be sentenced to prison for non-violent drug offenses;" "Blacks are more likely than Whites to be sentenced to prison for violent crimes;" "On average, Blacks receive longer prison sentences than Whites for the same crimes;" "Blacks are more likely than Whites to receive the death penalty;" "Hispanics/Latinos are more likely to receive harsher sentences than Whites for the same crime;" "Hispanics/Latinos are more likely to receive a harsher sentence if the victim of their crime is White;" "Hispanics/Latinos are more likely than Whites to be sentenced to prison for non-violent drug offenses;" "Hispanics/Latinos are more likely than Whites to be sentenced to prison for violent crimes;" "On average, Hispanics/Latinos receive longer prison sentences than Whites for the same crimes;" and "Hispanics/Latinos are more likely than Whites to receive the death penalty" (strongly disagree = 1; disagree = 2; undecided = 3; agree = 4; strongly agree = 5). The use of an obliquely rotated factor analysis revealed that each of these measures loaded onto a

single dimension with an Eigenvalue of 4.599 and factor loadings in excess of .79. These measures were, therefore, combined into an additive scale of Perceptions of Race-Based Sentencing Disparities. Internal consistency for this measure was strong, as indicated by a Cronbach's Alpha value in excess of .93.

For the purpose of this study, *perceptions of wrongful convictions frequency* is conceptualized as the frequency with which students perceive wrongful convictions to occur. This concept is operationalized through a question asking the student to identify what percent interval they perceive wrongful convictions occur. The question is, "if you had to guess, what percent of all convictions for serious offenses are wrongful convictions" (less than 1% =1; 1% to 3.9% =2; 4% to 7.9% = 3; 8% to 10.9% =4; 11% to 13.9% =5; 14% to 16.9% =6; 17% to 19.9% =7; 20% or more =8). This variable is a fully ordered ,ordinal level of measurement because it is mutually exclusive, exhaustive, and can be logically rank-ordered.

Analytic Strategy

The present study explores college student perceptions toward the factor responsible for most wrongful convictions. Specifically, I will consider how the independent variables: *race, college major, political affiliation, biological sex, family member/friend working in criminal justice, punitive attitudes, race-based sentencing disparity perceptions, and perceptions on the frequency of wrongful conviction,* will influence college students' perceptions. To achieve this, bivariate analysis techniques will be utilized in the form of Pearson's Correlation Coefficient (Pearson's r). Specifically, Pearson's r will be used to measure strength, significance, and correlation of the relationships among the variables (Chamberlain, 2013). Pearson's r is used when both the dependent and independent variables are interval levels of measurement. Bivariate analysis can provide preliminary evidence of an association between two variables in the form of

a correlation; however, it cannot used for the purposes of establishing causality (Chamberlain, 2013).

Results/Findings

Descriptives

Descriptive statistics are displayed in Table 1. Overall, the majority of the respondents were female (67%) and white (77%) which is representative of the university's 2018-2019 documentation on the sex and ethnicity of the undergraduate population. Of the respondents, 19.4% of respondents were freshman, 23% were sophomores, 21.9% were juniors, and 35.7% were seniors. These values are comparable to the university's Spring 2019 student demographics and characterize a representative sample of the undergraduate population ("Student Demographics", 2019). Approximately one third of the respondents identified as Republican and 32% indicated that their college major was Criminal Justice. The large percentage of criminal justice majors resulted because of limited access to classes outside of the social sciences. I was warned early on that faculty approval to distribute my survey would be minimal. Therefore, as a result, I was not able to obtain a wider variety of majors within my sample. Similar issues have been identified in other published works utilizing survey methodology at the study site (Carrillo, Crittenden, & Garland, 2019; Crittenden, Gimlin, Bennett, & Garland, 2018; Garland, Policastro, Richards, & McGuffee, 2016). Approximately 45% of the respondents reported having a friend or family member that works or has worked in the Criminal Justice field and more than 60% of the sample indicated that at least one parent had earned a bachelor's degree or higher. Parents' levels of education is a proxy for socioeconomic status, suggesting that more than 60% of my sample comes from a middle to upper-class background (Hauser & Warren, 1997; U.S. Bureau of Labor Statistics, 2014).

Approximately 70% of respondents preferred life with no chance of parole compared to the death penalty. Thus, a much lower percentage of the current study's sample supported the death penalty in comparison to other studies using college student samples. As examples, at least 50% of the samples examined by Farnworth, Longmire, and West (1998), Schadt and DeLisi (2007), Lambert, Hogan, Moore, Jenkins, Jiang, and Clarke (2008), Lambert, Jiang, Elechi, Khondaker, Baker, and Jin (2014), and Godcharles, Rad, Heide, Cochran, and Solomon's (2018) supported the death penalty. It is noteworthy, however, that with the exception of Lambert et al.'s (2014) study who asked respondents to indicate their level of support for the death penalty on a 7-point scale and level of support for life without parole on a 5-point scale, none of these studies asked respondents to indicate preference for life with no chance of parole compared to the death penalty (Farnworth et al., 1998; Schadt & DeLisi, 2007; Lambert et al., 2008; Godcharles et al., 2018).

Finally, respondents indicated a wide range of presumed frequencies of wrongful convictions in response to the question, "If you had to guess, what percent of all convictions for serious offenses are wrongful convictions?" Of the total responses, 7% of respondents indicated a frequency of 0-3.9%, 9% indicated a frequency of 4-7.9%, 16% indicated a frequency for 8-10.9% and 11-13.9%, 19% indicated a frequency of 14-16.9%, 14% indicated a frequency of 17-19.9%, and 17% indicated a frequency of 20% or more. Thus, more than 80% of respondents presumed the frequency of wrongful convictions to be less than 20%. Previous research estimates the frequency of wrongful convictions to occur between 1 and 40% (Gross, Hu, Kennedy, & O'Brien, 2014; Gross & O'Brien, 2008; *Kansas v. Marsh, 2006*; McCloskey, 1989). However, studies that examined criminal justice professionals' perceptions and perceptions of the general public have found that a majority of respondents perceived wrongful convictions to

occur no more than 5% of the time (Huff et al., 1986; Ramsey & Frank, 2007; Zalman et al., 2008; Smith et al., 2011; Zalman et al., 2012). Therefore, while the findings in my study may be higher compared to those in previous studies that inquired respondent perceptions on the frequency of wrongful convictions, the majority of my sample perceive wrongful convictions to occur less frequently than the overall estimated frequency of wrongful convictions.

In terms of the dependent variable, respondents exhibited a high degree of variance in the factor they perceived as responsible for most wrongful convictions in the criminal justice process. A plurality of respondents (47.9%), indicated eyewitness misidentification error was the leading factor responsible for most wrongful convictions. This figure is considerably lower than the 78.6% of Ohio criminal justice professional surveyed by Huff et al. (1986). Data from the Innocence Project reveals that 69% of their DNA exoneration cases involved eyewitness misidentification ("DNA Exonerations in the United States", n.d.). Comparatively, 29% of all DNA and non-DNA exonerations listed in the National Registry of Exonerations involved eyewitness misidentification. Thus, the perceptions of my respondents appear to align relatively well with reality.

Comparatively, 20.3% of respondents indicated police misconduct as the factor responsible for most wrongful convictions. Again, this figure diverged from the findings of Huff et al. (1986), who reported that only 13.9% of respondents perceived police misconduct to be the leading cause of wrongful convictions. Similarly, 16.2% of my respondents indicated prosecutorial misconduct as the leading factor responsible for most wrongful convictions, compared to the 3.2% of criminal justice professionals included in Huff et al.'s (1986) sample. Further, 8.9% of the individuals I surveyed indicated their perception that judicial misconduct was the factor responsible for the most wrongful convictions in the criminal justice system.

Again, this figure was higher than the 3.2% of criminal justice professionals surveyed by Huff et al. (1986). Comparisons of perceptions with reality do prove somewhat difficult as the National Registry of Exonerations (n.d.) groups police misconduct, prosecutorial misconduct and judicial misconduct into the category "official misconduct," an umbrella term associated with 54% of all exonerations listed in the NRE. Comparatively, a combined 45.4% of respondents indicated that errors/misconduct by police, prosecutors, or judges were responsible for the most wrongful convictions.

Finally, 6.8% of respondents indicated that contamination of forensic evidence was the factor responsible for most wrongful convictions. Although prior works suggest that such issues occur relatively infrequently (e.g., Smith et al., 2011; Zalman et al., 2012), mishandling of forensic evidence is a commonly reported problem in wrongful convictions. Indeed, it has been described as a factor in 44% of DNA exonerations ("DNA Exonerations in the United States", n.d.) and 24% of total exonerations described by the NRE. The findings reported here and in prior works (e.g. Smith et al., 2011; Zalman et al., 2012) therefore suggest a possible disconnect between perception and reality as it related to the value of DNA evidence. Although illuminating, there is only so much that can be gleaned from univariate analysis. Therefore, bivariate analysis was conducted to discover possible relationships among the independent and dependent variables.

Table 1. Descriptive Statistics for Variables in Analysis (n = 474)

	M	Mo	Min	Max	SD
Factor Responsible for the Most Wrongful Convictions	3.46		1	5	1.66
Police Misconduct	.20				
Prosecutorial Misconduct	.16				
Judicial Misconduct	.09				
Contamination of Forensic Evidence	07				
Mistaken Eyewitness Testimony	.48				
Biological Sex (Male =1)	.33		0	1	.47
Race (White = 1)	.77		0	1	.42
Republican	.32		0	1	.47
Parent College Graduate	.61		0	1	.49
Major (CJ or Other)	.32		0	1	.47
Semester Standing	2.74	4	1	4	1.14
Freshman	.19				
Sophomore	.23				
Junior	.22				
Senior	.36				
Friend/Family Employed in CJ	.45		0	1	
Perceptions of Sentencing Disparities (Scale)					
Blacks more likely to receive harsher sentences than Whites for same crime	4.12	4	1	5	.95
Blacks more likely to receive harsher sentence if victim is White	4.05	4	1	5	1.00
Blacks more likely than Whites to be sentenced to prison for drug offenses	4.16	4	1	5	.93
Blacks more likely than Whites to be sentenced to prison for violent crimes	3.94	4	1	5	1.03
Blacks receive longer prison sentences than Whites for the same crimes	3.93	4	1	5	1.01
Blacks more likely than Whites to receive the death penalty	3.48	3	1	5	1.08
Perceptions of Frequency of Wrongful Convictions	4.40	5	1	7	1.84
0-3.9%	.07				
4-7.9%	.09				
8-10.9%	.16				
11-13.9%	.16				
14-16.9%	.19				
17-19.9%	.14				
20% or more	.17				
Support Death Penalty	.31		0	1	.46

Bivariate Analysis

Results from the bivariate analysis are displayed in Table 2. Application of bivariate analysis revealed that biological sex shared statically significant relations with a number of other independent variables included in this study. Biological sex displayed a weak, positive, and statistically significant relationship with college major ($r = .183$, $p \leq .001$), indicating that criminal justice majors were more likely to be male. The relationship between biological sex and perceptions of race based sentencing disparities scale (PSD scale) was negative, weak, and statistically significant ($r = -.144$, $p \leq .001$). This finding indicates that, on average, males exhibit lower scores on the PSD scale in comparison to females. Biological sex also exhibited a positive and moderate relationship with support for the death penalty and this correlation was statistically significant ($r = .230$, $p \leq .001$). Consistent with studies conducted by Cochran and Sanders (2009), Bohm (2012), and Godcharles et al. (2018), males indicated stronger support for the death penalty in comparison to females. Specifically, the relationship between biological sex and perceptions of the frequency of wrongful convictions scale (PFC scale) was negative, weak, and statistically significant ($r = -.181$, $p \leq .001$). This finding suggests that males, on average, displayed lower scores on the PFC scale in comparison to females. These findings are similar to those found in Zalman and colleagues' (2012) study, in which males perceived wrongful convictions to occur less often in comparison to females (Zalman et al., 2012).

Looking at associations with the dependent variables, the correlation between biological sex and the perception that prosecutorial misconduct was responsible for most wrongful convictions was positive, weak, and statistically significant ($r = .115$, $p \leq .05$). This finding indicated that males were more likely than females to perceive prosecutorial misconduct as responsible for most wrongful convictions. Similarly, biological sex exhibited a positive and

weak relationship with the perception that contamination of forensic evidence was responsible for most wrongful convictions and this correlation was statistically significant ($r = .096$, $p \leq .05$). In sum, biological sex was found to maintain statistically significant relations with college major, the PSD scale, support for the death penalty, the PFC scale, perceptions that prosecutorial misconduct was responsible for most wrongful convictions, and perceptions that contamination of forensic evidence was responsible for most wrongful convictions. All other relationships failed to achieve statistical significance.

Race shared statistically significant correlations with political affiliation and the PSD scale. Specifically, the relationship between race and political affiliation was positive, moderate, and statistically significant ($r = .296$, $p \leq .001$). On average, whites were more likely to identify as Republican. This finding is consistent with data collected by the Pew Research Center in which whites are more likely to be affiliated with the Republican party and blacks are more likely to be affiliated with the democratic party ("Trends in Party Affiliation", 2018). Additionally, race displayed a negative and moderate relationship with the PSD scale and this correlation was statistically significant ($r = -.289$, $p \leq .001$). This finding indicates that non-whites held higher scores on the PSD scale compared to whites. Similar results have been discovered in previous works (Henderson, Cullen, Cao, Browning, & Kapachec, 1997; Longazel, Parker, & Sun, 2011), in which blacks were more likely to perceive injustices toward black citizens while whites were more inclined to perceive the criminal justice system as race-neutral. Similarly, race and the PFC scale exhibited a negative and weak relationship. This correlation achieved statistical significance ($r = -.138$, $p \leq .01$). Suggested by the results, non-whites displayed higher scores on the PFC scale. Similar discoveries were reported in Zalman et al.'s

(2012) study in which whites average score on the PFC scale was lower than non-whites average score.

In consideration of the relationship between race and the dependent variable, the correlation between race and the perception that police misconduct was responsible for most wrongful convictions was negative, weak, and statistically significant ($r = -.177$, $p \leq .001$). This relationship suggests that non-whites are more likely to perceive police misconduct as the factor responsible for most wrongful convictions compared to whites. Therefore, race was found to maintain statistically significant correlations with political affiliation, the PSD scale, the PFC scale, and perceptions that police misconduct was the factor responsible for most wrongful convictions. Race failed to display statistically significant influence on the remaining variables.

Political affiliation maintained statistically significant relations with the PSD scale and support for the death penalty. Specifically, political affiliation exhibited a strong and negative relationship with the PSD scale and this correlation was statistically significant ($r = -.413$, $p \leq .001$). Thus, Republicans displayed lower scores on the PSD scale in comparison to non-Republicans. Conversely, the relationship between political affiliation and support for the death penalty was positive, weak, and statistically significant ($r = .162$, $p \leq .001$). This finding suggests that, on average, Republicans are more likely to support the death penalty in comparison to other political affiliations. This discovery is reinforced in previous literature which supports that Republicans typically support the death penalty more often than other political parties (Bohm, 2012; Unnever & Cullen, 2006). Further, the relationship between political affiliation displayed a negative and weak relationship with the PFC scale. The correlation was statistically significant ($r = -.113$, $p \leq .05$). This result denotes that Republicans scored lower on the PFC scale in comparison to other political affiliations.

In respect to the dependent variable, the relationship between political affiliation and perceiving police misconduct as the factor responsible for most wrongful convictions was negative and weak. The correlation was statistically significant ($r = -.142$, $p \leq .01$). This finding suggests that non-Republicans are more likely to perceive police misconduct as responsible for most wrongful convictions. Political affiliation upheld statistically significant relations with the PSD scale, support for the death penalty, the PFC scale, and perceptions that police misconduct was responsible for most wrongful convictions. All other relationships failed to achieve statistical significance.

College major displayed a positive and weak relationship with having a friend or family member employed in criminal justice and statistically significant ($r = .177$, $p \leq .001$). On average, criminal justice majors have a family member or friend who is employed in the criminal justice field more often than non-criminal justice majors.

Looking at the relationship between college major and the dependent variable, criminal justice majors in comparison to non-criminal justice majors were less likely to perceive police misconduct as responsible for most wrongful convictions. The relationship was negative, weak, and statistically significant ($r = -.108$, $p \leq .05$). College major only maintained statistically significant relations with two variables: having a friend or family member employed in the criminal justice field and perceptions that police misconduct was responsible for most wrongful convictions. College major failed to attain statistically significant influence on the remaining variables.

Having a friend or family member employed in the criminal justice field only held one statistically significant relationship with the dependent variable. Having a friend or family member employed in the criminal justice field had a negative and weak relationship with

perceiving police misconduct as responsible for most wrongful convictions. This relationship was statistically significant ($r = -.122$, $p \leq .01$). Respondents who indicated having a family member or friend employed in the criminal justice field compared to those who do not were less likely to perceive police misconduct as responsible for most wrongful convictions. All other relationships failed to achieve statistical significance.

The PSD scale maintain statistically significant correlations with support for the death penalty, semester standing, the PFC scale and some of the dependent variables. Specifically, the relationship between the PSD scale and support for the death penalty was negative and weak. This relationship was statistically significant ($r = -.156$, $p \leq .001$). This discovery suggests that respondents who scored higher on the PSD scale are less likely to support the death penalty. Similarly, the relationship between PSD scale and semester standing was negative and weak. This correlation was statistically significant ($r = -.094$, $p \leq .05$). As implied by the results, freshman displayed lower scores on the PSD scale in comparison to seniors. Conversely, the PSD scale had a positive and moderate relationship with the PFC scale and this correlation was statistically significant ($r = .224$, $p \leq .001$). Respondents who scored higher on the PSD scale were more likely to score higher on the PFC scale suggesting that those who perceived race-based sentencing disparities to occur more often also perceived wrongful convictions to also occur at a high frequency

In relation to the dependent variables, the PSD scale and perceiving police misconduct as responsible for the most wrongful convictions had a positive, weak, and statistically significant relationship ($r= .2$, $p \leq .001$). Respondents who scored higher on the PSD scale were more likely to perceive police misconduct as responsible for most wrongful convictions. Contrary, the relationship between PSD scale and perceiving contamination of forensics as responsible for

most wrongful convictions was negative and weak. This correlation was statistically significant ($r = -.107$, $p \leq .05$). This finding suggests that those who scored higher on the PSD scale were less likely to perceive contamination of forensic evidence as responsible for most wrongful convictions. Finally, the PSD scale maintained a negative and weak relationship with perceiving eyewitness error as the factor responsible for most wrongful convictions. This correlation was statistically significant ($r = -.1$, $p \leq .05$). As implied, those who scored lower on the PSD scale were, on average, less likely to perceive eyewitness error as responsible for most wrongful convictions. In summation, the PSD scale maintained statistically significant relations with support for the death penalty, semester standing, the PFC scale, perceptions that police misconduct was responsible for most wrongful convictions, perceptions that contamination of forensic evidence was responsible for most wrongful convictions, and perceptions that eyewitness error was responsible for most wrongful convictions. All other relationships failed to achieve statistical significance.

Support for the death penalty only held one statistically significant relationship with the dependent variable. Support for the death penalty maintained a positive and weak relationship with perceiving contamination of forensic evidence as responsible for most wrongful convictions. This correlation was statistically significant ($r = .130$, $p \leq .01$). Those who indicated support for the death penalty were relatively more likely to perceive contamination of forensic evidence as responsible for most wrongful convictions compared to those who did not support the death penalty. Support for the death penalty failed to attain statistically significant influence on the remaining variables.

The PFC scale maintained one statistically significant relation with the dependent variable. The PFC scale and perceiving police misconduct as responsible for most wrongful convictions had a positive, weak, and statistically significant relationship ($r = .095$, $p \leq .005$). On average, those who scored higher on the PFC scale were more likely to perceive police misconduct as responsible for most wrongful convictions. All remaining relations with the PFC scale failed to achieve statistical significance.

Table 2. Bivariate Analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13
Sex													
Race	.008												
Political Affiliation	.058	.296***											
College Major	.183***	.037	.077										
Friend/Family Employed CJ	.025	.02	.050	.177***									
PSD Scale	-.144**	-.289***	-.413***	.039	-.04								
Support Death Penalty	.230***	.079	.162***	.083	-.011	-.156***							
PFC Scale	-.181***	-.138**	-.113*	.000	.072	.224***	-.044						
Semester Standing	.000	.048	.042	.078	-.07	-.094*	.013	-.03					
Police	-.054	-.177***	-.142**	-.108*	-.122**	.20***	-.063	.095*	.01				
Prosecutor	.115*	.062	.043	.067	.035	-.017	-.058	-.068	-.065	-.222***			
Judge	-.077	-.025	-.006	-.038	.074	.009	.017	.053	-.046	-.137**	-.137**		
Forensic	.096*	.046	.087	-.004	-.009	-.107*	.130**	-.073	.047	-.118**	-.118**	-.084	
Eyewitness	-.047	.088	.042	.061	.034	-.10*	.019	-.019	.042	-.483***	-.422***	-.299***	-.258***

*$P < 0.05$; **$P < 0.01$; ***$P < 0.001$.

Discussion

The purpose of this study was to examine the relationship between college student characteristics and perceptions of the factors responsible for most wrongful convictions. Previous research has been limited to descriptive analyses of small samples of criminal justice professionals regarding which factor they perceived to cause most wrongful convictions and their perceived reliability of criminal justice actors (Unnever & Cullen, 2005; Zalman et al., 2008; Zalman et al., 2011). Studies involving the public have also been limited in that they did not ask respondents which factor they perceived to cause the most wrongful convictions, but rather probed respondents' reliability of criminal justice actors and whether or not they believed wrongful convictions occur (Unnever & Cullen, 2005; Zalman et al., 2008; Zalman et al., 2012). In these respects, the current study makes a substantive contribution to the literature, as no prior study has explored what characteristics may influence perceptions of respondents, particularly college student respondents, toward which factor is responsible for most wrongful convictions. With that in mind, several of the findings in my study merit further discussion.

Respondents from this sample perceived mistaken eyewitness identification to be the factor responsible for most wrongful convictions. However, upon further examination into which characteristics might influence this perception, only one independent variable maintained a statistically significant relation with perceiving eyewitness misidentification as the factor responsible for most wrongful convictions. The influence of race-based sentencing disparities suggests that the more college students (accurately) perceive race-based sentencing disparities, the more likely they are to perceive eyewitness misidentification as the factor responsible for most wrongful convictions.

In contrast, the perception that police misconduct was the problem associated with most wrongful convictions was correlated with multiple respondent characteristics. Race, political affiliation, college major, having a close friend or family member employed in criminal justice, perceptions of race-based sentencing disparities, and perceptions of the frequency of wrongful convictions all held statistically significant relations with perceiving police misconduct as the factor responsible for most wrongful convictions. Specifically, non-whites, non-Republicans, non-criminal justice majors, and those who did not have a close friend or family member employed in criminal justice displayed a negative correlation with perceiving police misconduct to be the leading contributor to wrongful convictions. Those displaying higher scores on the PSD scale and the PFC scale revealed a positive association with perceiving police misconduct to be the leading contributor to wrongful convictions. It is not particularly surprising that non-whites and those who identify with a political party other than Republican would be more likely to perceive police misconduct as the factor responsible for most wrongful convictions given that the literature has indicated that minorities and non-Republicans hold less confidence and trust in the police (Dugan, 2015; Ekins, 2016; Newport, 2016; Zalman et al., 2012). Further, it is self-evident that those with close friends or family working in the criminal justice system, particularly in police agencies, would be less likely to perceive police misconduct as the factor responsible for most wrongful convictions. Even those college students who may not be criminal justice majors but have a friend or family member who works or has worked in the criminal justice field would also be less likely to perceive police as the factor responsible for most wrongful convictions because of their exposure to the criminal justice field and possibly knowing a police officer. Respondents who scored higher on the PSD scale and PFC scale may be more likely to perceive police as the factor responsible for most wrongful convictions because

they already perceive race-based sentencing disparities and wrongful convictions to occur with relative frequency and may be more educated on police misconduct and error that can contribute to both. Therefore, the characteristics that influence college students' perceptions toward perceiving police misconduct as the factor responsible for most wrongful convictions included race, political affiliation, college major, having a friend or family member employed in criminal justice, perceptions of race-based sentencing disparities and perceptions of the frequency of wrongful convictions.

Biological sex and punitive attitudes did not share statistically significant relations with perceiving mistaken eyewitness identification or police misconduct as the factor responsible for most wrongful convictions, but instead with perceiving prosecutorial misconduct or forensic error to be the factor responsible for most wrongful convictions. Specifically, males were more likely to perceive prosecutorial misconduct or forensic contamination as the factor responsible for most wrongful convictions. While there are no previous studies to compare these findings too, speculations can be made as to why males were more likely to perceive those factors as responsible for wrongful convictions. When looking at the gender demographics of criminal justice actors (police, prosecutors, and judges), a majority of these personnel are male (Hyland & Davis, 2019; "Tipping the Scales", 2019; "2019 US State Court", 2019). Therefore, the male respondents in my study may have not perceived police and judges to be factors responsible for wrongful convictions because they are more represented among the demographics of police and judges. Moreover, they may be more likely to perceive themselves serving those positions and therefore would believe that they would not contribute to wrongful convictions if serving in those positions. However, this proposition does not work when considering why males would perceive prosecutors to be the factor responsible for most wrongful convictions because

prosecutors are more likely to be male ("Tipping the Scales", 2019). A proposal as to why males may perceive prosecutors as the factor most responsible could be because males are more likely to be wrongfully convicted (National Registry of Exonerations, n.d.). As a result, males may have an innate bias against prosecutors because they know that males are more likely to be convicted of a crime they did not commit. This can be especially alarming to men when they are accused of sexual assault and rape. With the recent uprising of the #MeToo movement, many men have faced public accusation of sexual assault and rape, and prosecutors have seemingly been more likely to pursue these cases (i.e. R. Kelly, Jeffery Epstein, Harvey Weinstein, etc.). Again, as a result of media attention to these cases, males may be developing a bias against prosecutors and perceive them as individuals who will do anything to satisfy the public's unrest and possibly convict an innocent man. This can also explain why males perceived forensic error as the factor most responsible. Males may fear that inaccurate or contaminated forensic science could result in them being convicted. Going back to the sexual assault and rape example, the presence of DNA can prove that there was contact, but it cannot specify the manner of the contact and whether the actions were consensual or not. In current society where males are seeing many other males be publicly accused of rape and sexual assault, they may fear that forensic evidence can be misinterpreted or misleading and that prosecutors may be overzealous in convicting a rapist, therefore, suggesting as to why males perceived prosecutors or contamination of forensic evidence to be the factor responsible for most wrongful convictions.

The last independent variable to have a correlation with one of the dependent variables was support for the death penalty. Respondents who indicated support for the death penalty were more likely to perceive contamination of forensic evidence as responsible for most wrongful convictions. Support for the death penalty is a direct result of supporting a crime control policy

(Fitzgerald & Ellsworth, 1984; Unnever & Cullen, 2012). In Packer's (1968) explanation of crime control values, those who support this model believe that it is the criminal justice system's duty to repress crime and strictly enforce the law. Supporters of crime control also support the increase of criminal justice actors' power and discretion to effectively enforce the law and stop crime (Packer, 1968). Therefore, it makes sense as to why supporters of the death penalty would not perceive any criminal justice actor as responsible for wrongful convictions. Forensic scientists are not perceived as the typical criminal justice actor and therefore may be more likely to be perceived as responsible for wrongful convictions or more blameworthy. In summary, much can be taken from the findings in this study, however, this study does not exist without its limitations. Also, recommendations can be made for future studies and modifications for teaching methods.

Conclusion

The current study had several significant findings and established a baseline for future studies when exploring the relationship between respondent characteristics and their perceptions toward the factor responsible for most wrongful convictions. Similar to previous research, my study indicated mistaken eyewitness identification as the factor responsible for most wrongful convictions (Huff et al., 1986; DNA Exonerations in the United States, n.d.). Although mistaken eyewitness identification was perceived to be the factor responsible for most wrongful convictions, several respondent characteristics held statistically significant relations with perceiving police misconduct as the factor responsible for most wrongful convictions. This finding suggests that respondent characteristics had greater influence on selecting police misconduct rather than mistaken eyewitness identification as the factor responsible for most wrongful convictions. This differentiation could be due to police gaining more news and media

coverage in recent years, which has highlighted several cases of police misconduct and brutality (e.g. Eric Garner, Michael Brown, Walter Scott, Tamir Rice, etc.). While this study contributes the literature, it does not do so without limitations.

To begin, convenience sampling methods were used to construct my sample and gather data. As a result of utilizing convenience sampling methods, the data cannot be generalized beyond the study site because as described in the name, the sample was convenient for me to gather and is not representative of the entire undergraduate student population at the university (Walker & Maddan, 2009). I reached out to several non-social science classes during the semester of survey distribution in hopes of being approved to administer my survey in a wide variety of courses. However, many requests for access to classrooms outside of the social sciences were denied. Therefore, a majority of the surveys were distributed in social science classes with the exceptions of a few nursing and honors courses. Also, the sample consisted only of students attending a mid-sized university in the south east which means the findings cannot be generalized beyond the study site. If limitations could not be placed on sampling, a more appropriate sample technique that could have been used was stratified random sampling. Since this study was conducted at a university, this method would have allowed me to gather a more representative sample of the students. However, this is not the only limitation within my study.

There is also the issue of conducting bivariate analyses. Although my findings do show statistically significant correlations, they cannot be inferred as causal relationships. For example, my results indicated that non-whites were more likely to perceive police misconduct as the factor responsible for most wrongful convictions, however, it cannot be inferred that just because the respondent was not white it meant that they would perceive police misconduct to be the factor responsible for most wrongful convictions. Another limitation with Pearson's correlation is that

it may not show the full strength of curvilinear relationships that may be present. More advanced statistical analysis in the form of multiple regression could further clarify correlations between variables described here. Finally, Pearson's correlation is highly influenced by sample size in which weak correlations may be found to be significant in large samples or in which correlations can be influenced dramatically in a small sample (Walker & Maddan, 2009). Future studies are strongly encouraged to further explore the relationships between respondent characteristics and their perceptions toward the factor responsible for most wrongful convictions, as well as to consider conducting multivariate analysis. Furthermore, future research should build on this methodology by including perjury/wrongful accusation, wrongful confession, and defense attorney misconduct into their measures of factors that may contribute to wrongful convictions and may also consider scaling the variables.

This study endeavored to examine college student perceptions of the factor responsible for most wrongful convictions. While exploring perceptions toward the factors responsible for most wrongful convictions is important to recognize that wrongful convictions rarely occur based solely on one factor (National Registry of Exonerations, n.d.). Students would benefit from an explanation of each type of contributing factor along with a description of how it occurs and its prevalence among wrongful convictions. This would suggest that modifications should be made to teaching curricula to place an emphasis on educating students more about wrongful convictions and their contributors. This would benefit both criminal justice majors and non-criminal justice majors. Teaching students who anticipate working in the criminal justice field about wrongful convictions implies that not only will they learn how wrongful convictions occur, but specifically how their actions can directly impact wrongful convictions. Education on wrongful convictions involves teaching students about ethics and how to make ethical decisions

because in the instance of a wrongful conviction, it can occur directly as a result of an unethical decision made by a criminal justice actor. Students who are not criminal justice majors would also benefit from learning about wrongful convictions. While they may not directly work in the criminal justice field, they will all be possible voters for those who will make decisions that could impact wrongful convictions, such as judges, sheriffs, and prosecutors. It is important for all possible voters to know and understand the contributors to wrongful convictions because they will be better equipped to evaluate possible candidates for the positions of judge, sheriff, or prosecutor, and expect greater accountability when those individuals make decisions that could directly impact wrongful convictions. Overall, educating students about wrongful convictions creates a higher standard of procedural justice because when individuals are educated about how certain errors or mistakes are made, they will know what actions are unacceptable and will demand that action be taken to reduce these possible injustices. While not all college students may have a direct influence on wrongful convictions, knowing about how they occur and ways in which they can aid in preventing them can help lead our society toward reducing the amount of wrongful convictions that do occur.

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