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# Media Exposure, Confidence in the Police, and Police Legitimacy

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MEDIA EXPOSURE, CONFIDENCE IN THE POLICE, AND POLICE LEGITIMACY

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The American Time Use Survey (2017), sponsored by the Bureau of Labor Statistics, showed that U.S. citizens who were 15 years old or more spent 2.7 hours per day watching television. This number accounted for more than half of leisure time. Considering the widely examined media effects on audiences' perceptions (Morgan & Shanahan, 2010), increased availability of the media may, in part, explain why public perceptions of the police have become more negative over the last two decades (Gallup, 2017). Nonetheless, only a handful of studies were conducted to examine if and how the media affect perceptions of police (e.g., Callanan & Rosenberger, 2011). This research answers how and when the media are related to perceptions of police. Additionally, this study elaborates on mechanisms through which the media shape perceptions of police based on a wide range of scholarship.

The current study provides evidence concerning media impact on perceptions of police with strong internal validity based on a randomized experimental design using a student sample. The current findings indicate that media exposure can matter, particularly when it introduces negative images of police. Even when mixed images of police were presented, participants were more driven by the negative portrayal. This finding is in line with an asymmetrical impact of negative encounters with police relative to positive encounters (Skogan, 2006b), supporting that "bad is stronger than good" (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). Additionally, there was an interaction effect between respondents' majors and the mixed condition. When

media presented two contrasting images of police, both Criminology and Criminal Justice (CJ) majors and non-CJ majors experienced a reduction in confidence in the police, but this negative effect was more pronounced among non-CJ majors. Additional statistical analyses revealed that perceptions of crime and community mediated some of the media effects on perceptions. Overall, many hypothesized effects were not found to be statistically significant, and several relationships found to be statistically significant had weak effect sizes. Implications for criminal justice policy and future research are presented.

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were different. That said, if had I not met her, I may not have been able to attend IUP or walk this academic path. She wrote the recommendation letter for me and introduced the IUP program to me even though I had only met her at a short five-day workshop. I will never forget what she has done for me. Dr. Yongtao Cao is a professor in the mathematics department. I was interested in experimental design and in learning R. I contacted him and even though I was a complete stranger to him, he gladly let me sit in on his class and gave me an opportunity to learn about R. When I asked him to be a dissertation committee member, he accepted it without hesitation. His valuable insights are incorporated in this study.

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CHAPTER I

INTRODUCTION

According to a report from the Kaiser Family Foundation, total media exposure (e.g., TV, computers, video games, music, print, cell phones, and movies) among American youth has increased consistently in recent years (Rideout, Foehr, & Roberts, 2010). The American Time Use Survey (2017), sponsored by the Bureau of Labor Statistics, showed that U.S. citizens who were 15 years old or more spent 2.7 hours per day watching television. This number accounted for more than half of the sample's leisure time. This phenomenon is growing through the appearance of alternative platforms that enable viewers to consume the content of media easier (Strasburger et al., 2013). Considering the widely examined media effects on audiences' perceptions (Morgan & Shanahan, 1997, 2010), increased availability of the media may, in part, explain why public perceptions of the police have become more negative over the last two decades (Bradford, 2011; Gallup, 2017).

In his seminal work, Surette (2014) underlined the role of media in shaping audiences' understanding of the criminal justice system by stating that "crime, justice, and the media have to be studied together because they are inseparable, wedded to each other in a forced marriage where they cohabitate in a fascinating, if raucous, relationship" (p. 2). Given the influence of the media on the audience's quantitative judgments and values (Hawkins & Pingree, 1981), it is possible that perceptions of police may not be rooted in the objective performance of the police, but instead through the depiction of the world in the media (Doyle, 2003; Kasinsky, 1994). A report from the Bureau of Justice Statistics supported the importance of indirect experience regarding perceptions of police by reporting that only 16.9% of residents who were 16 or older

had personal interaction with police in the United States in the previous year before they were interviewed (Eith & Durose, 2011).

General perceptions of police are critical for several reasons. First, police work depends mostly on the cooperation of citizens (Moskos, 2008). Previous studies have found that the public's views of police are reliable predictors of compliance and voluntary cooperation with the police (Mazerolle, Antrobus, Bennett, & Tyler, 2013; Tyler, 2011a; Tyler & Wakslak, 2004). One key finding from this body of literature is that individuals' perceptions of police can be cynical even when their actual performance in fighting crime is effective (Tyler, 2005). Furthermore, the manner in which individuals perceive the police is closely related to support for vigilantism, questioning the legitimacy of the police institution (Haas, de Keijser, & Bruinsma, 2014). Put simply, improving public perceptions of police are essential because negative perceptions of police can impede the effectiveness of police work (Skogan, 2006b).

The majority of previous studies have been conducted under the assumption that the public uses objective information about the neighborhood and police work to evaluate the police (e.g., Cao, Frank, & Cullen, 1996; Jackson, Bradford, Hohl, & Farrall, 2009; Tyler & Huo, 2002; Wu, 2014); however, the President's Task Force on 21st Century Policing (2015) reported that improved police services have not led to positive perceptions toward police. The weak link between the quality of performance and perceptions of police can be attributed to the fact that many citizens have no firsthand knowledge of such information (Hohl, Bradford, & Stanko, 2010; Surette, 2014). Therefore, the potential role of the media as a socialization agent that influences the perception of the police can be vital (Akers, 2009). Nonetheless, only a handful of studies have been conducted to understand if and how the media affect perceptions of police (e.g., Callanan & Rosenberger, 2011; Dowler, 2002). This dissertation aims to add to this lack of

research. The current study employed a randomized experimental design with undergraduate students who were enrolled in courses at Indiana University of Pennsylvania (IUP) in the spring 2018 semester. The findings answer the question regarding how and when the media are related to perceptions of police (Hayes, 2013). Additionally, this study seeks to elaborate on mechanisms through which the media shape perceptions of police based on a wide range of scholarship.

## Statement of the Problem

Criminologists have often been criticized for their flawed assumptions about public knowledge regarding crime and punishment (e.g., Apel, 2013; Callanan, 2005; Kleck, Sever, Li, & Gertz, 2005). For instance, many researchers have supported punitive sanctions based on the premise that the public is sensitive to changes in the absolute level of formal punishments (e.g., Beccaria, 1963; Dezhbakhsh, Rubin, & Shepherd, 2003). Examples include the death penalty, three-strikes laws, and mandatory minimum sentencing laws (Pollock, 2017); however, this assumption has been challenged (Kleck et al., 2005; Nagin, 1998; Piquero, Paternoster, Pogarsky, & Loughran, 2011). In their deterrence research, Kleck et al. (2005) discovered that within counties, the variations in punishment levels were not rendered into comparable changes in public perceptions of punishments. County-level measures that reflect certainty, severity, and swiftness of punishment were largely independent of people's perceived levels of punishment. Surprisingly, the discrepancies between perceived punishment levels and actual punishment levels were more pronounced among arrestees in comparison to non-arrestees. This study implies that activities of legal authorities may not be translated into intended outcomes because other factors influence perceptions of crime and criminal justice.

Previous theoretical models on perceptions of police are primarily founded on the assumption that people are well-aware of activities within the criminal justice system, mainly through their own experiences (e.g., Tyler, 1990; Tyler & Huo, 2002). As previously noted, messages from legal authorities are limited in providing accurate information about their work. As such, it is possible that the media play a significant role in shaping individuals' perceptions by offering socially-constructed evidence. While Kleck et al.'s (2005) study found that watching local and television news had little influence on perceptions of punishment, Pickett, Mancini, Mears, and Gertz (2015) found that media consumption was related to levels of knowledge regarding criminal penalty. Additionally, in their multi-level analysis with 1,500 adults, Kleck and Jackson (2017) discovered that the number of times per week respondents watched local television news was related to their support for punitive criminal justice policies. This discrepancy in the research necessitates more studies on this topic to find the more conclusive answer as to whether media consumption influences perceptions of criminal justice.

Considering that most people rely on the media to supplement their lack of firsthand experience with the police, the potential missing link between police activities and an individual's perceptions of police can be clarified by taking the media into account. In this regard, a shift in the focus of predictors from personal experiences to vicarious experiences through the media is imperative.

The existing literature on the relationship between the media and perceptions of police is limited in three ways. First, as pointed out by Reiner (1985) and Jewkes (2010), only a handful of studies have investigated the effects of media on perceptions of police. While there have been a few studies that have examined whether the media affect perceptions of police, the findings have been inconsistent (Callanan & Rosenberger, 2011; Dirikx & Van den Bulck, 2014; Weitzer

& Tuch, 2005). Thus, it is not clear whether the media influence perceptions of police, or what way the media steer perceptions if any. Some research has indicated the negative direction of media effects on perceptions of police, while others have shown the positive direction (e.g., Dirikx, Gelders, & Van den Bulck, 2013; Dowler & Zawilski, 2007).

There are various reasons for these ambiguous findings. The limited body of research has used inconsistent measures of the media. While some studies have used survey items that ask the frequency of media usage or the amount of total media consumption (e.g., Dowler, 2003), other research has used survey questions explicitly asking the knowledge about police misconduct through the media (e.g., Lee, Lim, & Lee, 2015; Sun, Jou, Hou, & Chang, 2014). Another methodological issue with previous studies is that they have primarily relied on cross-sectional survey design (e.g., Eschholz, Blackwell, Gertz, & Chiricos, 2002). While there are benefits of cross-sectional survey design (e.g., external validity), this method has limitations. First, the temporal ordering of variables is not clear at times (Shadish, Cook, & Campbell, 2002). Even when independent variables are reasonably expected to occur before the variation in the dependent variable, many other variables might have distorted the relationship between independent variables and the dependent variable (Bachman & Schutt, 2015). Given that media researchers have raised the possibility of selective watching of audiences (Dowler, 2002; Surette, 2014), causal conclusions regarding the relationship between the media and perceptions of police should be reserved.

Simultaneously, there has been little effort to answer how and when the media influence perceptions of police (Dirikx & Van den Bulck, 2014; Hayes, 2013). The extant literature has mainly questioned whether the media are a determinant of the perceptions of police (Dowler, 2002, 2003); however, confidence in a causal statement between two variables can be

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"strengthened if a mechanism, some discernible means of creating a connection, can be identified" (Bachman & Schutt, 2015, p. 154). It is not yet apparent what mechanism can account for the relationship between the media and perceptions of police. Taken as a whole, previous research on this topic has not established an explicit causal ordering between these variables. Additionally, mechanisms through which the media influence the public's perceptions of police have not been investigated.

## Theoretical Framework

One primary goal of this study is to integrate theories that have developed from two different fields (i.e., policing and communication) to offer a better understanding about perceptions of police. Policing literature has developed models to explain the determinants of perceptions of the police based on the assumption that people come to know the police through their own experiences (Jackson & Gau, 2016; Lowrey, Maguire, & Bennett, 2016; Reisig, Wolfe, & Holtfreter, 2011). Meanwhile, communication researchers have examined media effects and how they can differ depending on audience traits, media channels, and/or genres (Gerbner, Gross, Jackson-Beeck, Jeffries-Fox, & Signorielli, 1978; Hirsch, 1980; Pickett et al., 2015; Roche, Pickett, & Gertz, 2016; Weitzer & Kubrin, 2004). An integrative model has some benefits in elaborating on the mechanisms linking media exposure to perceptions of police (Hayes, 2013; Slater, Hayes, & Ford, 2007). Building on Akers' (2009) social learning theory as a connecting link to integrate the two different traditions, the current study provides a more comprehensive understanding about perceptions of police.

Concerning policing literature on perceptions of police, four models are particularly relevant: the instrumental model, the expressive model, the procedural justice model, and the distributive justice model. The instrumental model posits that police are assessed on their

performance, including preventing crime, apprehending criminals, and reducing the fear of crime (Jackson et al., 2009; Sun et al., 2014). On the other hand, the expressive model suggests that public sentiments toward police are not driven by people's concern about their safety, but rather by the level of community values because the police are considered to be symbols of moral values (Dirikx, Van den Bulck, & Parmentier, 2012; Jackson & Bradford, 2009).

Meanwhile, Tyler (2000) suggested that two types of justice models can explain perceptions of police. The procedural justice model emphasizes procedural fairness when the police exercise their authority. If police act in a procedurally fair manner, people express more satisfaction with them (Murphy, Mazerolle, & Bennett, 2014). On the other hand, distributive justice involves assessments of how fair police services are distributed to citizens regardless of their backgrounds (Reisig, Bratton, & Gertz, 2007; Tyler & Wakslak, 2004). Since individuals consider the equal distribution of justice important, perceptions of distributive justice influence perceptions of the police (Tyler, 2005). While there are overlaps between different theoretical models, they could be differentiated depending on their focuses (Sunshine & Tyler, 2003b; Jackson & Sunshine, 2007). When testing these models, different indicators have been specified in each model (Gau, 2014; Jang & Hwang, 2014). Traditional models of perceptions of police are presented in Figure 1.

```
Instrumental Model
┌─────────────────────────┐
│     Fear of Crime       │
└─────────────────────────┘
┌─────────────────────────┐
│  Perceived Risk of Crime│
└─────────────────────────┘
Expressive Model
┌─────────────────────────┐
│        Incivility       │
└─────────────────────────┘
┌─────────────────────────┐
│   Collective Efficacy   │
└─────────────────────────┘
Procedural Justice Model
┌─────────────────────────┐
│   Quality of Treatment  │
└─────────────────────────┘
┌─────────────────────────┐
│ Quality of Decision-Making│
└─────────────────────────┘
Distributive Justice Model
┌─────────────────────────┐
│  Distribute Justice Scale│
└─────────────────────────┘
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┌─────────────────────────┐
│  Perceptions of Police  │
└─────────────────────────┘
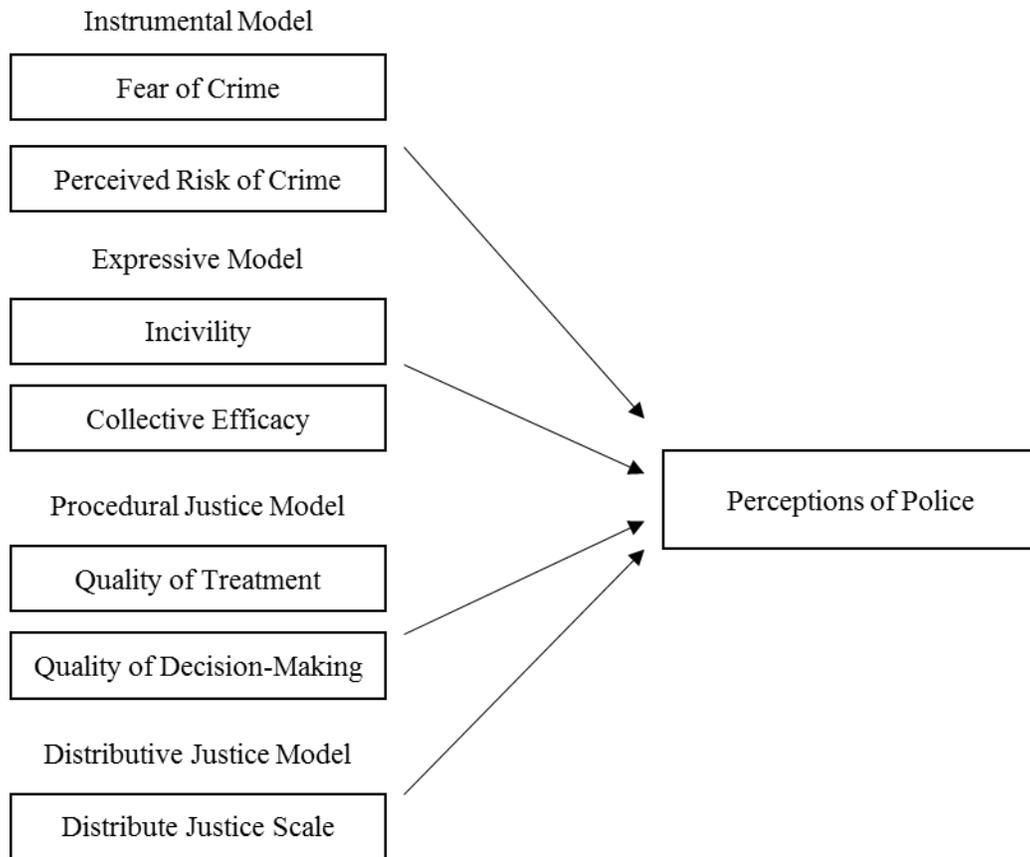
*Figure 1*. Four traditional models of perceptions of police.

Despite its benefit to explain perceptions of police, this tradition fails to consider the media as a primary source of knowledge about the police (Surette, 2014). This omission is significant, especially considering that most people obtain information about the criminal justice system through the media (Kappeler & Potter, 2017; Marion & Oliver, 2012).

As such, findings from communication and journalism fields are valuable in this regard. One theory from these fields is known as the cultivation theory. Cultivation theory proposes that the indirect experience obtained from media will come to replace direct experience to form attitudes and social beliefs (Gerbner, Gross, Morgan, Signorielli, & Shanahan, 2002). Since most people only have limited experience with the police (Surette, 2014), the impact of the media on perceptions of the police is particularly relevant within the context of cultivation theory. An

immense body of research on the effects of media on the public's perceptions has been conducted based on cultivation theory (Gerbner et al., 2002; Morgan & Shanahan, 2010).

There is one important theory in criminology that has not overlooked the effects of media. Based on Sutherland's (1947) differential association theory, Akers has developed a unique social learning theory that highlights the importance of interactions with people who have particular attitudes (Akers & Jensen, 2006; Akers & Sellers, 2009). This theory also underscores the importance of behavioral learning components when starting and continuing certain beliefs or behaviors (Akers, 1985; Akers & Sellers, 2009; see also for an earlier model, Burgess & Akers, 1966). While most discussions regarding Akers' social learning theory have centered on personal interaction, he stated that the media are critical social agents in the learning process (Akers, 2009).

The core argument of cultivation theory can be rephrased regarding Akers' social learning theory (Akers, 2009). For instance, the formation of normative belief due to exposure to the media can be understood as an outcome of differential association through the media. Thus, depictions of violence in the media shape definitions regarding crimes (Akers, 2009). Nonetheless, the theoretical justification for research published in criminology journals (e.g., *Criminology* and *Justice Quarterly*) has primarily relied on cultivation theory (e.g., Weitzer & Kubrin, 2004); however, Akers' social learning theory has multiple benefits in understanding media effects (Akers & Sellers, 2009).

First, since Akers' social learning theory takes into account different types of association (e.g., primary group and reference groups), researchers can understand what dynamic interactions occur between real-world experiences and media consumption. Second, as media researchers, Gerbner (who first proposed cultivation theory) and his descendants may have been

predisposed to find media effects, which could have overestimated them (Hughes, 1980; Morgan, 2011). On the other hand, Akers' social learning theory treats the media as one possible learning agent, not the exclusive place of learning. Another advantage of social learning theory is that it provides a systematic basis concerning why it is important to consider individuals' predispositions in understanding media effects. As a response to the claim that social learning theory is tautological (Gottfredson & Hirschi, 1990; Sampson, 1999), Akers and his associates have highlighted reciprocal effects between individuals' predispositions and their differential association (Akers & Jensen, 2006; Akers & Sellers, 2009). Simply put, even if individuals already have individual preferences that influence their media choice, that does not necessarily refute the influence of the media (Akers, 1999). For instance, it is true that a person who likes violence chooses to watch violent media more often than their counterparts, but this preference for violence over other types of content can still be more intensified by exposure to media that contain violence.

Additionally, Gerbner's original cultivation theory is centered mainly on television (Gerbner, 1998; Gerbner & Gross, 1976; Gerbner et al., 1977). Akers' social learning theory does not limit media effects to television (Akers, 2009). Considering technological innovations in recent years, limiting the discussion about media effects to television is problematic. Gerbner and his associates have placed a strong emphasis on cumulative and incremental impact from television exposure (Gerbner et al., 1977; Gerbner, Gross, Morgan, & Signorielli, 1980; Gerbner et al., 2002; cf. Shrum, Lee, Burroughs, & Rindfleisch, 2011); however, Akers' theorization of the media does not rule out the possibility of the influence of brief and short media exposure (Akers & Sellers, 2009). Lastly, Gerbner and his colleagues have assumed a uniform influence of television that illuminates depictions of crime and violence in the media (Gerbner & Gross,

1976; Gerbner et al., 1977; Gerbner et al., 2002). According to their work, television exposure inevitably fosters a "mean-world view," regardless of specific contents and genres of television (Gerbner et al., 1977, 1980). Akers (1985, 2009) does not assume that the media necessarily contribute to distorted perceptions about the proportion of violence in society. Depending on the content and channels of the media, the influence they have on audience's perceptions can significantly vary (Akers, 2009; Rader & Haynes, 2011). If individuals are exposed to media that promote a favorable attitude toward the police, they may form favourable assumptions about the police. These differences are essential given that this study employs a random experimental design using short media exposure as a treatment.

All of that being said, the most significant potential from adopting social learning theory is that it can be the fruitful theoretical bridge, linking traditional models involving perceptions of police to the media. One potential explanation for ambiguous findings in earlier research is that they do not provide answers about mechanisms through which learning from the media occurs. As early as the 1960s, perceptions of police have been of particular interest within a range of scholarship (Decker, 1981; Jefferis, Kaminski, Holmes, & Hanley, 1997). Extant research on perceptions of police and media effects has been developed respectively within each field. The literature on media effects and perceptions of police can be combined into an integrative model (Dirikx et al., 2013; Dirikx & Van den Bulck, 2014). The theoretical integration of perceptions of police is essential considering inconsistent findings from earlier cultivation studies on perceptions of police. Clarified mechanisms connecting the media to various perceptions can offer more accurate understandings about media effects on sentiments toward police among audiences (Bachman & Schutt, 2015).

## Current Study

The current study reviews prior research on perceptions of police and identifies connections between two different traditions from policing and media research. By identifying gaps within both realms of research respectively, this study seeks to integrate the two different perspectives based on Akers' social learning theory. In particular, this study assumes that previous policing models can explain specific mechanisms regarding how the media affect perceptions of police. Past policing models include the instrumental model, the expressive model, the procedural justice model, and the distributive justice model. For example, the procedural justice model emphasizes the way in which the police treat citizens (Engel, 2005; Tyler, 1990). According to the procedural justice model, individuals are likely to form positive perceptions of police when the police treat them in a fair and respectful manner, and if police officers make decisions based on laws and protocols (Johnson, Wilson, Maguire, & Lowrey-Kinberg, 2017). The impressions about the manner in which the police exercise their authority may not come from individuals' firsthand experience. Instead, they may have developed their ideas about how the police treat citizens through the media indirectly.

Provided that police misconduct and abuse of legal authority for the police to use violence are frequent issues that appear in television news (Benekos & Merlo, 2006; Surette, 2014), the viewing of police misconduct content can influence audiences' perceived level of procedural justice, which, in turn, influences general assessment of the police institution or individual police officers (Dirikx & Van den Bulck, 2014; Mazerolle, Bennett, Antrobus, & Eggins, 2012). Likewise, viewing crime news may foster audiences' fear of crime or perceived risk of victimization, which can alternately disappoint the audience due to poor police

performance (Hinds & Murphy, 2007; Van Craen, 2013). In other words, the media can play a vital role as a socialization agent, providing sources to evaluate police performance.

Additionally, individuals may become desensitized toward violence and regard police misconduct as a permissible form of social control due to exposure to media coverage of crime news (Baumer, Messner, & Rosenfeld, 2003; Bushman & Huesmann, 2006; Huesmann, 2007). A multitude of possibilities suggests two significant implications. First, the mediating roles of various perceptions should be considered together to examine whether media influence evaluation of police. Second, media content can shape different understandings of the audience instead of uniform worldviews (Britto & Noga-Styron, 2014; Cohen & Weimann, 2000). These possibilities remain open to rigorous empirical examination, thereby justifying the necessity of the current study. The conceptual integration model is found in Figure 2.
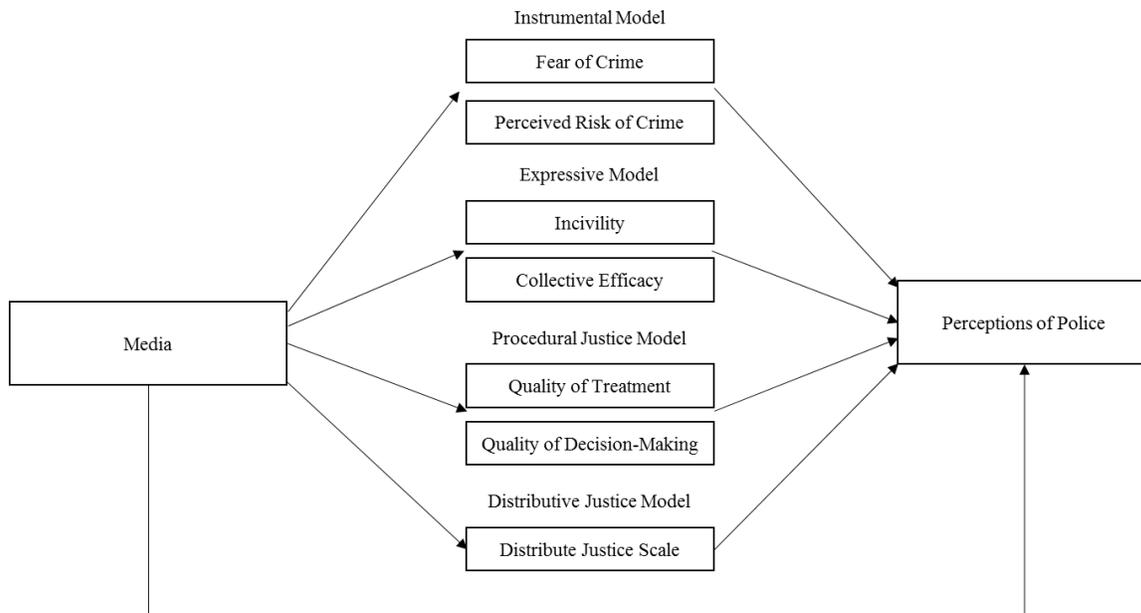


*Figure 2*. A conceptual mediator model for media and perceptions of police.

Another goal of the current study is to examine the moderating roles of audience traits (Eschholz, 1997; Gerbner et al., 1978; Gerbner et al., 1980; Roche et al., 2016; Schlesinger, Tumber, & Murdock, 1991). A large body of literature on perceptions of police has included

real-world experiences (e.g., victimization, encounters with the police) and individual

characteristics such as race, gender, and age in the model (e.g., Brown & Benedict, 2002; Cao,

Lai, & Zhao, 2012; Gabbidon, Higgins, & Potter, 2011; Huebner, Schafer, & Bynum, 2004;

Rosenbaum, Schuck, Costello, Hawkins, & Ring, 2005). The role of these variables has been of

particular interest in communication research (Chiricos, Eschholz, & Gertz, 1997; Chiricos,

Padgett, & Gertz, 2000; Eschholz, Chiricos, & Gertz, 2003; Gerbner et al., 1980; Morgan, 2011;

Shrum & Bischak, 2001). Taken together, media effects on perceptions of police can differ

depending on audience characteristics. Reflecting on the insights from differential reception

research, the present study assumes that race, gender, victimization experience, and police

encounters can moderate media effects on perceptions of police (Callanan & Rosenberger, 2011;

Dowler, 2002). The conceptual diagram of the interaction model is presented in Figure 3.
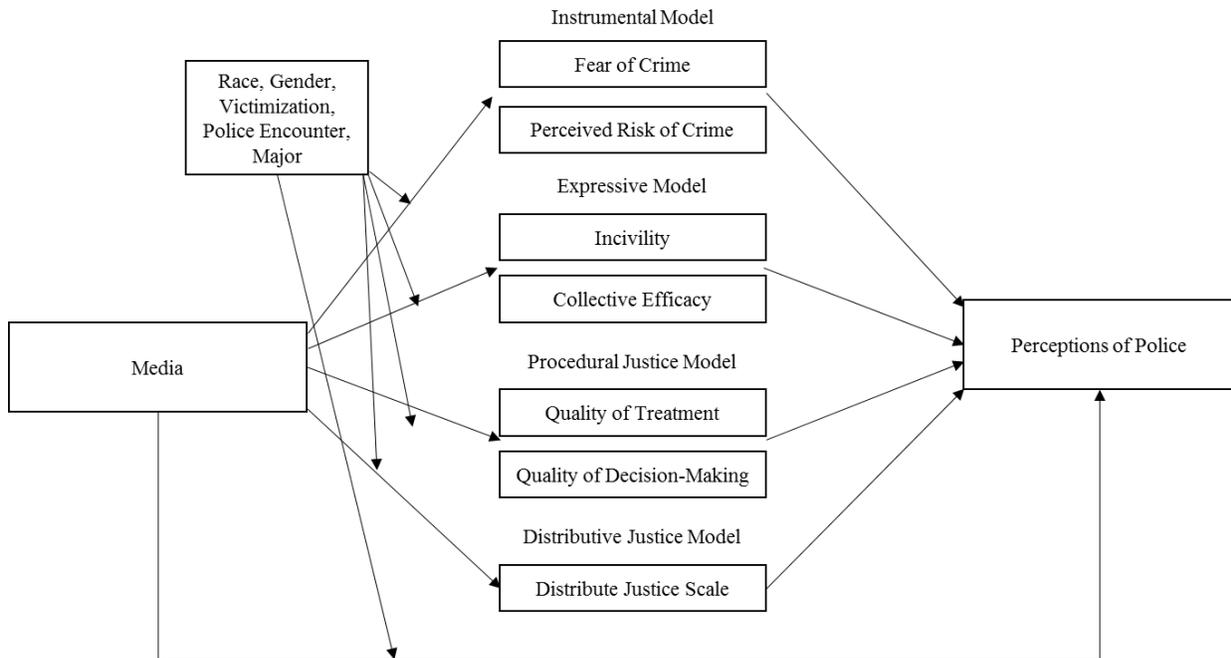


*Figure 3*. A conceptual moderated mediation model for media and perceptions of police.

Simultaneously, previous media research has been controversial due to its

methodological problems. First, scholars have underlined different aspects of media to capture

the influence of media, and this has resulted in non-unified measurement formats. For example, while some researchers listed specific crime-based programs and asked how often participants watched them (Callanan & Rosenberger, 2015; Eschholz et al., 2003; Fedorek, 2013), other researchers asked respondents to estimate the number of hours that they spent on various media outlets (Gerbner et al., 1980; Kohm, Waid-Lindberg, Weinrath, Shelley, & Dobbs, 2012). Second, previous cultivation research in criminology mostly relied on correlational studies (Shadish et al., 2002). In correlational studies, causal statements about the observed variation are difficult to be verified (Neuman & Wiegand, 2000). To address the limitations of earlier research, this study aims to examine the cultivation effect on perceptions of police through a randomized experimental design. Experimental design can compensate for the weakness of cross-sectional survey design in the absence of internal validity (Brewer & Hunter, 2006). Thus, the current research aims to examine the mechanisms that connect media exposure to perceptions of police, using a randomized experimental design.

Using a disproportionate stratification, a randomized experiment was conducted with 778 undergraduate students who were enrolled in courses at IUP in the 2018 spring semester. Students were randomly assigned to five groups. Each group was assigned to view a brief video segment. One group was assigned to watch an edited video segment that focuses on police misconduct. The second group was assigned to watch an edited video segment that focuses on the sacrifice of the police. The third group watched an edited video segment that focuses on a report of a "crime wave" (Fishman, 1978). The fourth group was presented with an edited video segment of a short lecture that is not related to crime and punishment issues. Lastly, the fifth group watched an edited video segment that contains both positive police images and police misconduct. The last two groups served as the control groups in the study. As part of the

experimental design, baseline data regarding perceptions of police were collected during the first phase of the survey, and the data were compared with survey data obtained immediately after the video presentation. It was examined whether experimentally manipulated conditions hold influence on various perceptions. Also, this researcher tested whether media effects differ depending on individual characteristics, including their experiences. Then, the analytical model assessed media influence on general assessments of police through other types of perceptions derived from traditional policing models.

## Research Questions

Previous studies have provided inconsistent results about media effects on perceptions of police. Moreover, the existing literature has predominantly relied on a cross-sectional survey design, which is marked by a lack of internal validity. Theoretical gaps regarding the mechanisms through which the media shape perceptions of police remain unclear. For these reasons, the current study seeks to answer four overarching research questions:

1) What are the direct effects of media exposure on perceptions of police?

2) If there are direct media effects, are there interaction effects between media exposure and individual characteristics and experiences?

3) Are there indirect influences of the media exposure on perceptions of police through traditional policing models (i.e., the instrumental model, the expressive model, the procedural justice model, and the distributive justice model)?

4) Are indirect influences of the media exposure on perceptions of police contingent on individual characteristics and experiences?

Question 1 concerns whether the media influence perceptions of police and if then, what the directions of media effects are. Question 2 aims to test whether media effects vary depending

on individual characteristics empirically. Question 3 involves the effort to clarify ambiguous

findings regarding media effects on perceptions of police in general by incorporating traditional

policing models into media effects. Question 4 is related to conditional indirect effects of media

exposures on perceptions of police.

## Significance of the Study

In his book, Lippmann (1946) stated that the actual world is too complicated and broad to

be perceived by individuals; thereby, mass media simplify the world and convey information to

people to help them construct their understanding of the world. The perceptions of crime and

criminal justice system are also tied to the influence of media. In the new media era, the public is

always exposed to various media forms which are consumed at a high rate. One major problem

with the media's portrayal of the criminal justice system is that they often instill distorted images

of crime and justice in viewers (Mastro & Robinson, 2000; Mazerolle, 2003).

The adage says, "when a dog bites a man, that is not news; but when a man bites a dog,

that is news" (Keir, McCombs, & Shaw, 1986, p. 3). Not surprisingly, media representations of

crime and legal authorities are often strikingly sensationalized (Dowler & Zawilski, 2007;

Surette, 2014). Startling crime news has become more dominant due to "the competitive

strategies for media attention employed by news sources" (Schlesinger et al., 1991, p. 399).

Media reports of crimes are mainly centered on street crimes rather than other types of crimes

such as white-collar crimes (Beckett & Sasson, 2004; Graber, 1980). Alternative viewpoints to

understand crime issues have become more limited because a few media corporations dominate

and consolidate most media outlets through vertical and horizontal integration (Jewkes, 2010;

Robinson, 2016). As Bagdikian (2004) briefly noted, six major corporations currently exercise

"more communication power than was exercised by any despot or dictatorship in history" (p. 3).

The domination in the media can be particularly problematic provided that most people lack firsthand experience with the criminal justice system (Doyle, 2003; Hohl et al., 2010). Accordingly, they primarily rely on the media to obtain information about crime and justice (Dowler, 2003; Surette, 2014; Tonry, 1999). In their focus group study, Boda and Szabó (2011) found that participants' understanding about crime and justice issues were in close accord with narratives in the media; although, participants did not think that the media influenced them. This finding implies that our knowledge about crime and justice issues can be permeated through the media even when we do not recognize it. Considering the power of subliminal messages from the media and the increasing accessibility of the media (Pavolik, 2015), it is critical to consider the role of the media in cultivating individuals' perceptions of the criminal justice system (Britto & Dabney, 2010; Roche et al., 2016). The current study contributes to extant research on perceptions of police by expanding the focus of sources from real-world experience to the media.

The influence of media on perceptions of police is far from conclusive (e.g., Callanan & Rosenberger, 2011; Weitzer, 2002). While cultivation theory assumes that the exposure to media can influence the perception of the audience (Gerbner & Gross, 1976), other researchers have argued that the cultivation effect of media is minimal because messages from media are often mixed and contradictory (Boda & Szabó, 2011; Tyler, 2006b). Even if there is a relationship between media and perceptions of police, the direction of the relationship is not conclusive. (Chiricos & Eschholz, 2002; Sun et al., 2014; Weitzer & Tuch, 2005). Some researchers have contended that the exposure to crime-related media can result in a positive perception of the police because most crimes are solved, and justice is served in media stories (Callanan & Rosenberger, 2011; Dowler, 2002; Rafter, 2006; Sparks, 1992). Even when police officers in the media violate department regulations or citizens' constitutional rights, these actions are often

contextualized and legitimized (Hirschfield & Simon, 2010; Rafter, 2006). The causes of those

infringements are portrayed to be the last resort to produce "good" outcomes (Dirikx et al., 2012;

Halevy & Cooper, 2016). In other words, people may accept the perception that police officers

engage in corruption for noble reasons (Cooper, 2012; Crank & Caldero, 2004).

Media coverage of the police can also lower confidence in law enforcement by overly

portraying police misconduct, specifically concerning the use of excessive force (Lim, 2015;

Weitzer, 2002). In addition to police abuse of power, the media can erode confidence in the

police by setting unrealistic expectation about police work. Specifically, people may develop an

unrealistic expectation about the performance of criminal justice agents after watching TV

programs showing the police that solve most crimes effectively and swiftly (Boda & Szabó,

2011; Schweitzer & Saks, 2007). Once the public sets the bar high for police performance, there

is a higher likelihood of becoming disappointed (Hawkins & Scherr, 2017; Tyler, 2006b). The

clarification of the direction of the relationship between the media and perceptions of police

remains ambiguous. This study adds to the ongoing debate regarding the direction of media

effects on perceptions of police.

Another significant contribution of this study is that it used a different theoretical model

to understand media effects other than cultivation theory. As previously noted, cultivation theory

is limited in its explanations about media effects relative to real-world experiences. That being

said, most available studies of media effects have mainly relied on cultivation theory (Morgan &

Shanahan, 2010). While the vast majority of studies on media effects used cultivation theory as

their theoretical framework (Callanan & Rosenberger, 2011; Roche et al., 2016), Akers (2009)

used social learning theory to test the influence of the media on fear of crime as a learning agent.

Unfortunately, the following empirical research on social learning theory has revolved around

behavioral outcomes instead of perceptions (Kanz, 2016). In fact, most studies have failed to consider the media as an essential reference group within the context of Akers' social learning theory (Pratt et al., 2010). Theoretical speculation of the applicability of Akers' social learning theory to account for media effects on perception can rekindle interests in the impact of the media from criminological tradition.

While there are a handful of studies that have investigated the relationship between the media and perceptions of police, these studies mainly relied on cross-sectional survey design (Callanan & Rosenberger, 2011; Dirikx et al., 2013; Dirikx & Van den Bulck, 2014; Dowler, 2002). Previous studies on the cultivation effect have been criticized for the possibility of a reverse causal relationship between media consumption and audiences' perceptions (Dowler, 2002; Gerbner, 1998; Heath & Gilbert, 1996). Briefly, people who have particular orientations or predispositions are more likely to consume particular genres and contents of the media selectively. As such, it is not the media that imbue and cultivate particular perceptions, but it is an individual's orientations that lead him/her to select and consume particular media. The current dissertation addressed the lack of internal validity caused by individuals' dispositions and their media consumption by employing a randomized experiment that establishes strong internal validity (Remler & Van Ryzin, 2015).

Lastly, the current study contributes to a better understanding regarding how perceptions of police are shaped through the media. The findings regarding how and when the media influence perceptions of police can offer specific policy implications for the public, police officials, and police reporters (Mawby, 2002). If media exposure accounts for much of the variation in perceptions of police, a limited resource for promoting positive sentiments toward police should be reallocated (Sacco, 2005).

In understanding perceptions of police, the current study aims to shift the focus of predictors from objective conditions to socially-constructed images in the media (Surette, 2014). Empirical findings from this study may have equal importance to implications that Tyler's process-based model has indicated (Engel, 2005; Sargeant, Murphy, & Cherney, 2014). Before the process-based model held the limelight, the conventional wisdom regarding effective crime prevention was to increase formal social control (e.g., punishment) to motivate people to comply with the law (Kelling & Coles, 1996; Wilson & Kelling, 1982). Aggressive law enforcement strategies such as high-discretion police stops and proactive searches had side effects: "to lower trust and to impede compliance and voluntary cooperation with law enforcement" (Tyler, 2011a, p. 256). Considering the importance of compliance and cooperation with citizens in effective policing (e.g., Chaiken, Greenwood, & Petersilia, 1977; Tyler & Fagan, 2008), aggressive policing has been widely criticized and has not yielded its expected outcomes (Tyler, 2011a).

The introduction of the process-based model helped practitioners to reconsider the utility of policing models that stressed strict social control (e.g., broken windows policing and zero-tolerance policing). Tyler and his associates' process-based model has provided alternative ways to view policing (Tyler, 2000, 2005). Specifically, how police officers treated citizens encouraged the public to comply and cooperate, regardless of how well they performed their duties and what the outcome was (Tyler, 1990, 2005). These findings contributed to lawmakers' efforts to incorporate the principles of procedural justice in police practices (Lind & Tyler, 1988; Tyler, 1990, 2005, 2011; Tyler & Huo, 2002; Mazerolle et al., 2012).

Similarly, the findings from the current study provide another way to look at perceptions of police. Media coverage of crime and punishment predicted significant variations in the perceptions of police, regardless of an individual's experiences and his/her characteristics. For

instance, the current findings indicate that people are influenced by media exposure, particularly when the media content involves negative images of police. This finding suggests that the media serve as a venue to erode positive attitudes toward the police and therefore should be taken seriously. If the media can create distorted images of police, leading to changes in perceptions, people should recognize that the police are not entirely responsible for the current animosity from the community toward police (Pollock, 2017). Simultaneously, police should endeavor to reduce media coverages on police misconduct by institutionalizing programs and policies that can deter police corruption (De Angelis, 2016; Lee, Lim, Moore, & Kim, 2013; Walker, 2012).

The current study also included a detailed model specification, considering not only interaction effects, but also mediating variables. In other words, the findings provide insights concerning when and how media presentation of crime and justice influences audiences. For example, the impact of the media exposure differed depending on participants' major although it was marginally significant. Specifically, criminology and criminal justice (CJ) majors were less likely to be influenced by negative images in the mixed media exposure in comparison to non-CJ majors. Mediation analyses also provided intriguing results involving indirect effects of media exposure on perceptiosn of police. Some video conditions brought about changes in fear of crime and collective efficacy, which, in turn, resulted in changes in perceptions of police. The empirical evidence of mediating variables enables police to identify intervention points to improve perceptions of police.

Notwithstanding its interesting findings, it should also be noted that many proposed hypotheses of the current dissertation were not empirically supported. Even when media effects were statistically significant, the effect size was often small or medium at best. Some researchers have overestimated media effects (Gerbner et al., 2002), whereas other researchers refuted even a

slim possibility of the media effect (e.g., Tyler, 2006b). The current study indicates that the

either/or approach regarding media effects should be refrained. That said, given that

experimental research on media effects in criminal justice is scarce, the conclusive answer for

media effects should be reserved, and more studies on this topic should be pursued. While the

average citizen spends great deal of his/her time on watching TV, even the most extensive

studies regarding evidence-based policy in the criminal justice system have overlooked the

importance of the media in diffusing positive perceptions of police (Lum & Koper, 2017;

Sherman, Farrington, Welsh, & MacKenzie, 2002). The current study helps to fill some of these

gaps.

CHAPTER II

LITERATURE REVIEW

**Perceptions of Police**

This chapter presents a review of relevant literature. First, research related to perceptions of police is examined. The literature review clarifies conceptual and empirical differences in confidence in police and police legitimacy. Each section highlights different aspects of each construct and provides previous research. Then, existing research on media and perceptions of audience are reviewed. This section is used to form the argument regarding the relationship between the media and perceptions of police. The following provides a brief introduction as to why confidence in police and police legitimacy is conceptually and empirically distinct.

Perceptions of police are conceptually ambiguous. While the importance of attitudes toward the police has been widely recognized and studied (Brown & Benedict, 2002; Decker, 1981), researchers have not reached consensus on how to differentiate similar attitudinal concepts in policing literature (Cao, 2015; Jackson & Gau, 2016). For instance, Cao (2015) argued that confidence in the police is the most suitable construct in studying perceptions of police, whereas Jackson and Gau (2016) paid considerable attention to police legitimacy and trust in the police. Empirical measures developed to capture opinions of police have also been inconsistent (Gau, 2011; Tyler & Huo, 2002). While researchers have used trust in the police and perceived obligation to obey to measure police legitimacy (Sunshine & Tyler, 2003a; Tyler, 1990; Tyler & Huo, 2002), recent studies reveal that the two concepts cannot be equally subsumed under legitimacy (Bottoms & Tankebe, 2012; Gau, 2011). Bottoms and Tankebe (2012) theoretically discussed the differences between trust and legitimacy. They concluded that trust is a more future-oriented concept and is related to an individual's expectation of other

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people's future behaviors, whereas legitimacy is centered around acknowledging that the actions or decisions of the subjects in power are morally correct and justifiable. Supporting this theoretical conjecture, Gau (2011) provided statistical evidence from confirmatory factor analysis that the two constructs do not converge.

The necessity of differentiating trust and legitimacy has also been theoretically discussed. Hawdon (2008) contributed to this discussion by noting that people can perceive the police as legitimate authority figures even when they do not necessarily trust particular officers. According to Jackson and Gau (2016), trust is generally defined as "a subject judgement formed at the micro-level (that is, between individual citizens and officers)," whereas legitimacy can be defined as "a property possessed at the institutional level (the citizenry's belief that the police institution rightfully holds and exercises power over the public)" (p. 62). If trust and legitimacy reflect two distinct concepts, measures for these concepts should be developed respectively.

Supporting theoretical arguments, empirical findings have also shown that trust and legitimacy are two different constructs (Reisig et al., 2007; Tyler, 1990). Trust in the police and obligation to obey have been treated as two distinct concepts that fall under legitimacy (Jackson & Gau, 2016). Statistical findings suggested that these two concepts cannot be subsumed under legitimacy (Gau, 2011; Reisig et al., 2007; Tyler, 1990). The first reason is that the two concepts did not indicate a high level of construct validity (Tyler, 1990). For instance, Tyler (1990) discovered that the correlation coefficient between trust and perceived obligation to obey was relatively small. This evidence questions the convergent validity of police legitimacy ($r = .26$, p. 47). Second, statistical findings have shown that these concepts do not share the same level of predictive validity with each other (Remler & Van Ryzin, 2015). Reisig et al. (2007) found an interesting pattern when they disaggregated the combined legitimacy index and examined

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whether or not the respective concept predicted respondents' compliance and cooperation. While trust in police exerted a statistically significant influence on both compliance and cooperation, the impact of obligation to obey was not substantiated. The discrepancy between the impact of the overall legitimacy index, and the effects of the individual subconstructs under legitimacy on compliance and cooperation, implies risk of an erroneous inference when two different concepts are combined into one index. Gau's (2011) confirmatory factor analyses also affirmed that trust in police does converge on the same latent construct with the obligation to obey. This finding suggests that trust in police and the obligation to obey should be treated as separate constructs.

In other words, trust in police and perceived legitimacy should be treated as distinct concepts, albeit interrelated (Gau, 2014; Jackson & Gau, 2016; Reisig et al., 2007). Although recent findings have supported that the two concepts are theoretically and empirically separate, the majority of existing literature fails to consider the distinct nature of two concepts (Nix, Wolfe, Rojek, & Kaminski, 2015). The following section provides a conceptual clarification between confidence in police and police legitimacy.

**Confidence in the Police**

Trust helps individuals to handle the complexity of society, but trust is inevitably subjective (Giddens, 1991; Luhmann, 2017). This is because the chance that someone who is trusted will carry an expected action is unknown. Thus, trusting someone always accompanies a chance of being wrong (Jackson & Gau, 2016). Jackson and Gau (2016) stated that trust involves "the subjective judgment that a trustor makes about the likelihood of the trustee following through with an expected and valued action under the condition of uncertainty" (p. 53). Hawdon (2008) defined trust as "the belief that a person occupying a specific role will perform that role in a manner consistent with the socially defined normative expectations associated with that role"

(p. 186). When applied to police, trust references an individual's subjective judgment that police officers will act according to expectations about police roles (Nix et al., 2015).

The average citizens expect the police to be successful in catching criminals, solving crimes, preventing crime, and resolving conflicts (Wilson, 1975). In this regard, a critical element of trust in police is the belief that police "are competent to act in specific ways in specific situations" (Jackson et al., 2011, p. 269). Simultaneously, police are expected to achieve their goals professionally without overusing or abusing their authority (Tyler, 1990, 2005). If police understand what the general public wants and act accordingly, they will not use excessive force when unnecessary (Tyler, 1990). Smith (2010) argued that three types of trust are commonly used: generalized trust, particularized trust, and strategic trust. Generalized trust underlines individuals' beliefs and internal states regarding trusting another individual or group. On the other hand, particularized trust refers to the belief that only people similar to an individual are worth trusting. Lastly, strategic trust is based on rational choices of individuals. Individuals' expectations that another individual or group can deliver what they promise to give are the core elements of strategic trust. Strategic trust is particularly relevant regarding trust in police because it illuminates the motives and intentions of trustees.

Consistent with strategic trust, trust in police can be fostered when police meet two different requirements: 1) as an institution that provides public service, and 2) as a state-sponsored institution exercising authority in an impartial and fair way (Jackson et al., 2011). Tyler dubbed this trust, "motive-based trust" (Tyler, 1990; Tyler & Huo, 2002). Motive-based trust is dependent on whether police are perceived to do their best to serve the interests of the general public and whether they share the values and goals that the community pursues (Jackson & Sunshine, 2007; Sunshine & Tyler, 2003b). Similarly, Jackson et al. (2011) emphasized

individuals' beliefs that "the police have the right intentions towards citizens" in forming trust in the police (p. 269).

The expectation about how well police would perform when encountering several factors can shape perceptions. Citizens' prior experiences with law enforcement officers can play a pivotal role in determining the level of confidence in the police (Mazerolle, Antrobus, et al., 2013). Observing differential treatment by the police along the line of a race or social class can also influence the level of confidence in the police (Reisig et al., 2007; Tyler & Wakslak, 2004). People may come into contact with the police as victims, witnesses, and suspects. The results of these encounters can influence general beliefs about how competent the police are and how much the police care for the interests of the general public.

While the police can earn the confidence of citizens by being competent and fair in their work, this perception can be modified through indirect sources (e.g., Hohl et al., 2010). Hohl et al. (2010) examined the effect of indirect sources on perceptions of police by employing a quasi-experimental design. Newsletters were distributed to respondents regarding the success of the police in addressing disorder and crime. Respondents who received the newsletter were compared to respondents who did not. The result showed that respondents who received the newsletter indicated a higher level of the confidence in the police. This finding implies that the public can be influenced not just by direct experiences with the police but also by other sources. Similarly, Jackson et al. (2012) stated that confidence in the police is rooted in "cues that communicate information about the intentions and character" of the police (p. 4). There are various sources that deliver images of the police indirectly, including crime news or cop shows (Callanan & Rosenberger, 2011; Dowler & Zawilski, 2007). In sum, confidence in the police can be held regardless of individuals' experiences (Nix et al., 2015; Tyler & Huo, 2002).

General perceptions about the behavior of police officers have been identified in different ways: confidence in the police (e.g., Cao, 2015; Ivković, 2008; Lee et al., 2015; Skogan, 2006b), satisfaction (e.g., Reisig & Parks, 2000; Weitzer & Tuch, 2002), attitudes toward police (Dowler, 2002; Eschholz et al., 2002), and trust (Sun et al., 2014; Van Craen, 2013). For instance, Weitzer and Tuch (2005) measured individuals' global perceptions of the police by combining two items that asked how satisfied or dissatisfied they were with the police department in their cities and the police officers in their neighborhoods. Since satisfaction pinpoints the pleasure or comfort based on individuals' experiences (Van Craen, 2013), this is a narrower concept in comparison to confidence in the police that reflects general sentiments toward the police institution (Cao, 2015). Confusion of similar ideas can impede the development of an adequate explanation of trust (Barbalet, 2009; Tankebe, 2013).

Cao (2015) provided a conceptual clarification between three frequently used concepts in policing literature. Cao (2015) first differentiated two concepts: 1) satisfaction with the police, and 2) trust and confidence in the police. While satisfaction focuses on "an internal state of mind of an individual" (p. 241), trust and confidence reflect more global assessment which is externally oriented. Cao further differentiated the two concepts of trust and confidence. According to Cao, confidence is a narrower concept than trust, focusing on the "vertical trust linking citizens and their public institutions" (p. 242). Put simply, Cao concluded that the use of confidence in the police is a preferable concept since it reflects general sentiments toward the specific police institution.

**Police Legitimacy**

Unlike confidence in the police, which emphasizes positive expectations about them, there is a distinct element to police legitimacy: obligation to obey (Jackson & Gau, 2016).

Legitimacy can be broadly defined as "the right to govern and the recognition by the governed of that right" (Jackson et al., 2011, p. 272). Similarly, Jackson and Gau (2016) defined legitimacy as "the property or quality of possessing rightful power and the subsequent acceptance of, and willing deference to, authority" (p. 59). Both definitions stress the differential power structure and its rightfulness.

According to Jackson and Gau (2016), Tyler's definition of legitimacy has repeatedly been cited (Sunshine & Tyler, 2003a; Tyler, 1990, 2006a; Tyler & Huo, 2002). Tyler strongly emphasized the sense of obligation. In Tyler's (1990) influential study, legitimacy is defined as "acceptance by people of the need to bring their behavior into line with the dictates of external authority" (p. 25). In that work, Tyler (1990) used expressed allegiance/support for legal authorities and perceived obligation to obey the law as two key subscales to measure legitimacy.

In subsequent studies, Tyler et al. (2002, 2003) modified the original conceptualization of legitimacy. For instance, in their Oakland and Los Angeles studies, Tyler and Huo (2002) added the entitlement component to Tyler's (1990) definition of legitimacy from his earlier research. They defined legitimacy as the subjective judgment that "legal authorities are entitled to be obeyed and that the individual ought to defer to their judgment" (p. 14). Tyler and Huo proposed four different subscales to measure legitimacy: obligation to obey the law, cynicism about the law, institutional trust, and feelings about legal authorities. Sunshine and Tyler (2003a) also treated feelings of obligation as crucial components to define legitimacy. While Sunshine and Tyler used two different survey data files to test their process-based model, obligation to obey the law was repeatedly used as a subscale in their operationalization of legitimacy. In short, a sense of obligation to obey has been an essential element of legitimacy as a subjective judgment (Jackson & Gau, 2016).

It should be noted that there were criticisms about whether feelings of obligation could be subsumed under legitimacy (Bottoms & Tankebe, 2012; Tankebe, 2013). For example, Bottoms and Tankebe (2012) contended that legitimacy should be considered as dialogues that continue between the power-holder and the audience. Accordingly, Tankebe (2013) argued that obligation is a broader concept that encompasses legitimacy. They noted that dialogues develop as the power-holder "make legitimacy claims" and the audience "accept the power-holder as a legitimate authority" (p. 160). In short, some researchers have argued that legitimacy should be understood not just from the power-holder and the audience.

Researchers have used different methods to operationalize police legitimacy (Jackson & Gau, 2016). While feelings of obligation to obey a legal authority have been used as essential components, some researchers have incorporated institutional trust and normative alignment to mirror police legitimacy. For instance, in the words of Tyler (2006a):

Legitimacy is a psychological property of an authority, institution, or social arrangement that leads those connected to it to believe that it is appropriate, proper, and just. Because of legitimacy, people feel that they ought to defer to decisions and rules, following them voluntarily out of obligation rather than out of fear of punishment or anticipation of reward (p. 375).

Tyler (2005) stated that institutional trust involves subjective judgments about the extent to which "the police are honest and care for the members of the communities they police" (p. 324). Institutional trust is different from motive-based trust because the latter captures citizens' inference about intentions or motives of the police, whereas the former focuses more on police work (Reisig et al., 2007).

Taken together, no definition of police legitimacy has been universally acknowledged. Some researchers have underscored the sense of obligation as an essential component of legitimacy, while others have disputed the claim that feelings of obligation can represent legitimacy (Tankebe, 2013; Tyler, 1990, 2006a). Some researchers have included other components such as an institutional trust or cynicism about the law in addition to the obligation to obey the law when measuring legitimacy (e.g., Tyler & Huo, 2002). In short, there is no consensus on how legitimacy should be defined and measured to test its empirical utility. In the following section, different models to understand perceptions of police will be discussed.

## The Objectivist Models

Due to the importance of perceptions of police in activating voluntary cooperation and compliance with legal authority, researchers have paid a great deal of attention to determinants of police perceptions (e.g., Brown & Benedict, 2002; Huang & Vaughn, 1996). Existing research has identified several predictors including socio-demographic factors, police- and crime-related factors, and neighborhood factors (Cao et al., 1996; Cao, Huang, & Sun, 2014; Weitzer & Tuch, 2006; Wu, 2014). Many studies on attitudes toward the police have been guided by researchers' conjectures and specific propositions (Brown & Benedict, 2002; Dunham & Alpert, 2005). Also, recent theoretical developments in policing literature have deepened the understanding of perceptions of police (Jackson & Sunshine, 2007; Sunshine & Tyler, 2003b; Tyler, 1990).

Two broad models have resulted from the recent theoretical developments. The first are the objectivist models. The theoretical models (the instrumental model, the expressive model, the procedural justice model, and the distributive justice model) that belong to the objective models is premised on the idea that perceptions of police are mostly or entirely inculcated by the knowledge about objective conditions (Skogan, 2009; Tyler, 2011a; Weitzer & Kubrin, 2004).

This approach is different from the second development, which is the constructionist model. The constructionist model argues that social problems are socially constructed through the media or politics rather than actual performance of the police (Beckett, 1994; Reiner, 1985).

The constructionist model is discussed in the following section which explores the relationship between media and perceptions of police. The following section focuses on the objective model in detail. The objectivist model proposes that public perceptions are rooted in accurate assessments of the situation (Robinson, 2016; Sacco, 2005; Wilson, 1975). When applied to the police, the quality of police performance or recognition of problems related to the police can influence perceptions. For example, the degree to which the police respectfully treat citizens can be a factor that predicts public attitudes toward them. As previously mentioned, four models have been proposed to explain perceptions of police, resonating the essence of the objectivist model: the instrumental model, the expressive model, the procedural justice model, and the distributive justice model (Jackson & Sunshine, 2007; Reisig et al., 2007). More detailed descriptions of each theoretical model and the studies that employed them are provided in the following sections.

**The Instrumental Model**

The police are expected to prevent crime and apprehend criminals effectively (Wilson, 1975), and the instrumental model suggests that police performance is a significant driver of perceptions of police (Jackson et al., 2009).  If the public perceives that crime increases, it is possible they become more afraid of crime, which may lead them to question the effectiveness of the police. Perceived risk of victimization may lead the public to hold the police accountable for crime issues. This perspective coincides with the performance theory that stresses the quality of government performance (Brown & Coulter, 1983; Van Craen, 2013).

Researchers have long argued that instrumental/pragmatic concerns can drive public policy (Baumer et al., 2003; Tyler & Boeckmann, 1997; Tyler & Weber, 1982). For example, Baumer et al. (2003) found that people who lived in neighborhoods with high levels of violent crime were more likely to support extreme types of formal social control (i.e., death penalty) to stop violence. Similarly, Tyler and Weber (1982) discovered that concerns about crime and evaluations of the effectiveness regarding punishment predicted public support for capital punishment. As objective conditions of their neighborhoods influence attitudes toward capital punishment, concerns about crime can also affect perceptions of criminal justice. For instance, confidence in the police may root in individuals' fear of crime. The body of research based on the instrumental model has treated perceptions of police as a dependent variable, arguing that concerns about crime affect these perceptions (Jackson et al., 2009; Jackson & Sunshine, 2007). Skogan (2009) dubbed this tradition the "accountability model" (p. 301).

Jackson et al. (2009) investigated the relationship between public perceptions of crime, social disorder, and cohesion and confidence in the police. Using data from the British Crime Survey (BCS) and Metropolitan Police's Public Attitude Survey (MPPAS), they examined whether the instrumental model could explain public confidence in the police. The instrumental model was represented with several explanatory variables, including victimization experiences and people's concerns about crime. Their findings supported the instrumental model. Statistical models using the BCS data indicated that victimization experiences of property crime ($\beta$ = -.18, p < .001) and personal crime ($\beta$ = -.23, p < .001) lowered overall confidence in local policing. Ordinal regression models using MPPAS also showed that people's concerns about crime were a significant factor, reducing overall confidence in local policing ($\exp(\beta) = 0.81$, $p < .001$).

Similarly, Jackson and Bradford (2009) examined if the forms of social perceptions could predict the confidence in police. They conducted two studies, using the 2003/2004 BCS and the 2006/2007 London Metropolitan Police Safer Neighborhoods Survey (LMPSNS) respectively. Their findings indicated that both broader perceptions and objective local conditions mattered in predicting perceptions of police. While the effect size of the variable in predicting overall confidence with local police became smaller when other variables were included, from the odds ratio of 1.375 to 1.243, this impact regarding people's concerns about crime on confidence in the police still remained statistically significant (95% CI 1.14–1.36, $p < .001$). In other words, people who indicated higher concerns about crime were more likely to evaluate the police poorly.

The utility of the instrumental model has been affirmed from different contexts in different countries (Jang & Hwang, 2014; Murphy & Cherney, 2011; Song, Choi, & Lee, 2015; Stack, Cao, & Adamzyck, 2007; Sun et al., 2014; Tankebe, 2009). Most have tested the respective influence of the instrumental and expressive model and yielded similar results. Sun et al.'s (2014) study is particularly relevant, since they designed their survey to compare the instrumental model with the expressive model rather than employing secondary data. Sun et al. recently sought to assess the strength of the instrumental and expressive models in predicting Taiwanese trust in the police. The data for this study were collected from 2,289 respondents in three metropolitan areas in Taiwan. They used concerns about safety and victimization experience as variables to represent the instrumental model. They found that concerns about safety had statistically significant effects on trust in the police. Using data from the Korean National Crime Victimization Survey (KNCVS), Jang and Hwang (2014) also confirmed that

worry about crime correlated significantly with public confidence in police among South Koreans.

Some researchers have considered distributive justice as one component of the instrumental model (Sunshine & Tyler, 2003b; Tyler & Huo, 2002). Discussed in more detail below, distributive justice is a more specific outcome that individuals received from encounters with police (Reisig et al., 2007). In other words, factors such as concern about safety or perceived risk would not converge with distributive justice since they tap into different constructs.

It also should be noted that there is a model that assumes the opposite effects of crime-related concerns on perceptions of police. System justification theory suggests that a high level of perceived risk of crime or fear of crime may promote positive attitudes toward the police instead of lowering them (Jost & Banaji, 1994). This intriguing proposition informed by social psychology contradicts predictions from the instrumental model (Jost, Banaji, & Nosek, 2004; Kochel, 2016). According to system justification theory, people try to legitimize the status quo when they perceive the system is under threat. Even when a social system is unjust, if people believe that they should rely on the system to manage threats (e.g., crime), they may ignore or underestimate problems that are present in a system (Van der Toorn, Tyler, & Jost, 2011). In the words of Van der Toorn et al. (2011), "believing that the social system is the way it should be helps to reduce uncertainty and manage threat and creates a sense that there is common ground to maintain shared reality" (p. 128).

System justification theory predicts the opposite of the instrumental model. While the instrumental model proposes that perceived crime problems will promote dissatisfaction with police performance, lowering confidence in the police, system justification theory suggests that

people who view that they are in danger (e.g., crime) are more likely to recognize the necessity of the police, increasing the confidence in the police. Employing panel survey data, Van der Toorn et al. (2011) found that the perceived level of neighborhood conditions at Time 1 predicted the perceived police legitimacy at Time 2. Consistent with system justification theory, their findings indicated that people who believed that they were living in unsafe neighborhood conditions were more likely to see the police as legitimate. Considering inconsistent conclusions from the instrumental model and system justification theory, the further empirical examination should be undertaken.

**The Expressive Model**

The expressive model underlines the subjective judgments about how people view their community values and norms (Jackson & Sunshine, 2007). According to this perspective, concerns about safety play a marginal role in shaping perceptions of police. That said, if the police do not adequately control rule-breaking behaviors, the public may feel that the moral structures of the community are at risk. Accordingly, the police are no longer viewed as the defenders of community values and morals in the public eye (Jackson & Bradford, 2009). This model is also called neo-Durkheim model due to its theoretical relevance to Durkheim. According to Durkheim (1961), the function of punishment does not solely lie in deterring crimes. The punishment plays a pivotal role in reassuring moral structure in society. Applying this to the police, they can be construed as "prototypical representatives" who defend the moral and social order of society (Sunshine & Tyler, 2003b, p. 153). Similarly, Lofthouse (1996) noted that the police are constantly involved "in the construction and reconstruction of the moral and social order" (p. 44). Therefore, when there are indications of an attack on community morals, people turn to the police to protect their moral values (Sunshine & Tyler, 2003b). Nonetheless, if

the police seem to fail in this role, people will experience disappointment in the police. Put simply, as much as the police "have strong symbolic power," they are also the ones responsible for the deterioration of moral structures (Dirikx et al., 2012, p. 39).

Empirical studies have buttressed the expressive model (Ellison, Pino, & Shirlow, 2013; Jackson & Bradford, 2010). Jackson and Sunshine (2007) examined whether the public's community values and morals are critical factors that shape the public's confidence in the police. Using survey data from a randomly drawn sample of respondents in seven towns and villages in England, they found that both fear of crime and trust in the police are influenced by respondents' social perception measured with evaluations of social disorder and social cohesion. They argued that the police are considered defenders of community values, especially when the public views that the moral structure they support is under threat. Their findings indicated that there was neither an impact of the disorder on confidence in policing nor an impact of fear of crime. On the other hand, social cohesion maintained its influence on confidence in the police, even when all other variables were considered.

Researchers who have included both the instrumental and the expressive model in their statistical analyses have concluded that the impacts of the factors that represent the expressive model are much stronger than those that represent the instrumental model (Jackson & Bradford, 2009; Jackson et al., 2009; Jang & Hwang, 2014; Song et al., 2015; Sun et al., 2014). Most of this research examined the utility of both models using similar measures. For example, Sun et al. (2014) included three variables to represent the expressive model: quality of life, physical disorder, and trust in neighborhoods. Their multiple regression analysis lent greater support for the expressive model in comparison to the instrumental model measured with concerns about safety and victimization experience. The three indicators of the expressive model – trust in

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neighborhoods, physical disorder, and quality of life – were included in the statistical model while victimization experience and concern about safety were used to represent the instrumental model. Both trust in neighborhoods and quality of life had statistically significant effects on trust in the police. While concerns about safety were a significant factor ($\beta$ = -.14, $p$ < .001), the explanatory power of the variables representing the expressive model was stronger when all variables were combined.

Although not explicitly derived from the expressive model, early studies conducted with data from the United States revealed that neighborhood contexts are influential in cultivating attitudes toward the police (Reisig & Parks, 2000, 2003; Sampson & Bartusch, 1998). Recently, Gau, Corsaro, Stewart, and Brunson (2012) reported that perceived neighborhood social cohesion measured at the individual level predict perceptions of police legitimacy, whereas macro-level neighborhood conditions do not. Likewise, Nix et al. (2015) demonstrated that perceived collective efficacy correlates significantly with the evaluation of the police. They explained that "a breakdown in perceived collective efficacy is appropriately conceptualized as an anomic cognitive orientation about one's ecological environment," which echoes the core argument of the expressive model (Nix et al., 2015, p. 617).

It is noteworthy that Sunshine and Tyler (2003b) viewed the expressive model in the context of the procedural justice model. In their statistical analyses, they found that factors representing the expressive model mostly mediate the effect of procedural justice on perceptions of police. They then contended that if the police treat people respectfully and fairly, the public would believe that community norms and values are embedded in the police. Similar explanations were discovered across Tyler et al.'s work (Tyler, 1990; Tyler & Huo, 2002). Perceived neighborhood conditions are not necessarily the outcome produced by procedural

justice. Procedural justice judgment may be only one antecedent that influences social cohesion or collective efficacy. Indeed, previous studies on the expressive model used its own distinct set of variables, including social disorder, social cohesion, or collective efficacy. Therefore, it is reasonable to assume that factors that represent the expressive model can be understood separately from the procedural justice model.

**The Procedural Justice Model**

Procedural justice refers to the idea that perception of justice is tied to the perceived fairness of the procedure that individuals experience (Tyler, 1990). Some researchers have emphasized encounters with police in understanding perceptions of police (Skogan, 2006b). While people may contact the police voluntarily or involuntarily (Smith & Hawkins, 1973), individuals' experiences with police officers can increase or decrease voluntary compliance and cooperation with them (Myhill & Bradford, 2012; Skogan, 2006b). Thibaut and Walker (1975) were two of the first researchers who explored the importance of individuals' encounters with the police. They stated that individuals could exercise two types of control when interacting with legal authorities: decision control and process control. Decision control involves the citizen's ability to affect the outcome of interactions with the police, whereas process control pertains to the opportunities that citizens have to voice their opinion during interactions with them. While their findings illuminated the importance of decision control, other research has consistently demonstrated process control is much more important than initially assumed (Tyler, 1990; Tyler & Huo, 2002). For instance, researchers have found that when individuals are given the opportunity to speak up for themselves in the decision-making process, they perceive that decision makers are fair, regardless of the actual influence of their opinion on decision outcomes (Lind, Kanfer, & Earley, 1990; Lind & Tyler, 1988). Simultaneously, in their Oakland and Los

Angeles study, Tyler and Huo (2002) found that willingness to comply with police directives during police traffic stops is not as much the outcome of a favorable decision as it is one of quality treatment. While outcome favorability predicted willingness to accept police decisions, the effect on willingness to accept decisions was much more pronounced among people who perceived fair treatment from police.

These findings led researchers to explore more about fair procedures (e.g., Paternoster, Brame, Bachman, & Sherman, 1997). Paternoster et al. (1997) examined whether procedural justice influenced subsequent domestic violence after police intervention. They found that domestic violence suspects who perceived that they were treated fairly were less likely to repeat domestic violence. When legal authorities adhere to fair procedures, this provides a message to people that fairly, thereby promoting confidence in the police (Tyler, 2000). This argument is the essence of the procedural justice model. The procedural justice model highlights the citizens' expectations that the police should treat people with justice and dignity (Tyler, 2001), be attentive to citizens' rights and be responsive to their needs.

In this vein, Tyler (1990, 2005) proposed that perceptions of legal authorities are primarily shaped by citizens' subjective judgment about procedural fairness regarding decision making and the way legal authorities exercise their power. Researchers have argued that the positive effects of procedural justice are not only limited to people who have had police-initiated encounters (Bradford, Jackson, & Stanko, 2009; Skogan, 2006b). Citizens who initiated encounters are also substantially influenced by the way police officers treat them (Skogan, 2009, 2012). For instance, police officers' efforts to share information with victims regarding the progress in their case positively influence victims' satisfaction (Skogan, 2009).

The validity of the procedural justice model has been substantiated through various research designs. Murphy et al. (2014) implemented a field trial during routine traffic stops. Police officers in the experimental condition were trained and asked to follow the specified procedural justice protocol during a traffic stop. Police officers were given a script to follow to convey four essential elements of procedural justice to the drivers. These elements included voice, neutrality, trustworthiness, and respect. In the experimental group, drivers were given a newsletter that underlined crime issues in their neighborhood. They then were given a chance to voice their thoughts on the matters to the police. On the other hand, police officers in the control group were instructed to implement a traffic stop as usual. Their experimental field study indicated that perceptions of police were significantly higher among the drivers who experienced procedural justice practices. Using data from the Flemish Integration Survey 2008, Van Craen (2013) concurred with previous studies regarding the procedural justice model, showing that respondents who thought that police treat people in a procedurally unfair manner were less likely to express positive sentiments toward the police even after adjusting for factors from the performance model and social capital theory. This result is by Tyler's (2001) argument that individuals believe that a police officer must treat citizens in a fair manner and to value the rights of citizens. When police do not meet these expectations, citizens will develop negative perceptions of police. In other words, procedural justice has an impact on the evaluation of the police among ethnic minority groups.

The procedural justice model has also been tested with more specific population groups such as Muslim Americans and other ethnic minority groups (Sargeant et al., 2014; Tyler, Schulhofer, & Huq, 2010). In a study with a sample of Muslims in New York, Tyler et al. (2010) found that perceived procedural fairness was a key determinant of willingness to assist the police

by informing them about terrorist activities. Similarly, Sargeant et al. (2014) found that the assessment of procedural justice predicted trust in the police among Vietnamese and Indian descendant groups in Australia.

To explain why procedural justice matters in developing perceptions of police, Lind and Tyler (1988) proposed the group value model. The group value model suggests that people judge their standing as valued members of society by how authorities treat them. The premise of the group value model is that people want to be recognized by establishing and maintaining the long-term relationship with social groups, including the police institution (Tyler, 2011b). Since procedural justice sends messages of respect and value to the public (Murphy & Cherney, 2011; Tyler, 1990), people who experience a positive encounter tend to indicate a higher level of confidence (Bradford, Murphy, & Jackson, 2014).

Researchers have often used fairness of police decision making and quality of treatment as two constructs to measure procedural justice (Sunshine & Tyler, 2003a, 2003b; Tyler & Fagan, 2008; Tyler & Wakslak, 2004). Assessments of the quality of decision making involve neutrality that requires police officers to exercise their authority objectively based on facts and rules (Murphy & Cherney, 2011; Tyler & Fagan, 2008). The quality of decision making typically includes respect, dignity, and consideration of one's views (Tyler & Huo, 2002). For example, in their panel study, Tyler and Fagan (2008) asked respondents to indicate their global evaluations of police and judgments about their personal experiences with the police to capture different aspects of procedural justice. For both assessments, they operationalized procedural justice with two subscales: the justice of decision making and the justice of interpersonal treatment. Using these measures, Tyler and Fagan (2008) found that citizens' global evaluations of procedural justice were statistically significant predictors of public evaluations of police legitimacy.

Simultaneously, they performed regression analyses only with respondents who had personal experience with the police. Findings indicated that people who experienced procedural justice during face-to-face contact with police were more likely to show a higher level of perceived legitimacy.

**The Distributive Justice Model**

Unlike the procedural justice model that stresses the decision-making process, distributive justice concerns the fair distribution of police services across people and communities (Tyler & Wakslak, 2004). If an individual believes that the outcome from an encounter with the police is equivalent to others who are similarly situated, the distributive model then proposes that he or she will be more likely to accept the outcome. In short, people expect the police to provide the same quality of service regardless of group membership or status (Sarat, 1977).

Studies on distributive justice have provided empirical support for this model (Reisig et al., 2007; Sunshine & Tyler, 2003b; Tyler, 2005; Tyler & Wakslak, 2004). For instance, Tyler and Wakslak (2004) examined if distributive justice influences satisfaction with police officers and respondents' willingness to accept the decision. In this study, distributive justice was comprised of two constructs: the distributive fairness of outcome and objective favorability of outcome received from the police. There was no direct effect of perceived distributive justice on acceptance of the decision, but the increased level of perceived distributive justice was correlated with the extent to which people attributed being stopped by the police to various types of profiling. Using data from a nationwide telephone survey, Reisig et al. (2007) also found that respondents who perceived that police resources were equitably distributed across groups tended

to indicate a higher level of perceived police legitimacy and were more likely to cooperate with the police.

Despite its impact on perceptions of police, compliance and cooperation, the relative importance of distributive justice has been discounted (Tyler, 2003; Tyler & Huo, 2002). This is partly because the influence of distributive justice has been found to be insignificant or weak in predicting public cooperation with the police (Reisig & Lloyd, 2009; Tankebe, 2009). For example, using survey data from a sample of New Yorkers, Tyler (2005) reported that the perceived level of distributive justice influenced perceptions of police, but the perceived procedural justice held the most substantial influence. Tyler and Huo (2002) also discovered that the effect of distributive justice on perceptions of legal authorities and voluntary decision acceptance was considerably weaker than the impact of procedural justice on the same outcomes.

Researchers typically used several subscales to represent distributive justice. Tyler (2005) operationalized distributive justice with two subscales measuring distributive justice for individual respondents (i.e., "Do 'people like you' get the same quality of outcomes (better or worse) as others?") (p. 330). The other subscale was distributive justice for groups. This scale was designed to measure the extent to which respondents perceived that the members of seven groups (people living in your neighborhood, minorities in your neighborhood, Whites, African Americans, Hispanics, poor people and wealthy people) received equal or unequal outcomes from the police (7-item scale, $\alpha = .83$) (p. 330). Similarly, Sunshine and Tyler (2003a) employed a 5-item additive distributive fairness scale. Sunshine and Tyler (2003a) included items such as the following: (1) "How often do people receive the outcomes they deserve under the law when they deal with the police?", (2) "Are the outcomes that people receive from the police better than they deserve, worse than they deserve, or about what they deserve under the law?", (3) "How

often do the police give people in your neighborhood less help than they give others due to their race?", (4) "The police do not provide the same quality of service to people living in all areas of the city", and (5) "Minority residents of the city receive a lower quality of service from the NYPD than do whites" ($\alpha = .76$, p. 541). The use of the different subscales resulted in non-unified measures of distributive justice, leaving the question of whether different findings reflect different measurements of distributive justice.

Researchers have not used different measures of perceived distributive justice to test empirical validity of the relationship between distributive justice and perceptions of police (Reisig et al., 2007), and some researchers have used scales with fewer items (Engel, 2005, p. 454; Murphy, Hinds, & Fleming, 2008, p. 142; Tankebe, 2013, p. 116). Some measures focused on the perceptions of distribution of service across gender, race, and social class, while others focused on whether individuals receive their deserved outcome (Sunshine & Tyler, 2003a; Tyler, 2005). Taken together, it is crucial to consider perceptions of distributive justice in explaining perceptions of police, primarily because their evidence suggests there are significant differences in assessments of distributive justice between Black and White citizens (Engel, 2005).

## Media Consumption and Perception of Police

Most people do not often experience personal contact with police. National studies conducted for the Bureau of Justice Statistics have repeatedly shown that among U.S. residents who are 16 and older, the rate of personal contact with police remains approximately 20% (Durose, Smith, & Langan, 2007; Eith & Durose, 2011). Additionally, traffic-related contacts accounted for more than half of these. Given that 90% of citizens who had face-to-face contact with police perceived that the police acted appropriately (Eith & Durose, 2011), a lack of consideration of indirect experiences with the police is critical.

The media are effective agents that facilitate indirect experiences between police and citizens (Donovan & Klahm, 2015). According to the American Time Use Survey (2017), U.S. residents aged 15 years or over spent 2.7 hours per day watching television, and this accounted for more than half of leisure time. Using a content analysis with various crime shows (e.g., *The Mentalist*, *Criminal Minds*, and *NCIS*), Donovan and Klahm (2015) found that fictional police officials in these shows were often portrayed as effective and successful. Moreover, police use of force against offenders was shown to be proper because offenders were frequently noncompliant and hostile toward the police.

Concerning media coverage of crime, Graber (1980) made two critical observations. First, she discovered that crime and justice were particularly popular topics across different types of the media. For example, the proportion of crime and justice topics introduced in daily newspapers and local television stations took up more than 20% of the entire coverage. Another significant finding of her study was that the media were identified as the primary source of information about crimes for most Americans (see also, Tonry, 1999). Some researchers have argued that presentations of crime in the media can drive public demands for more punitive crime policies (Callanan, 2005; Garofalo, 1981; Kappeler & Potter, 2017; Rosenberger & Callanan, 2011). Surette (2014) underlined that the primary goal of the media is to maximize profits, and that media coverage of crime can take the attention away from the audience; this helps media companies to receive more advertising revenue. Thus, the media continuously produce sensationalized coverage and recycle crime news through multiple media channels and formats (Robinson, 2016; Surette, 2014). Considering a potential role of the media in constructing a symbolic reality, the potential power of the media concerning perceptions of police is worthy of investigation.

Regarding criminal justice policy, a pivotal role of media in shaping public perceptions has long been an interesting topic in relevant fields (Beckett & Sasson, 2004; Cohen, 2002; Fishman, 1978; Sacco, 1995). For instance, the moral panic tradition highlights the functioning of the media in amplifying or exaggerating antisocial behaviors, which, in turn, increases the public's fear of crime. This then leads to higher demand for punishment and social control (Cohen, 2002; Hall, Critcher, Jefferson, Clarke, & Roberts, 1978; Jewkes, 2010). Some researchers have criticized the media from several perspectives. According to Beckett (1994), the constructionist model suggests that public opinion is driven by "media and state claimsmaking" (p. 428). From this perspective, the politicization of crime issues does not occur just because the public becomes concerned with the increased number of crimes and drug use. The role of the media has also been the focus of cultural criminologists (Ferrell, 1999). This approach portrays that news media have particular interests in dehumanizing or delegitimizing particular social groups (Aiello, 2014). This approach also underlines the media's influence on how people think that it is justifiable for the police to bend the rules to secure a safe society and to apprehend criminals (Cavender & Deutsch, 2007).

Considering the accessibility of the media to the public and their constant coverage of crime and justice topics, the method in which the media present crime and portray police is of particular interest. There are a few predominant patterns of media representations (Barak, 1994; Britto, Hughes, Saltzman, & Stroh, 2007). Using content analysis, Britto et al. (2007) found that the majority of victims are White in "Law & Order: SVU" when actual victims in Manhattan were mainly minorities. Additionally, when minority victims were portrayed, photos were often used to describe minority victims instead of showing a person, which was argued as contributing to the depersonalization of minority victims. Black female victims were almost absent on

"SVU." Concerning police officers, Britto et al. (2007) discovered that detectives on "SVU" often violate civil rights (1.12 events per episode) to obtain confessions and con victims. In a similar vein, Barak (1994) stressed the importance of newsmaking criminology to overcome a lack of cultural diversity in the media. According to Barak (1994), "Blacks, Hispanics, and other 'minorities' such as Asians and Middle-Easterners are generally under-represented in the 'good news.'" (p. 10).

The media portray criminals as predators who cannot be redeemed, their crimes being results of selfish choices, victims as innocent young children, or White females (Hirschfield & Simon, 2010; Surette, 2014). One notable finding is that images of the police are not consistent in the media (Surette, 2014). Sometimes, the police are portrayed as courageous and self-giving heroes, and at other times, they are shown to be irredeemably corrupt and antagonistic to the public (Benekos & Merlo, 2006; Dirikx et al., 2012). This inconsistency makes it hard to predict the potential impact of constant exposure to the media on perceptions of police. Researchers have found that the portrayal of police using force was distorted in the media. For example, after analyzing 330 programs and 336 hours of fictional crime-related shows that aired for two weeks on primetime television, Mastro and Robinson (2000) discovered that police officers were shown to exercise more excessive force when interacting with young minority perpetrators in comparison to White counterparts.

Research on perceptions of police has consistently illuminated a substantial impact of personal experience with the police on one's sentiments toward them (Bradford et al., 2009; Mazerolle, Antrobus, et al., 2013; Tyler & Fagan, 2008). Some studies have shown that indirect experience with the police could be as relevant as face-to-face interaction with police officers (Augustyn, 2016; Dowler & Zawilski, 2007; Johnson et al., 2017; Miller & Davis, 2008;

Rosenbaum et al., 2005). For example, Dowler and Zawilski (2007) examined the impact of media consumption on attitudes toward police misconduct and discrimination. Drawing on the data derived from the 2000 Law and Media Survey, they conducted ordinary least squares and binomial logistic regression. Exposure to media was comprised of two measures: crime show and news consumption. They used three questions to measure crime show consumption. Specifically, they asked how often respondents watched various types of shows (e.g., *NYPD Blue* and *Law and Order*). The television news consumption was measured with questions asking respondents how often they watched four different news programs: (1) network newscasts such as *NBC Nightly News*, *CBS Evening News*, and *ABC World News Tonight*, (2) local newscasts hosted by anchors from one's local area, (3) *Newshour with Jim Lehrer* on PBS, (4) news magazine programs like *20/20*, *60 Minutes* or *Dateline*, and (5) all-news cable stations like CNN, MSNBC, or FoxNews (p. 196). The results showed that viewers who heavily consumed network news tended to believe that police misconduct often occurs. The influence of the consumption of network news was pronounced among non-White viewers as compared to White viewers. Heavy viewers of police dramas tended to believe that the police treat the wealthy favorably. Employing data from five New York City precincts, Miller and Davis (2008) empirically demonstrated that perceptions of police misconduct could be largely driven by media influences, race, neighborhood conditions, and police contacts; however, perceptions of police effectiveness/responsiveness were not so much associated with news consumption.

Emphasizing the media as a learning agent coincides with the vicarious victimization thesis that has emerged from studies regarding the fear of crime (Skogan & Maxfield, 1981). According to this perspective, people can be more fearful of crimes if they come to know crime stories from family members, friends, or the media (Covington & Taylor, 1991). Empirical

studies have offered mixed results concerning the impact of the media on perceptions of police. For instance, Dowler (2002) tested the influence of various media measures on respondents' attitudes toward police effectiveness. Drawing on the 1995 National Opinion Survey on Crime and Justice, he employed three media variables. First, respondents were asked if they viewed TV crime drama frequently. The second measure was operationalized with the number of hours watching TV per week. The last measure was the respondents' primary source of crime news. Statistical findings lent some support for the association between media consumption and negative perception of police. In particular, the relationship of television viewing and perception of police effectiveness was discovered among respondents with prior police contact. Respondents who heavily watched TV perceived police as less trustworthy.

Some researchers have found the opposite effect of crime-related media consumption, thereby supporting the relationship between media consumption and positive perceptions of police (Callanan & Rosenberger, 2011; Dirikx & Van den Bulck, 2014). Callanan and Rosenberger (2011) conducted a study to investigate if there is an influence of crime-related media consumption on individuals' perceptions of the police. Drawing on a state-wide survey of 4,245 California residents, they examined if three aspects of perceived police performance (police confidence, police fairness, and police use of excessive force) were rooted in crime-related media exposure. They considered various measures of media including crime drama, crime reality shows, newspapers, TV news, and the total number of hours exposed to all types of television. The results indicated that watching TV news and crime reality programs significantly enhanced confidence in the police. Similarly, Dirikx and Van den Bulck (2014) examined if exposure to crime shows influence respondents' intention to cooperate with police officers in their investigations of crime by using survey data from Flemish adolescents. They discovered

that there were indirect and direct pathways from crime show exposure to intention to assist the police. Interestingly, crime show exposure was positively correlated with procedural fairness, distributive fairness, and the performance of the police, which, in turn, influenced respondents' intentions to cooperate with the police. Therefore, the impact of the media consumption on the images of the police is far from conclusive (Cohen & Weimann, 2000; Dowler, 2002). Furthermore, most of these studies relied on cross-sectional data, which makes it hard to draw a causal relationship between variables (Shadish et al., 2002).

Recently, researchers have begun to conduct randomized experiments using video clips (Johnson et al., 2017; Lowrey et al., 2016; Maguire, Lowrey, & Johnson, 2017). For instance, Lowrey et al. (2016) randomly assigned different experimental conditions to participants using an online survey. The video clips involved the depiction of an interaction between a police officer and a driver during a traffic stop. They simulated mock traffic stops in which officers treat a driver differently. The police officer in the control condition did not attempt to practice any elements derived from procedural justice. On the other hand, the procedural justice condition concerns the police officer exercising his authority based on essential components of procedural justice, such as respect, neutrality, and voice. Their findings indicate that respondents exposed to the procedural justice condition were more likely to have more positive perceptions of police that were directed toward the officer presented in the video (i.e., obligation to obey, trust and confidence) in comparison to the control condition. Using similar methods, Maguire et al. (2017) compared the group exposed to negative encounter with a police officer to the group presented with the positive interaction with the police officer whose practices reflected critical components of procedural justice. They found that the relative effects of negative and positive interactions can differ depending on the types of outcome. The impacts of the negative condition on

perceptions of police were notably stronger than those of the positive condition when examining global evaluations of police, as compared to encounter-specific perceptions of police.

While these studies have addressed limitations that come from the survey design by ensuring the causality between the experimental condition and the outcome, their experimental conditions were limited to simulated videos based on a mock traffic stop. In other words, their focus was not on testing the influence of the media; instead, they intended to understand the impact of police interaction with citizens other than randomized field trials (Mazerolle et al., 2012; Sahin, 2014). In particular, while showing participants the filmed video footages from the viewpoint of a police-worn body camera can be used to substitute for direct experience with the police, the simulated interactions are far from what is often shown from the popular media. Thus, little is known about the effect of typical media coverage of the police on perceptions of police.

It is within this context that this study examines if media consumption has an impact, and if so, what pathways link media to perceptions of police (Hayes, 2013). Identifying intervening variables that are derived from earlier studies can ensure the causality of the potential relationship between the media and the perception (Bachman & Schutt, 2015). The following section presents theoretical frameworks proposed from different disciplines to explain possible influences from media on viewers' attitudes and assumptions.

**Akers' Social Learning Theory**

One significant contribution of Akers is clarifying the processes through which learning occurs (Rader & Haynes, 2011). While Akers's predecessor, Edwin H. Sutherland (1947), refuted the impact of media on criminal behavior, arguing that "impersonal agencies of communication, such as movies and newspaper, play a relatively unimportant part in the genesis of criminal behavior," (p. 6), which did not mean that he or his successors entirely excluded the

possibility of the influence of media on public perceptions. For instance, Sutherland, Cressey, and Luckenbill (1992) concurred with Fishman's (1978) notion of "crime wave," noting that "news consumers get the impression that the influence of the criminal whose crime was originally publicized is spreading" (p. 238).

The potential role of news media as social agents has been further elaborated by Akers (Akers, 1985; Akers & Sellers, 2009). While Akers and Sellers (2009) sympathized with Sutherland's emphasis on direct interaction over media, he commented that the influence of the mass media has become more important in recent years than during Sutherland's time due to technological and social advances. According to Akers and Sellers (2009), since people are exposed to the media more frequently and intensely as compared to the past, the media can override the influence of "less frequent, intense, and lasting primary group relations" (p. 76). The media can be a source of behavioral models that allow one to imitate particular actions. Additionally, the media can function as distant reference groups in reinforcing individuals' definition and behaviors vicariously.

From his conceptualization, Akers identified four essential constructs of social learning theory: differential association, definition, differential reinforcement, and imitation (Akers & Sellers, 2009). Akers retained principles of differential association and definition from Sutherland's social learning theory (Krohn, 1999). In particular, differential association refers to the exposure of a level of definition, favorable or unfavorable, to specific forms of behavior. Other mechanisms can be activated only when there is a differential association (Akers, 2009). Akers lists four conditions in which the impact of associations can be intensified: priority, duration, frequency, and intensity. According to this principle, individuals who were exposed to the media earlier are more likely to have attitudes that align with the portrayals presented in the

media. The media will exercise more power on people who spend more time consuming it. Lastly, individuals who place more value on the media are more likely to be influenced by the media (Akers & Sellers, 2009).

The second concept, definition, involves attitudes and orientations, favorable or unfavorable, to individual acts. Sutherland (1947) initially proposed that "the specific direction of motives, drives, rationalizations, and attitudes" can be learned, and that "the specific direction of motives and drives is learned from definitions of the legal code as favorable and unfavorable" (p. 6). Namely, exposure to others' definitions is a central process by which individuals acquire their own definitions. Akers' (2009) social learning theory proposes that the media can be a source for forming definitions. Definitions can be both general and specific. In the words of Akers and Sellers (2009), "general beliefs include religious, moral, and other conventional values and norms" on a broad level, whereas specific definitions are tied to "particular acts or series of acts" (p. 90). Applied to perceptions of police, people may feel that the police institution is legitimate and trustworthy, but at the same time, they may see some individual officers are unfair and disrespectful (Jackson & Gau, 2016).

The third component of social learning is differential reinforcement (Akers & Sellers, 2009). Differential reinforcement refers to "the balance of anticipated or actual rewards and punishments that follow or are consequences of behavior" (Akers & Sellers, 2009, p. 91). Rewards do not need to be tangible. For instance, individuals' general and specific definitions can be reinforced by obtaining approval from an imaginary person or group portrayed in the media, which Warr (2002) considered "virtual peer groups." Further, there are three types of modalities of reinforcement: "amount, frequency, and probability" (Akers & Sellers, 2009, p. 92). If the amount of reinforcement for particular definition is high, one's definition is likely to

be reinforced. The more frequently there are reinforcements, the stronger one's definition is. A high chance of rewards will also strengthen one's definition. Concerning the media, if an individual is frequently exposed to "virtual peer groups" who encourage particular attitudes, he or she is more likely to reinforce his or her definitions.

The last component of social learning, imitation, is perhaps the most often linked to the media. Individuals begin to engage in specific behaviors after observing other's actions. According to Akers and Sellers (2009), the likelihood of imitating another person's behavior depends on "the characteristics of the models, the behavior observed, and the observed consequences of the behavior" (p. 93). Various symbolic models can be shown to individuals through films, televisions, or news, which contain verbal and visual messages (Bandura, 1986, 2001). According to Kanz (2016):

> A person is likely to adopt behavior seen on TV or in a video game if his or her individual experiences and learned behavioral standards—which include attitudes towards violence—promise a positive outcome (reward) of the modeled behavior, especially if the latter is positively and constantly rewarded on screen (p. 151).

While Akers' social learning theory has been applied to various deviant behaviors, including police misconduct (Chappell & Piquero, 2004), digital piracy (Higgins, Fell, & Wilson, 2006), substance use (Lee, Akers, & Borg, 2004), and corporate crime (Piquero, Tibbetts, & Blankenship, 2005), not many researchers have employed social learning theory to account for the role of media in cultivating particular normative belief (Akers, 2009). Even when media consumption was considered in social learning theory, it was only used to explain behavioral patterns, not perceptions (Gentile, Li, Khoo, Prot, & Anderson, 2014; Kanz, 2016). Additionally, a majority of research on media effects has been conducted based on Bandura's

(1977) social learning theory, rather than Akers' social learning theory (Anderson, Gentile, & Dill, 2012; Bushman & Huesmann, 2012).

For example, Kanz's (2016) study is one of a few studies that utilized Akers' social learning theory to explain the learning mechanism by which the media work. Specifically, she hypothesized that male juveniles exposed to violent games and films would indicate more violence-approving normative beliefs than their counterparts. The increased violence-approving normative beliefs are assumed to influence the likelihood of aggressive behavior. Her findings showed that violent media consumption results in more violent delinquency through increased violence-approving normative beliefs.

While only a handful of studies have explored media effects on perceptions from social learning theory (Akers, 2009; Rader & Haynes, 2011), it is conceivable that particular perceptions can be translated as one form of "definition," and if so, social learning theory can be an adequate systematic theory to explain variation in perceptions of police. A few studies have been conducted applying Akers' social learning theory to individuals' perceptions (Akers, 2009; Akers, La Greca, Sellers, & Cochran, 1987; Rader & Haynes, 2011). For example, Rader and Haynes (2011) elaborated how the gendered fear of crime can be developed applying the principles derived from Akers' social learning theory. Akers et al. (1987) tested the influence of community setting on fear of crime assuming that the community contexts serve as a proxy of social learning in which fear of crime can be studied and spread. Specifically, the four different communities were analyzed based on the level of homogeneity of age groups and the level of concentration of the elderly within the community. The results indicate then when comparing two age-heterogeneous communities, the elderly from the community with a greater concentration of elderly tended to express a lower level of fear of crime. Akers et al. (1987) cited

Gubrium (1974) to argue that age-homogeneous community settings are easier environments for the elderly to make close social ties to neighbors in the community.

More direct use of Akers' social learning theory in understanding perceptions of crime can be found in Akers' work. Akers (2009) argued that if "fear of crime could be conceptualized as one type of 'definition' or attitude, then theoretically it should be learned in the same way that definitions favorable or unfavorable to committing crime are learned" (pp. 308-309). To test the applicability of social learning theory, he specifically hypothesized that fear of crime could differ depending on the level of exposure to "'fearful' crime definitions in their primary and secondary groups and from the media" (p. 320). In his statistical analysis, he included three scales to tap into the differential association, which were labeled as "Primary" (i.e., spouses, family members, best friends), "Secondary" (i.e., co-workers, fellow member of organizations, and neighbors), and "Media" (i.e., newspaper and television reports). The findings indicate that fear of crime could be acquired through association with individual's primary group who are fearful of crimes. Interestingly, he also found exposure to the crime through the media also exerts a significant impact on judgments of risk and worry. Akers stated that "crime coverage in the media can encourage some kinds of fear of crime" (p. 315). Despite their essential implication on how to interpret the impact of media within the context of social learning theory, studies have failed to corroborate Akers' findings and arguments.

Recent studies, however, show some promise in incorporating Akers' social learning theory to explain perceptions of police (Lim, 2015). While Bandura's (1977) social learning theory differs from Akers' social learning theory, they share the similar unarticulated positions regarding human nature (Paternoster & Bachman, 2001). That is, humans can learn something by being exposed to external stimuli. Thus, the previous study that used Bandura's (1977) social

learning model is worthy of attention. Building on Bandura's (1977) observational learning model, Lim (2015) tested three observational models of social learning on two dependent variables. The first dependent variable was trust in the police, and the second dependent variable was named "biased policing" (p. 680). Among three observational models (the live model, the verbal model, and the symbolic model) proposed by Bandura (1977), the symbolic model is particularly relevant regarding understanding the role of the media in shaping perceptions of police. The symbolic model is founded on the assumption that individuals can develop perceptions by being exposed to "either a real or fictional character demonstrating the behavior via movies, books, television, radio, online media, or other media sources" (p. 678). The symbolic model was represented with three items regarding the frequency in which students hear or read about police use of force, racial profiling, and corruption. Supporting the symbolic model, Lim (2015) found that the exposure to negative information about the police lowered the students' trust in the police.

Some researchers have employed the vicarious experience perspective to argue that stories that people hear or read about police officers from friends, family, acquaintances, and the media shape the public's perception (Brunson, 2007; Hohl et al., 2010; Rosenbaum et al., 2005; Weitzer, 2002; Weitzer & Tuch, 2005).[1] Using the North Carolina Highway Traffic Study, Warren (2011) found that people who heard about others' negative or disrespectful interactions with police were more likely to perceive a sense of disrespect during their interactions with the police. Consistent with this finding, Brunson's (2007) provided further evidence. His findings showed that negative perceptions of police among Blacks could be attributed to negative vicarious experiences. Many young Black respondents in urban settings (37 out of 40) reported

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[1] Unmentioned articles that are referenced are discussed in other sections when more applicable.

that they knew acquaintances who were harassed or mistreated by the police. Additionally, Weitzer (2002) examined if reports of celebrated police misconduct impacted subsequent perceptions of police misconduct. Using poll data from the *Los Angeles Times* and the *New York Times*, he tracked overall trends in citizens' perceptions of police. He compared citizens' attitudes toward the police before and after major incidents involving police misconduct. He discovered that there were substantial reductions in satisfaction with police performance after each incident. Although named differently, the vicarious experience perspective illustrated these studies is in line with Akers' social learning theory. Evidence from this body of research lends support for the applicability of Akers' social learning theory in understanding perceptions of police.

Vicarious experience perspective and legitimacy perspective share one fundamental assumption regarding human perceptions. That is, human beings develop values and morals based on our direct or indirect experience which is in keeping with Akers' social learning theory. One of the most influential researchers about legitimacy research, Tyler (2011a), stated that:

> From a legitimacy perspective, every encounter that the public has with the police, the courts and the law should be treated as a *socializing experience* [emphasis added], that builds or undermines legitimacy. Each contact is a '*teachable moment*' [emphasis added], in which people learn about the law and legal authorities. To understand the consequences of personal experiences for views about policies legitimacy, it is important to consider what it is about their own personal experiences that the public considers when reacting to encounters with a police officer. (p. 257)

According to this approach, all possible communication between the police and the public are socializing experiences for perceptions of police (Engel, 2005; Tyler & Fagan, 2008).

Of course, the source of learning goes beyond direct interactions such as victimization and police encounters (Hohl et al., 2010). In recent years, some researchers have expanded the existing literature by considering the effect of subcultural involvement on perceptions of police, although they did not explicitly rely on Akers's social learning model (Brick, Taylor, & Esbensen, 2009; Leiber, Nalla, & Farnworth, 1998; Wu, Lake, & Cao, 2015). This line of research has demonstrated that juveniles' delinquent attitudes and behaviors can be linked to their perceptions of the police. Previously, Leiber et al. (1998) found that juveniles' level of deviant subculture, which were measured with attitudinal (i.e., tolerance for delinquent behaviors) and behavioral scales (i.e., the number of self-reported delinquency), were significantly related to the level of respect that juveniles had for police, perceived police fairness, and police discrimination respectively. Given that subcultural theories and Akers' social learning theory shares the assumption that socialization shapes human behaviors and values, the findings from Leiber et al. (1998) can be reconceptualized in Akers' terms.

Additionally, in their study on the effect of juvenile delinquency involvement on perceptions of police, Wu et al. (2015) found that juveniles who had been arrested and who had engaged in at least one serious violent offense were more likely to indicate less favorable perceptions of the police. Similarly, using the data gathered from the National Evaluation of the Teens, Crime, and the Community/Community Works program, (Brick et al., 2009) discovered that junior high students who were more committed toward delinquent peers were more likely to have negative perceptions of police. Pro-delinquent attitudes also contributed to negative perceptions of police. These findings suggest that Akers' social learning theory can serve as a theoretical foundation, explaining factors that influence perceptions of police.

Many theory reviews and textbooks have pointed out that social learning theory suffers from tautological issues (Bernard, Snipes, & Gerould, 2010; Cao, 2004; Cullen, Agnew, & Wilcox, 2014; Gottfredson & Hirschi, 1990; Kubrin, Stucky, & Krohn, 2009; Tibbetts, 2005). This criticism essentially argues that the high correlation between criminal behaviors and the number of delinquent friends is a byproduct of measuring the same concept. As the old saying goes, "birds of a feather flock together." This argument can be equally applied to potential media effects. In other words, people who have particular tendencies or predispositions are more likely to watch or read specific content in the media selectively. The causality of media effects has been raised about individuals' propensities (Donahue & Miller, 2006; Dowler, 2002; O'Keefe & Reid-Nash, 1987), but virtually no studies to date have specifically addressed this issue.

Just because social homogeneity serves as a confounding variable in the relationship between the number of delinquent friends and criminal behaviors, it does not mean that there is no independent impact of differential association with delinquent friends (Akers, 1999, 2009; Krohn & Thornberry, 2008; Warr, 2002). Thornberry, Krohn, Lizotte, and Chard-Wierschem (1993) have sought to examine three different mechanisms through which crime occurs regarding gang membership. The first mechanism is the selection model. This model emphasizes youths' predispositions in committing a crime and joining gangs. If there is no significant difference in involvement in crimes before, during, and after gang participation, this provides evidence for the selection model. In other words, joining a gang did not change individuals' behaviors, but it was the individuals' tendencies that led them to commit crimes. The second mechanism, the facilitation model, underlines the impact of gang participation. The support for the facilitation effect can be evidenced by the increased number of offenses during gang

membership as compared to the time periods before and after gang membership. Lastly, the enhancement model stresses both the selection and facilitation effects.

**Cultivation Theory**

Although Akers' social learning theory can be a guiding theory to explain media effects, cultivation theory, the most often cited communication theory regarding media effects on audience perceptions, is also essential. Cultivation theory posits that the media have substantial impact on public attitudes (Gerbner & Gross, 1976). According to this theory, individuals who are exposed to the media tend to have perceptions consistent with images presented in the media (Custers & Van den Bulck, 2011; Gerbner et al., 1980; Gerbner, Gross, Signorielli, Morgan, & Jackson-Beeck, 1979; Morgan & Shanahan, 2010).

In particular, Gerbner et al. (1979) paid attention to portrayals of crime and violence in the media. Since the media are flooded with sensationalized crime news, the more that individuals are exposed to the media, the more likely it is that they are fearful and insecure about their safety (Gerbner et al., 2002; Gerbner et al., 1979; Roche et al., 2016). Researchers have found that people's views of crime issues are closely aligned with the media's representation of reality (Boda & Szabó, 2011; Choi, Han, & Lee, 2014; Sheley & Ashkins, 1981).

For example, Sheley and Ashkins (1981) found that there were big gaps in crime trends between police statistics and media presentations. While public perceptions of crime trends indicated little agreement with official figures from the police, the public's view of the relative frequency of various crime incidents indicated high agreement with the image presented by the newspaper. This finding was also backed up by Choi et al.'s (2014) statistical results. Using the data from 2010 Korean National Victimization Survey, Choi et al. (2014) discovered that individuals who spent more time watching TV were more likely to be afraid of crime. It was

reasoned that the media often portrays exaggerated depictions of crimes in the world, and the audience develops unrealistic concerns about crime. While highlighting the influence of the media, Gerbner coined the term "mean-world view" (Gerbner et al., 1977; Gerbner et al., 1980). According to this proposition, individuals' views are shaped by the media according to the increase in media exposure.

Qualitative research has supported the relationship between the media and audience's perception regarding the criminal justice. Conducting focus group interviews with Hungarian students, Boda and Szabó (2011) found that individuals had perceptions of crime and the criminal justice system that were consistent with the media representations. What is interesting from this study is that even when focus group participants denied the potential influence of the media on their perceptions, their understanding about crime and the criminal justice bore a resemblance to the image portrayed in the media. Focus group participants tended to overestimate the influence of the media on other people's perceptions while underestimating the power of the media on themselves.

Over time, researchers have challenged and modified Gerbner's original propositions. First, early critics of cultivation theory argued that the omission of control variables in Gerbner's statistical models resulted in an overestimation of cultivation effects (Hawkins & Pingree, 1981; Hirsch, 1980, 1981; Hughes, 1980). Hirsch (1980) and Hughes (1980) reanalyzed the General Social Survey data that Gerbner et al. (1978) used to support cultivation theory. Using multivariate analysis, Hirsch (1980) found that when holding multiple control variables (i.e., education, race, sex, and employment status) constant, the relationship between media usage and fear of crime became either weak or insignificant. Gerbner et al. (1980), however, discovered that even with multiple controls, the subsets of respondents still showed a significant relationship

between media usage and attitudes toward crime. These subsets were constructed according to the level of income and race. For example, Gerbner et al. (1980) found that Whites were significantly influenced by the media regarding fear of crime in comparison to Blacks. From this observation, Gerbner et al. (1980) refined his original cultivation theory, which resulted in the mainstreaming hypothesis.

The mainstreaming hypothesis stresses that cultivation is not a same phenomenon across individuals. Gerbner et al. (1980) argued that it is critical to consider relative positions of groups in which individuals are situated in light of the mainstream group. For instance, Gerbner et al. (1980) found that people who have lower income are more likely than those who have higher incomes to indicate a higher fear of crime. Interestingly, infrequent television viewers with higher incomes indicated substantially different perceptions about fear of crime than those with low-income. Frequent television viewers with higher incomes, however, reported a similar level of fear of crime as those with low-income; this is in line with Gerbner and Gross's (1976) earlier position that "television is cultivating the common consciousness of the most far-flung and heterogeneous mass publics in history" (p. 174). According to Gerbner et al. (1980), people who are White or with moderate to high income are more likely to be influenced by the media because their personal experiences in the world are substantially different from what they see in the media, which leaves a higher chance of changes in perceptions. Put simply, Gerbner et al. (1980) contended that the position of an individual relative to the mainstream culture can determine the effect of the media.

From the discovery of differential effects of the media, Gerbner et al. (1980) also conjectured the resonance hypothesis. According to this hypothesis, people who have had victimization experiences or are exposed to a higher chance to be victimized are susceptible to

influence from media in comparison to those who do not because they are reminded of their victimization experiences or their chance to be victimized (Chiricos et al., 2000; Choi et al., 2014; Morgan, 2011; Shrum & Bischak, 2001). The early proposition by Gerbner et al. (1980) highlighted audiences' surrounding environments. Namely, people who live in high crime rate areas are prone to high levels of media influence because messages from the media resonate with their experiences, and this increases the cultivation effect (Gerbner et al., 1980). Gerbner et al. (1980) explained that when television messages are "congruent with everyday reality (or even perceived reality), the combination may result in a…powerful 'double dose' of the television message" (p. 15). According to this position, those who are non-victims are less prone to display a high impact of media regarding producing a higher fear of crime (Chiricos et al., 1997).

The second significant modification of cultivation theory sheds light on other factors concerning exposure to media. While most cultivation studies have solely focused on the amount of media usage, some researchers began to recognize the importance of how people perceive media messages (O'Keefe & Reid-Nash, 1987; Potter & Chang, 1990; Weitzer & Kubrin, 2004). For instance, Potter and Chang (1990) employed different measures to operationalize television exposure. More specifically, they gauged television exposure not just regarding total amount of time individuals spent watching time, but also regarding types of the program they were exposed and relative dominance of exposure to each program type. They also employed the weighted proportion measure created by multiplying the total hours viewed weekly by proportional exposure to each of the program types. They found that exposure to types of viewing predicted audiences' belief toward the world even after controlling for total viewing. Additionally, their finding reveals that the proportional measure (i.e., relative dominance of exposure to each

program type) was superior to total television viewing in explaining the variance in cultivation measures.

In a similar vein, in their panel study, O'Keefe and Reid-Nash (1987) included a crime news attention scale in their statistical models in addition to the amount of television watched and the frequency of viewing crime-related shows. Their findings revealed that the level of attention respondents paid to news media about crime was associated with the subsequent concern about being victimized. By contrast, they found that overall television exposure did not have any influence on respondents' fear of crime. In other words, it was not the amount of television exposure, but the level of the audience's attention that influenced their perceptions. Akers also emphasized the quality of differential association (e.g., the level of intimacy between individual and people that individual associates with) in the learning process rather than simply focusing on the quantitative aspect of learning (e.g., the amount of time we spend with our friends). Particularly, consideration about how much value individuals assign to the media corresponds with Akers' conceptualization about differential reinforcement in social learning theory (Akers, 2009). Akers proposed that the amount of reinforcement is critical in motivating individuals to repeat certain beliefs or behaviors Burgess and Akers (1966). If individuals do not assign any value to the information that they are given through the media, the messages that the media convey will be weakened.

Within the context of cultivation theory, the "CSI effect" has been proposed (Hawkins & Scherr, 2017; Hayes-Smith & Levett, 2011; Maeder & Corbett, 2015; Podlas, 2005; Tyler, 2006b). Proponents of this approach contend that viewing crime dramas such as the *CSI* series can influence juror decision-making by developing unrealistic expectations about the ability of criminal justice institutions (Schweitzer & Saks, 2007). Despite the popularity of the term,

empirical research on the CSI effect is still scarce (Hawkins & Scherr, 2017; Kim, Barak, & Shelton, 2009; Tyler, 2006b). That being said, researchers have reported that watching crime dramas can influence hypothetical jurors' decision-making in a similar way that pretrial publicity affects juror judgments about certain defendants (Hawkins & Scherr, 2017; Schweitzer & Saks, 2007). For example, Hayes-Smith and Levett (2011) conducted an experimental study, using a trial vignette. They found that as the number of daily hours watching television increased, the odds of a guilty verdict reduced by 64% and by 70% depending on the strength of the forensic evidence condition. The noteworthy point of the CSI effect lies in insights that the messages from the media do not work simplistically. For instance, one could assume that efficient functioning of criminal justice institutions portrayed in the media can positively shape perceptions of criminal justice intuitions; however, the CSI effect implies that this perception may return with disappointment due to the discrepancy between how justice institutions operate and how the media present them (Boda & Szabó, 2011; Tyler, 2006b).

The findings stated above can be applied to explain the relationship between the media and perceptions of police. According to cultivation theory, media representation of the police can foster the public's views about the police positively, negatively, and not at all. First, the direction of this relationship can be positive. If individuals frequently watch shows that illuminate effective crime-fighting of the police (Eschholz, Mallard, & Flynn, 2004; Soulliere, 2003), they may build positive sentiments toward the police. Crime-related media can also promote positive perceptions of police by allowing the audience to recognize the necessity of the police institution. Gerbner et al. (1979) noted that:

It is just as important to look at the large majority of people who become more fearful, insecure, and dependent on the authority; and who may grow up *demanding protection* and even *welcoming repression in the name of security* [emphasis added] (p.196).

If Gerbner et al.'s (1979) argument is valid, saturated violence in the media will not necessarily diminish perceptions of police; however, as the CSI effect alludes, it is also conceivable that the audience may form high expectations of the police that can quickly lead to disappointment. The negative direction of the relationship can also be inferred from a different perspective. The media frequently report police corruption or misconduct involving racist behaviors. If individuals are exposed to such images, they may think that police officers are not trustworthy (Dowler, 2002; Edwards, 1999; Graber, 1980). Nonetheless, earlier studies did not differentiate media effects depending on different media content (Gerbner et al., 1977; Gerbner et al., 1980).

Regardless, messages from the media are usually conflicting and complicated, so a lack of influence on the perceptions of police may be due to the different directions of effects that may cancel out their power (Mazerolle, 2003; Tyler, 2006b). In the review of the CSI effect, Tyler (2006b) proposed several hypotheses regarding the influence of media that counter-intuition regarding the CSI effect. Tyler noted that the CSI effect can lower the standards for jurors in making verdicts instead of raising them. When jurors perceive their criminal cases as "an uncorrected injustice" (p. 1063), they may want to convict the suspect to relieve their psychological tension. Jurors may also be motivated to use scientific evidence to legitimize their preconceived conviction. Since the CSI effect places a great emphasis on scientific evidence despite their lack of a scientific warrant, juries may develop an inflated trust on the evidence presented in trials.

Tyler (2006b) also contended that jurors who often watch fictional programs, like *CSI*, may want to feel reassured that justice is done to criminals in the real world as in the world of CSI where most wrongdoers are punished, and justice is done. Lastly, Tyler poses another possibility regarding why the CSI effect can lower the standards for conviction of jurors. Since dramas like *CSI* do not show whether suspects are found guilty in court, viewers may overlook the salience of the judicial process; this can lead jurors to side with the prosecutor who represents the state's authority, consequently compromising due process rights.

Despite the limited number of studies that have been conducted to assess media effects, results regarding cultivation effects have been inconsistent (Dirikx et al., 2013; Dirikx & Van den Bulck, 2014; Donahue & Miller, 2006; Rosenbaum et al., 2005; Weitzer, 2002; Weitzer & Tuch, 2005). Considering the inconclusive direction of media effects on perceptions of police, more attention should be given to cultivation effects (Callanan & Rosenberger, 2011; Dowler, 2002, 2003).

**Differential Reception Thesis**

Differential reception thesis is an umbrella term that encompasses all of these potential differences in media effects between individuals and groups (Roche et al., 2016). Jensen (1986) used the notion of "cultural communities" to argue that distinct patterns of media usage may mark different social groups. In a similar vein, Berkowitz and TerKeurst (1999) used the term "interpretive community" to define groups that share norms and ideologies, thereby making sense of media messages in similar fashions. On the other hand, Chiricos et al. (1997) underscored individuals' differences in interpreting media messages depending on their personal experiences, beliefs, or even circumstances, dubbing individual differences as "audience effects."

Many audience characteristics have been considered, including race, gender, age, and victimization experiences (Callanan & Rosenberger, 2015; Roche et al., 2016; Rosenberger & Callanan, 2011). Most prior studies on the differential reception thesis have centered on predicting fear of crime (Callanan, 2012; Chiricos et al., 1997; Chiricos et al., 2000; Eschholz et al., 2003; Lane & Meeker, 2003). A great deal of research on cultivation effect on fear of crime has provided evidence for the differential reception thesis (Lane & Meeker, 2003; Weitzer & Kubrin, 2004).

For instance, in their influential study, Weitzer and Kubrin (2004) found that fear of crime among Whites was influenced not by the media but instead by their perceived risk of violent criminal victimization. Blacks, on the other hand, were affected by local television news and real-world conditions, property crime victimization, and perceived risk of street drugs to themselves and family members. They also found that when the sample was disaggregated by neighborhood violent crime level, residents of communities with high violent rates were especially likely to be affected, in their fear of crime, by local television newscasts. By contrast, local television news exposure did not increase fear for residents of low violent crime communities.

Similarly, Doob and Macdonald (1979) discovered that crime rates within a neighborhood could be a confounding variable in explaining the influence of media on people's perceptions. Based on the respective data from four areas—a high-crime city, a low-crime city, a high-crime suburb, and a low-crime suburb—they found that social contexts of the audience matter regarding cultivation effect. Moreover, Liska and Baccaglini (1990) contributed to understanding media effects concerning gender, race, and age. They found that follow-up crime news in one's city had a stronger impact on females, Whites, and the elderly as compared to their

respective counterparts. Chiricos et al. (1997) further specified subgroups by considering race, gender, "age, victim experience, perceived safety, income, and neighborhood racial composition" (p. 351). They found that among 48 subsamples, White females experienced the most significant influence by TV news consumption. Unlike Liska and Baccaglini's (1990) findings, Chiricos et al. (1997) found that the significant impact of the media on fear of crime among White females was located within the middle age group, not the oldest age category. In short, research supports that media effects on fear of crime differ depending on audience characteristics.

Some researchers have sought to examine audience characteristics when exploring the relationship between media coverage and perceptions of police (Dowler, 2002; Dowler & Zawilski, 2007; Eschholz et al., 2002; Weitzer, 2002).[2] In this regard, race has been the most frequently utilized variable to test interaction effects with media consumption. For instance, in his study on impacts of highly publicized incidents on perceptions of police, Weitzer (2002) discovered that significant incidents involving police misconduct eroded confidence in the police across different races. Whites, however, maintained a higher level of approval of the police as compared to Blacks and Hispanics. Dowler and Zawilski (2007) also examined the impact of media consumption on attitudes toward police misconduct and discrimination. They found that the use of network newscasts had different effects on respondents' attitudes toward police depending on their race. Non-White audiences of network newscasts were much more likely to perceive a high level of police misconduct as compared to their White counterparts.

Race is a critical factor in linking the influence of the media to perceptions of police. According to the differential reception thesis, it has been argued that non-Whites may react to the

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[2] Unmentioned articles that are referenced here are discussed more completely in other sections when applicable.

media differently from Whites because of distinct experiences in their everyday lives (Chiricos et al., 2000; Roche et al., 2016). Researchers have consistently reported that minorities indicate a lower level of trust in the police (Brown & Benedict, 2002; Cho, Choi, & Kim, 2015; Correia, Reisig, & Lovrich, 1996; Flanagan & Vaughn, 1996; Wu, 2014; Wu et al., 2015). To explain this phenomenon, researchers have put forth three explanations for racial differences in attitudes toward the police: (1) group position theory, (2) a strain approach, and (3) an explanation based on the overlap between class and race. Some researchers have relied on Blumer's (1958) group position theory. According to this theory, there is a stratified hierarchy between groups based on race. The dominant group members try to suppress subordinate groups to maintain their privileges (Cao, 2011; Cho et al., 2015). As such, racial minorities may feel like they are blocked from equal opportunities to be successful. Other researchers have argued that race is a strain variable that is associated with negative experiences such as explicit or subtle racial discrimination (Gabbidon, 2015; Unnever, Cullen, Mathers, McClure, & Allison, 2009). Alternatively, some researchers have opined that racial issues in the United States are confounded with social class issues (Wilson, 1978, 2016). According to this perspective, negative perceptions of police can be explained by socio-economic status.

All three reasons can be linked to the potential influence of the media. If racial minorities indicate a lower level of perceptions of police for the reasons above, their reactions to the media may vary regarding sensitivity. Racial minorities may be more sensitive or insensitive to what is shown in the media. For example, if non-Whites are well aware of police brutality or racial profiling from their firsthand experience, their perceptions will not change significantly even after they are exposed to the media coverage of those topics. On the other hand, they may be more susceptible to the media since they may be reminded of their experiences.

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The second reason for negative views toward police among ethnic minorities can be accounted for by media reports of crimes (Callanan & Rosenberger, 2011; Chiricos & Eschholz, 2002; Dowler & Zawilski, 2007; Eschholz et al., 2004; Kochel, 2017; Mastro & Robinson, 2000; Walker, Spohn, & DeLone, 2012). Research has presented different explanations for negative views of ethnic minorities toward police. Assuming that publicized crime news cultivates our understanding of crimes, Walker et al. (2012) argued that offenders in the news are typically portrayed as African Americans or Hispanics. Furthermore, the media account of police misconduct is likely to center on police discrimination against non-Whites (Dowler & Zawilski, 2007).

Some researchers have attempted to empirically test differential effects of the media depending on race. Using the data from a panel survey from St Louis County in Missouri, Kochel (2017) examined whether there was a significant decline in perceptions of police after the police used lethal force on Michael Brown. While non-Blacks' views of the police remained relatively stable, the Black community, which Michael Brown belonged to, experienced a substantial decrease in police legitimacy and trust in the police. This study shows that even if the same media content is presented, individuals with different races interpret this information differently.

Chiricos and Eschholz (2002) empirically examined several dominant presumptions about media representation regarding crime. First, they assessed if crimes in the media are mainly portrayed as "a Black phenomenon" (p. 402). Then, they questioned if Blacks are mainly depicted as criminals in media. Lastly, they answered if Blacks and Hispanics are portrayed in more threatening ways than their White counterparts. Using the data from local television news in Orlando, Florida, they conducted a content analysis and compared the media representation of

minority criminals with racial and ethnic characteristics of official figures. Interestingly, their results showed that Blacks were not overly represented in TV news crime suspects as compared to Whites. Additionally, the representation of Black suspects was proportionate to their general population ratio. In fact, Blacks were underrepresented in crime news considering the racial proportion of suspects arrested for crimes in Orlando. Instead, it was Whites who were overrepresented in TV news as criminal suspects. The way Black criminal suspects were portrayed in TV news was more negative than the way Whites were depicted. Black criminal suspects were more frequently portrayed in menacing ways. Blacks were also more often typified as criminal suspects on television news relative to Whites. Put simply, among the many roles Blacks assumed on TV news programs; they showed a high frequency of appearing as criminal suspects rather than reporters or anchors. In sum, this study lends general support to the assumption that the portrayal of TV news contributes to fostering negative images of minorities.

Another audience characteristic that has often been studied is gender (Choi, Yim, & Lee, 2015; Eschholz et al., 2003; Pickett et al., 2015). While gender has been treated as a control variable in research on attitudes toward the police, it may play more complicated roles concerning cultivation effects (Lane & Meeker, 2003). With respect to fear of crime, earlier studies found that females indicate a higher level of fear of crime despite their lower risk of actual victimization as compared to males (Choi et al., 2015; Custers & Van den Bulck, 2013; Ferraro, 1996; Schafer, Huebner, & Bynum, 2006; Warr, 1984). The cultivation effect on females often has been stronger relative to cultivation effects on males although this finding is not conclusive (Chiricos et al., 1997; Chiricos et al., 2000; Eschholz et al., 2003; Gerbner et al., 1977; Gerbner et al., 1980; Heath & Petraitis, 1987). For instance, when partitioning subsamples according to audience traits, females who perceived that they lived in neighborhoods with high

Black populations were significantly influenced by television consumption across diverse program types (i.e., local TV news, tabloid news, reality shows, and crime dramas). For equivalent male respondents, only a few television impacts on fear were discovered (i.e., local TV news and reality shows).

In an earlier study, Skogan and Maxfield (1981) argued that women can be more sensitive to media coverage of crime since they feel vulnerable to victimization. Applied to perceptions of police, sensationalized media accounts can increase fear of crime, which in turn influence sentiments toward the police. Aligned with the differential reception thesis, females may react to the media differently than males do (Chiricos et al., 1997; Roche et al., 2016). For example, females who are exposed to the media frequently may feel more dependent on the police because they think that dangerous and random crimes surround them, in comparison to their male counterparts. This explanation can be consistent with system justification theory proposed in social psychology (Jost et al., 2004). As previously mentioned, it is also possible that females express more disappointment in the police when they experience high fear of crime and perceive more risk of victimization. This hypothesis resonates with the instrumental model (Jackson & Sunshine, 2007).

Previous studies have produced inconsistent results regarding gender and perceptions of police unlike the influence of race (Cao et al., 1996; Correia et al., 1996; Sampson & Bartusch, 1998). Some research indicated that males held more favorable attitudes toward the police compared to females (e.g., Lai & Zhao, 2010), whereas other studies produced evidence for the opposite effect of gender (e.g., Tankebe, 2010). These different outcomes imply that the differential reception thesis does not provide a certain direction of the interaction between the

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media and gender. It calls for further investigation of the moderating role of gender with the media in predicting perceptions of police by using a more rigorous experimental design.

Other aspects of viewers' characteristics that might be important could be victimization- and police-related experieces. Several sub-hypotheses proposed within the context of cultivation theory are particularly relevant (Chiricos et al., 1997; Eschholz et al., 2003; Roche et al., 2016). As noted earlier, the resonance hypothesis predicts that when media accounts resonate with individual's life experiences, the cultivation effect is stronger (Gerbner et al., 1980). For example, people who have had victimization experiences will recall their painful memories when watching crime-related media (Chiricos et al., 2000; Doob & Macdonald, 1979; Weitzer & Kubrin, 2004). The substitution hypothesis poses the opposite proposition from the resonance hypothesis (Gunter, 1987; Weaver & Wakshlag, 1986). For instance, Weaver and Wakshlag (1986) found that television consumption increased perceptions of vulnerability to crime among audiences who lacked victimization experience. Regarding women's high fear of crime relative to their actual victimization risk, Gunter (1987) argued that this paradox occurs because predominant crimes in the media substitute their actual crime risks.

Regarding perceptions of police, researchers have reported that victimization experience has a significant influence on confidence in the police (Cao et al., 1996; Ivković, 2008; Payne & Gainey, 2007; Smith & Hawkins, 1973). These findings echo the instrumental model that stresses the role of the police in fighting and preventing crime (Van Craen, 2013). Victims may have been let down by the performance of the police because they failed to protect them. (Sun et al., 2014).

If the resonance hypothesis applies to perceptions of police, there are three possibilities. First, victims may express more dissatisfaction with the police when they are exposed to media

coverage of crime issues because they are reminded of their victimization experiences, which are associated with poor police performance. Second, increased fear of crime from the media may lead victims to count on police officers more than non-victims. Lastly, two contradicting effects may work simultaneously, which counterbalances the cultivation effect. If so, the moderation effect of victimization will disappear.

Following the substitution hypothesis, one can predict that non-victims may be more influenced by media accounts of crime (Eschholz et al., 2003). The direction of the cultivation effect from the substitution hypothesis is not certain as is the case in the resonance hypothesis. There are three possible scenarios. First, if perceived risk of victimization significantly increases only among non-victims as they are exposed to the media, this can negatively affect the audiences' perceptions of the police. They may blame the police for their ineffective crime control; however, non-victims who become more fearful of crime because of the media influence may feel more reliant on formal control to correct a chaotic state of the society (Gerbner et al., 1979). Lastly, if the two different effects co-occur, there will be no moderating effects of victimization.

As discussed, the importance of police-related factors in shaping perceptions of the police cannot be overlooked (Skogan, 2005; Tyler, 1990, 2005; Tyler & Huo, 2002). The majority of citizens have no firsthand experience with police officers (Skogan, 2005, 2006b). Even when citizens interact with the police, most encounters involve very brief contact concerning general administrative services (Hohl et al., 2010; Skogan, 2005). Nonetheless, encounters with police are important factors regarding the cultivation effect considering the strong impact of encounters (Mazerolle, Antrobus, et al., 2013; Sahin, 2014; Skogan, 2006b). If the influence of encounters

with police is so substantial that it takes precedence over media effects on perceptions of police, the cultivation effect will be trivial.

In policing literature, researchers have often categorized public encounters with police into four types based on who initiated interaction and the quality of encounter (Bradford, 2011; Reisig & Parks, 2000; Skogan, 2006b). The first criterion pertains to the individual who initiated interaction: citizen-initiated encounter as opposed to police-initiated encounter. Citizens typically contact the police to report a crime and to ask for assistance in an accident or other emergencies (Skogan, 2006b). On the other hand, the police routinely initiate encounters with the public for administrative arrangements or inquisitorial purposes. Therefore, there are the two subsets of this criterion: (1) citizen initiation and (2) police initiation. The second criterion involves the quality of encounters with the police: positive encounters versus negative encounters. The number of possible combination between two criteria are four: (1) citizen initiated-positive, (2) citizen initiated-negative, (3) police initiated-positive, and (4) police initiated-negative. There is a great deal of support for the idea that police-initiated encounters and negative encounters promote negative public attitudes toward the police (Bradford et al., 2009; Miller & Davis, 2008; Myhill & Bradford, 2012; Ren, Cao, Lovrich, & Gaffney, 2005). Researchers have found that the impacts of negative interactions with the police are substantially larger than the effects of positive interactions with the police (Bradford et al., 2009; Skogan, 2006b, 2012). Interestingly, Nicholas and Walker (2004) discovered that despite the type of contact, those who experienced encounters with the police had unfavorable attitudes toward the police in comparison to those who had no recent contact with the police. Using randomized control trials, researchers have demonstrated that intentional efforts to integrate procedural justice into police practices can foster positive attitude toward the police (Mazerolle, Antrobus, et al., 2013; Mazerolle et al.,

2012; Murphy et al., 2014; Sahin, 2014). Some researchers tested the utility of procedural justice using experiments randomly assigning video clips that portray different types of interactions between a police officer and a citizen (Johnson et al., 2017; Maguire et al., 2017). Findings supported that the exposure to a police officer following procedural justice can lead to the changes in individuals' perceptions of police.

Concerning media effects, encounters with police officers may generate intriguing interaction effects. Regardless of the quality of encounters, people who have encounter experiences may not be influenced by media coverage of crime and the police. It is also conceivable that "asymmetrical" impacts of negative experiences with the police work in relation to the cultivation effect (Skogan, 2006b, p. 100). In other words, while people who have negative encounters with police officers maintain unfavorable attitudes toward the police no matter what information the media present. It is also possible that having a positive experience with the police may not moderate media effects on perceptions of police.

**Media Form/Channel and Genre of the Content**

While earlier discussions concerning interaction effects revolve around general patterns of the media's presentation (e.g., pervasive crimes in the world), the cultivation effect can differ significantly if different genres of the media are taken into account (Cohen & Weimann, 2000). Unlike crime shows that illuminate sensational and random crimes, cop shows may highlight their effective functioning in catching criminals (Rosenberger & Callanan, 2011). Fictional police shows often present the world where most criminals are caught and punished (Tyler, 2006b). Simply put, the assumed cultivation effect from diverse sub-hypotheses can be more complicated when considering different genres; this echoes Heath and Gilbert's (1996)

conclusion that "at least some television programming is correlated with fear of crime for at least some of the viewers" (p. 380).

Gerbner (1998) placed a particular emphasis on television, stating that "[t]elevision is different from other media also in its centralized mass-production of a coherent set of images and messages produced for total populations, and in its relatively non-selective, almost ritualistic, use by most viewers" (p. 178). Gerbner et al. (2002) also contended that the amount of television consumption influences perceptions about social reality, regardless of the format or genre of specific content. The following researchers have expanded the applicability of cultivation theory to other channels (Dowler, 2002; Kohm et al., 2012; Morgan, 2011; Rosenberger & Callanan, 2011; Waid-Lindberg, Dobbs, & Mname, 2011). Research has provided evidence for the cultivation effect from radio (Chiricos et al., 1997), newspapers (Heath, 1984; Liska & Baccaglini, 1990), films (Perse, Ferguson, & McLeod, 1994; Shrum et al., 2011), the Internet (Roche et al., 2016), and video games (Kanz, 2016). For instance, in the study of support for the death penalty, Britto and Noga-Styron (2014) examined cultivation effects from television, newspapers, radio, and the Internet. While there was no influence found from the Internet and newspaper consumption, listening to talk/news radio contributed to increasing support for capital punishment in addition to watching television. Conversely, Roche et al. (2016) found that exposure to Internet news was associated with perceived risk of victimization and support for punitive punishment only for some people with particular audience traits (e.g., political orientation).

That being said, the majority of previous studies have not refuted the influence of television exposure. Rather, researchers have provided evidence that aligns with Gerbner's emphasis on television (Britto & Noga-Styron, 2014; Chiricos et al., 1997; Grabe & Drew, 2007;

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O'Keefe & Reid-Nash, 1987; Roche et al., 2016; Romer, Jamieson, & Aday, 2003). For instance, Weitzer and Kubrin (2004) discovered that individuals who identified local television as their most important news source were more fearful of crime, compared to those who used daily newspapers and other mediums as their primary news source. Similarly, Roche et al. (2016) also demonstrated that traditional forms of media hold stronger effects on perceptions of crime and punishment as compared to the Internet. Using data from four different national surveys, they found that while traditional media usage promoted perceptions of victimization risk and support for harsh penal sanctions, Internet news exposure was not generally significantly associated with worry about crime and support for punitive crime policies.

Another conflict with Gerbner's original cultivation theory regards the lack of importance Gerbner et al. (2002) placed on genre selection and content differences. Other researchers have demonstrated the importance of considering genres in understanding the cultivation effect (Britto & Noga-Styron, 2014; Donahue & Miller, 2006; Dowler, 2002; Eschholz et al., 2002; Hawkins & Pingree, 1981; Holbert, Shah, & Kwak, 2004).

Hawkins and Pingree (1981) were one of the first critics of Gerbner's assumption that genre does not matter regarding cultivating audiences' perceptions. Hawkins and Pingree (1981) empirically demonstrated that some genres (e.g., crime-adventure) were related to audiences' perceptions of violence, whereas other genres were not. Similarly, Holbert et al. (2004) found that the type of content shown in television matters in relation to people's perceptions. They created three different television viewing variables: TV News, Police Reality, and Crime Drama. Audiences' viewing of police reality shows was related to their perceptions of capital punishment, gun ownership, police authority, and crime. On the other hand, the influence of audiences' viewing of TV News and crime drama on various perceptions was inconsistent.

In a similar study of the media's impact on penal attitudes, Rosenberger and Callanan (2011) considered not only diverse channels of media but also multiple genres of media to differentiate the respective influence of media consumption. Employing a statewide sample of California residents, they conducted multinomial logistic regression to examine the media effects on their perceived goal of sentencing. The findings indicated that watching reality crime shows and TV news increased the odds of perceiving punishment, instead of rehabilitation, as the goal of sentencing. They also found that viewing crime dramas increased the odds of preferring incapacitation over rehabilitation. While their findings indicated the same direction of media effects across different types of shows (i.e., reality crime shows, TV news, crime drams), other researchers have discovered that the direction of influence from different genres can be inconsistent.

For instance, Donahue and Miller (2006) sought to find evidence that citizens' direct experience and mediated exposure can affect attitudes toward the police, which, in turn, affects willingness to pay for police services. Conducting a survey of Connecticut taxpayers, they measured the amount of media exposure in two ways. To estimate the influence of specific types of programs, they differentiated the overall level of television watching. The analyses indicated that the more people viewed local news programs, the more positively they perceived police officers. By contrast, watching non-fictional reality shows decreased respondents' trust in the police, whereas exposure to fictional television led respondents to be more trusting of the police. They also found that direct contact with the police negatively influenced attitudes toward the police.

Considering genres of the media regarding the cultivation effect is particularly important

due to the advent of infotainment[3] and reality shows (Cavender & Fishman, 1998; Doyle, 2003;

Fishman, 1978; Lowry, Nio, & Leitner, 2003; Surette, 2014). Infotainment performs both roles

of news media and entertainment media, blurring the boundary between reality and

entertainment (Robinson, 2016). Since this type of the media sensationalizes issues, the

audiences of infotainment may cultivate distorted perceptions of reality. For instance, the

television program, *COPS* is an example of infotainment. While this program contains some

aspects of reality about police work, it is also intended to entertain the audience by providing

stimulating events.

Another type of entertainment, "reality" shows, also deserve attention (Dirikx et al.,

2013; Dowler, 2003; Doyle, 2003; Eschholz et al., 2002). Reality shows can lead audiences to

confuse the media's version of reality with actual reality. They often focus on dramatic scenes of

crimes while paying little attention to causes and contexts of those crimes (Cavender & Bond-

Maupin, 1993). For instance, Eschholz et al. (2002) specifically focused on the relationship

between attitudes toward the police and media variables including television news and "reality"

shows. First, three items were used to measure the amount of the exposure to "cop shows."[4]

They asked respondents how many hours in a month they spent watching the following three

shows: *America's Most Wanted*, *COPS*, and *Real Stories of the Highway Patrol*. The number of

hours was added to construct an additive index. They also measured the amount of time that

respondents watched television news. The sum of the number of hours per month respondents

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[3] Infotainment is defined as television programs that present information (such as news) in a manner intended to be entertaining (Infotainment, n.d.)

[4] Cop shows can be classified into five categories: one hour police drama (hero-based), one hour police drama (group-based), one hour police drama (not primarily police-based), half hour police show (comedy/drama), and reality-based police show. More detailed explanation can be found from MediaSmart (2012).

spent watching various local and national news was used to create an eight-item additive index. They found that watching television news was positively and significantly associated with attitude toward the police. This was operationalized through four questions asking confidence in the local police, the local sheriff, state police, and the FBI. Interestingly, watching cop shows was associated with a positive attitude toward the police only among White male viewers. The predominant representation of White males as cops in reality crime shows may have contributed to building an affinity among White audiences. By contrast, the level of confidence in the police among Blacks was so low that little statistical variation within the population existed to be explained.

Taken together, studies have consistently found that television is the most essential medium that shape individual's perceptions of the police although other formats of media have been found to be significant sporadically (Callanan, 2012; Chiricos et al., 1997; O'Keefe & Reid-Nash, 1987; Romer et al., 2003; Rosenberger & Callanan, 2011). Among various genres of the media, non-fictional television programs such as crime-reality shows and television news appear to exert the strongest cultivation effect (Callanan, 2005; Eschholz et al., 2002; Grabe & Drew, 2007; Potter, 1986; Weitzer & Kubrin, 2004).

**Limitations of Prior Studies**

The current section reviews the limitations of previous studies on media effects on perceptions of police. While reviewing the limitations of prior studies, some critical studies are discussed here as well. These studies are particularly relevant to this section since they were designed to overcome traditional problems of earlier studies. The current section does not only acknowledge these efforts and their contributions regarding media effects on perceptions of police, but it illuminates why further research is necessary for this topic.

The greatest limitation of typical studies on perceptions of police is that most studies have overlooked the importance of indirect experience through the media in forming perceptions of police (Bradford, 2011; Cao et al., 1996; Jackson & Gau, 2016; Kochel, 2016; Nix et al., 2015; Tankebe, 2009; Tyler & Huo, 2002; Wu et al., 2015). As previously mentioned, there are possible linkages between the media and the four traditional models in policing literature. Variables that represent the four models have often been treated as the dependent variable (e.g., fear of crime) in media research. For instance, two variables used to capture the instrumental model – fear of crime and perceived risk of crime – have been repeatedly used as the outcome variables predicted by media effects (Chiricos et al., 1997; Chiricos et al., 2000; Eschholz et al., 2003; Gerbner et al., 1979; Hirsch, 1980; Weitzer & Kubrin, 2004). In an earlier study, Gerbner (1981) cautioned that:

> Fearful people are more dependent, more easily manipulated and controlled, more susceptible to deceptively simple, strong, tough measures and hard-line postures—both political and religious. They may accept and even welcome repression if it promises to relieve their insecurities. That is the deeper problem of violence-laden television (p. 7).

Similarly, even if police officers perform their job according to the principles of procedural justice, if the manner in which police are presented in the media is coercive and corrupt, audiences may promote perceptions that rely on the media's version of the police, which does not necessarily reflect reality.

Because most people lack firsthand experience with the police, and crime and punishment are the most frequently covered topic in the media (Beckett & Sasson, 2004; Graber, 1980; Sacco, 2005), the role that the media may play in determining perceptions of police is particularly essential. Equally important, technological innovations in recent years make it

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possible to deliver information quickly at any time and to any place (Campbell, Martin, & Fabos, 2011). For instance, many individuals now can use on-demand services to watch programs whenever they want for a nominal expense. In other words, the accessibility to the media has become quicker and more convenient compared to former days, which implies a substantial influence of the media.

The potential role of the media has additional implications about the police for another reason. The police have become an important source for the media, distributing official information that is advantageous to their image (Chermak, 1995; Ericson, Baranek, & Chan, 1987; Schlesinger et al., 1991). The institutionalized relationship between police reporters and police officials can adversely affect the neutrality of the media (Chermak & Weiss, 2005; Ericson, 1998), emphasizing effective policing (Lawrence, 2000; Dirikx et al., 2012).

As previously mentioned, there is a small body of research regarding media effects on perceptions of police. Despite their contribution to the existing literature, the findings from these studies have been inconsistent, which brings into question the implications from these findings. While some studies have indicated the positive relationship between the media and perceptions of police in general (Callanan & Rosenberger, 2011; Dirikx & Van den Bulck, 2014; Eschholz et al., 2002), some studies have found a negative direction instead (Dowler, 2002; Lee & Gibbs, 2015; Lim, 2015; Weitzer, 2002; Weitzer & Tuch, 2005). Other studies have yielded statistical findings that, by and large, exhibit no significant relationship between the media and sentiments toward the police (Chermak, McGarrell, & Gruenewald, 2006; Dirikx et al., 2013; Dowler, 2003).

There are two main methodological issues for inconsistent findings: measurement issues and limitations in the employed research design (see also, Shrum, 2007; Surette, 1992). The first

is the lack of reliability and validity in measurement for media (Morgan & Shanahan, 1997; Surette, 1992). While some researchers solely focused on the frequency of media consumption such as hours of TV watching (Donahue & Miller, 2006), some researchers asked respondents to indicate their primary sources of information regarding crime and punishment (Dowler, 2002). Measures of the media also have varied depending on researchers' interest in media channels and genres (Dirikx et al., 2013; Dirikx & Van den Bulck, 2014; Dowler & Zawilski, 2007). For instance, Dirikx and Van den Bulck (2014) measured exposure to crime shows by asking respondents how often they watched a list of programs broadcasted on six Flemish television channels. Meanwhile, Dowler and Zawilski (2007) employed two different sets of items to measure crime shows and television news consumption. Their questions were more specific so that they could capture the type of contents consumed by respondents as well as overall exposure to the media (e.g., "some shows on television try to solve actual crimes, such as *America's Most Wanted* and *Unsolved Mysteries*") (p. 196). Additionally, Eschholz et al. (2002) paid special attention to reality crime shows. Three shows (i.e., *America's Most Wanted*, *COPS*, and *Real Stories of the Highway Patrol*) were chosen to measure individuals' amount of exposure to cop shows.

What makes the measurement of the media more problematic is that some researchers employed value-laden items (Sun et al., 2014; Weitzer & Tuch, 2005). For example, Sun et al. (2014) asked respondents how often they have heard or read news about police misconduct. Similarly, Lim (2015) asked students to indicate how often they heard or read about police misconduct through media. These items may cue respondents to focus on a negative influence of the media, thereby leading to a negative association between media exposure and perceptions of police; this may not tap into the general media effects that foster perceptions of police properly.

Given that police misconduct is often justified and contextualized in the media, overall exposure to the media may not lower confidence in the police even when the media cover police misconduct (Dirikx et al., 2012; Eschholz et al., 2004).

Some researchers have considered different aspects of the media such as news source salience (Sun et al., 2014; Weitzer & Kubrin, 2004). For instance, Sun et al. (2014) asked respondents to indicate the extent to which respondents believe the media's negative portrayal of the police. In sum, inconsistent measures of the media and conflicting results have impeded our ability to conclude media effects on perceptions of police.

The second methodological issue is related to the research design employed (Callanan & Rosenberger, 2011; Chermak et al., 2006; Kaminski & Jefferis, 1998). Most studies on media effects have relied on correlational findings using a cross-sectional design (Morgan & Shanahan, 2010). Nonetheless, the correlation between variables is only one condition to infer a causal relationship between them (Bachman & Schutt, 2015; Shadish et al., 2002). Many researchers have already mentioned the possibility of reverse causality between media exposure and their attitudes. For instance, Dowler (2002) stated that "respondents with pro-police attitudes may be attracted to crime dramas; conversely viewing these dramas may strengthen or reaffirm the respondents' pro-police attitudes" (p. 236). Others have raised the possibility of individual's tendencies to prefer certain types of the show (Cohen & Weimann, 2000).

While the majority of previous studies used survey design to estimate media effects on perceptions of police (Callanan & Rosenberger, 2011; Dirikx et al., 2013), a few studies have employed quasi-experimental design to examine media effects on perceptions of police (Gerbner et al., 1977; Gerbner et al., 1978; Kochel, 2017; Lasley, 1994). For instance, Kaminski and Jefferis (1998) examined the impact of a celebrated violent arrest of a Black youth on diffuse

support for the police. Using the data derived from the Greater Cincinnati Survey (GCS), they found that the televised arrest did not substantially change diffuse support for the police institution. Likewise, Chermak et al. (2006) also examined how celebrated crime cases influence attitudes toward police, taking into account various contextual variables. They used three waves of survey data collected from the Indianapolis Directed Patrol Project (IDPP). Data at two time points were used because there was the police misconduct that received spotlight from the media between these two time periods. Wave 2 data were collected before the celebrated police misconduct "Brawl trial," and Wave 3 data were collected after the "Brawl trial." They incorporated unique measures to tap into media effects. The first media variable was measured by asking the number of days per week they read the local newspaper. Chermak et al. (2006) gauged two measures tailored to cover the Brawl case. Respondents were asked how many newspaper articles they remembered reading about the case and how many TV stories they remembered watching the case. The results suggested that media measures did not influence attitudes toward police. Therefore, the results of quasi-experimental studies have not been definitive (Chermak et al., 2006; Kaminski & Jefferis, 1998; Kochel, 2017).

While the quasi-experimental design is generally superior to survey design regarding ensuring internal validity, findings from natural experiments are vulnerable to selection bias and confounding variables (Babbie, 2016; Brewer & Hunter, 2006). Simultaneously, prior studies using quasi-experimental design have exclusively focused on media effects of celebrated police misconduct instead of general media coverage of crime and punishment (Jefferis et al., 1997).

The random experimental design is particularly beneficial in that random assignment allows researchers to make certain treatment exogenous, which helps rule out spuriousness (Shadish et al., 2002). Of course, the random experimental design is not without limitations (e.g.,

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compensatory behavior and diffusion of treatment). That said, it has become almost impossible

to measure exposure to the media with simple survey items due to technological developments

such as smartphones or on-demand services. The difficulty of capturing the amount of media

exposure has been exacerbated due to the appearance of the third and fourth-screen devices[5]

(Campbell et al., 2011), for example, smartphones (Fedorek, 2015). For instance, even if a

respondent indicates that he/she rarely watches television that does not mean that he/she does not

use smartphones to watch different shows. A few studies are using randomized experiments

when examining media effects on perceptions of audiences although this approach has not been

expanded to perceptions of police (Granot, Balcetis, Schneider, & Tyler, 2014; O'Toole &

Fondacaro, 2017; Shrum et al., 2011).

   While the previous discussion about limitations of earlier studies centered on the neglect

of media effects and methodological issues, theoretical issues in previous studies are also worth

noting. Researchers have overlooked critical theoretical considerations while focusing on

cultivation theory. For instance, cultivation theory is limited due to its exclusive attention to

long-term exposure to the media (Morgan, 2011). More importantly, within the tradition of

cultivation theory, individuals' characteristics or experiences were considered secondary sources

to the media regarding forming perceptions. To adequately recognize the roles of individuals'

backgrounds and their firsthand experiences information of perception, it is imperative to draw

on the theory that can answer how media exposure can interlock with real-world experiences. A

scarcity of theoretical linkages between media effects and real-world experiences can be

achieved by using the theory that can connect them. Based on Akers' social learning theory, we

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[5] Third or fourth screen devices refers to mobile devices that allow consumers to watch TV programming without relying on television or traditional media channels

can take into account previous models in policing literature (Jackson & Sunshine, 2007; Tyler, 1990).

The great benefit of using Akers' social learning theory lies in its power linking media effects to previous policing models; it shares the assumption that exposures to certain norms and behaviors lead to changes in individuals' norms and behaviors, whether they are firsthand experiences or secondhand experiences. The idea of integration with media effects and previous policing models is not entirely noble (Dirikx et al., 2013; O'Toole & Fondacaro, 2017). For instance, Dirikx and Van den Bulck (2014) tested if media use was associated with adolescents' willingness to assist police through their perception of police. They proposed an integrative theoretical framework that incorporated Tyler's process-based model into theories about media effects. Three scales – procedural justice judgments, performance judgments, and distributive fairness judgments – were included in the model founded on the process-based model. The impacts of these judgments were hypothesized to influence intentions to cooperate with the police through perceived legitimacy of the police. They found that watching crime shows indirectly increased adolescents' legitimacy belief and their willingness to cooperate with the police. In particular, the indirect effect of exposure to crime shows on adolescents' perceived obligation to obey the police and trust in the police was in the positive direction, which, in turn, increased respondents' intentions to assist the police.

There are several gaps in these studies that the current study aims to address. First, Dirikx and Van den Bulck (2014) studies did not offer a clear justification for the integration of cultivation theory and Tyler's process-based model. Second, they did not consider other major theoretical models (e.g., the expressive model and the instrumental model) that have been proposed in policing literature. Third, they failed to differentiate perceived police legitimacy

from confidence in the police. As discussed in detail earlier, police legitimacy is not an identical concept to confidence in the police (Barbalet, 2009; Bottoms & Tankebe, 2012). Lastly, their studies were based on cross-sectional data, which makes drawing clear causal order between the media and perceptions of police difficult.

One major limitation of previous studies on perceptions of police is that they do not consider that most people lack firsthand experience with law enforcement officers (Boda & Szabó, 2011; Dowler, 2003). According to a national study from the Bureau of Justice Statistics (Eith & Durose, 2011), only 16.9% of residents who were 16 or older had personal interaction with police in the United States. Additionally, the reason for contact was predominantly concentrated on traffic-related contacts (59.2%). This estimation is consistent with those documented in other surveys (Hough, Fitzgerald, Joseph, & Qureshi, 2002; Myhill & Bradford, 2012; Skogan, 2005). Thus, the public is left to rely on the media to supplement the information they lack (Chiricos & Eschholz, 2002; Graber, 1980; Maxson, Hennigan, & Sloane, 2003). The omission of media effects in earlier studies is critical because media effects can be linked to the objectivist model: the instrumental model, the expressive model, the procedural justice model, and the distributive justice model.

When applying the instrumental model to perceptions of police, two possible relationships link the media to perceptions of police. First, the media can influence the perceived risk of victimization or fear of crime (Chiricos et al., 2000; O'Keefe & Reid-Nash, 1987). Existing research has demonstrated that the media are influential in cultivating distorted perceptions of threat and danger (Gerbner & Gross, 1976; Morgan & Shanahan, 2010). If the media lead the public to believe that crime is increasing and criminals are going uncaught and

unpunished, regardless of the actual performance of the police, the police may be held responsible for circumstances beyond their control.

Another important link between the media and perceptions of police concerning the instrumental model pertains to the way the police are presented in the media (Chiricos & Eschholz, 2002; Dirikx et al., 2012). Police officers are often depicted as very effective in apprehending criminals and finding scientific evidence (Aiello, 2014; Cavender & Deutsch, 2007). The media may foster an overstated assumption about how competent the police are in controlling crime (Dowler, 2003). While this tendency of the media can fuel positive sentiments toward the police, the public may be disappointed when comparing actual police performance to the police portrayed on television. Considering possible associations between the media and the police, especially regarding the instrumental model (Callanan, 2005), direct and indirect effects of the media on perceptions of police should be studied.

Meanwhile, the role of the media is also noteworthy regarding the expressive model, although no empirical study is available to date. Researchers have argued that the media can make a significant contribution to the way individuals view the world (Gerbner et al., 1977). Since media coverage is replete with sensationalistic and random crime (Surette, 2014), the more individuals that are exposed to the media, the more likely they foster distrust toward other people, including neighbors (Chiricos et al., 1997; Gerbner et al., 2002).

It is also conceivable that the media can promote social cohesion and collective efficacy. While it has been taken for granted that the exposure to crime-related media increases fear of crime, Durkheim's (1933) functionalist perspective offers a noble understanding about the role of media. Durkheim posited that the communication of crime may have a positive role in building collective sentiments. More specifically, Durkheim construed crime as a communal

opponent. Durkheim (1933) noted that "never do we feel the need of the company of our compatriots so greatly as when we are in a strange country; never does the believer feel so strongly attracted to his co-religionists as during periods of persecution" (p. 102). In a similar vein, Durkheim further argued that when a crime occurs, the common conscience arises to fight against a communal enemy, that is, crime. Community members can band together to defend themselves from criminal threats. The thesis on the functionality of crime can also be applied to understand crime-related media. When an audience is repeatedly exposed to crime-related media, they are likely to believe that many deviant individuals violate rules of conduct. This impression can lead the community to develop a tighter bond of solidarity than before (Liska & Warner, 1991).

It is possible to infer two different hypotheses regarding the relationship between the media and variables representing the expressive model such as collective efficacy and incivility. The exposure to crime-related media can affect collective efficacy or incivility, which, in turn, influence perceptions of police. Therefore, the roles of the expressive model as intervening variables are worthwhile to explore.

As with earlier models, most studies on the procedural justice model did not consider the role of the media as a source of the assessment of procedural fairness (Dirikx et al., 2013; Dirikx & Van den Bulck, 2014). As Edwards (1999) stated, even citizens who do not have firsthand experience with the police are exposed to "media reports of police corruption and violent or racist behavior used by individual officers" (p. 148). Content analysis from other researchers supports this insight. For instance, Eschholz et al. (2004) conducted content analysis with the 2000-01 season of "Law & Order" and "NYPD Blue" and found that the police were portrayed as violating civil rights at least once in almost every episode. A similar finding was reported by

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Dirikx et al. (2012). By conducting content analysis with popular American police shows, they found that police officers engaged in "one violation of trustworthy or respectful police behavior per episode" (p. 49).

Media images of the police can be a surrogate for experiencing procedural justice from police. If individuals are often exposed to negative images of police who unfairly treat citizens in the media, these individuals are likely to think that the police are not respectful and fair even though they have not experienced face-to-face contact with police. Watching police officers exercise the excessive use of force in the media may raise questions about the motives or intentions of authority figures in their actions (Tyler, 2000). In the words of Hohl et al. (2010), "communication—of whatever type—between police and public will contain messages relating to the trustworthiness of the police across all three aspects" (i.e., police effectiveness, community engagement, and fairness) (p. 494). Hence, the success of procedural justice also may not entirely depend on police officers' actual performance. In fact, the media may play a significant role in ingraining perceived success of procedural justice.

Researchers have provided evidence concerning the effect of highly publicized, negative police-citizen interactions on perceptions of police, independent of firsthand experience of direct encounters with the police (Huang & Vaughn, 1996; Jefferis et al., 1997; Rosenbaum et al., 2005). For instance, Jefferis et al. (1997) examined the effect of a highly publicized arrest on the public perception of police use of force. Employing the semiannual Greater Cincinnati Survey, they conducted several multinomial logistical regression analyses. The results indicate that a highly publicized videotaped recording of police misconduct negatively impacted citizens' perceptions of police use of force. These findings imply the importance of considering the media as a source of the perceptions of police, even in the context of procedural justice.

Concerning the distributive justice model, the role of the media in shaping perceptions of police may be particularly important. The longitudinal study conducted by Lasley (1994) showed that publicized police use of force had different levels of effects by race. Lasley (1994) discovered that positive perceptions of police were significantly lowered following videotaped police misconduct (i.e., Rodney King incident), regardless of respondent's race, gender, or age; however, perceptions of police among Black respondents were lowered the most in comparison to other races. Furthermore, diminished perceptions of police lasted longer among Black respondents compared to respondents of other races.

Drawing on the data derived from the 2000 Law and Media Survey, Dowler and Zawilski (2007) concurred with Lasley (1994), finding that viewers who heavily consumed network news tended to believe that police misconduct occurs frequently. The influence of the consumption of network news was more pronounced among non-White respondents in comparison to White respondents. One notable finding from this study is that heavy viewers of police dramas tended to believe that the police treat the wealthy favorably. Considering the core argument of the distributive justice model, this finding suggests that the media may influence audiences' perceptions regarding the distribution of police services, which, in turn, shape global assessments of the police. As Mastro and Robinson (2000) iterate, disturbing images from the media can "influence viewers' perceptions of race and the criminal justice system" (p. 394). Since most people have little personal interaction with police (Eith & Durose, 2011), the media can be an important agent to form perceptions of distributive justice (Hohl et al., 2010).

## Summary

In previous sections, two theoretical frameworks and their limitations were reviewed. The first framework was the objectivist model that has been of particular interest in traditional

policing literature. The second framework was centered on potential media effects on perceptions of police. The limitations of previous studies were reviewed from each theoretical frame, thereby making it necessary to synthesize two different perspectives. The current study aims to fill some of these gaps in several ways. First, this study expands on the extant research on media effects by relying on Akers' social learning theory. Building on social learning theory, insights from cultivation theory and the differential reception thesis were considered simultaneously. Given that Tyler (2011a) construed perceptions of police as outcomes from socializing experiences, social learning theory can serve as an integrative theoretical model that incorporates theories regarding media effects into the objectivist model that highlights real-world experiences.

The current study also examines important arguments regarding causal effects of the media. Some critics have argued that estimated correlation between the media and perception can be attributed to selective watching of individuals who are already predisposed to prefer particular media content (Dowler, 2002; Surette, 2014). Similar criticism has been made within the context of the social learning model. Some researchers have argued that social learning theory is tautological because people associate themselves with similar people (i.e., selection effect) (Lilly, Cullen, & Ball, 2010). That being said, researchers have revealed that a selection effect is trivial, signifying the importance of the facilitation model (i.e., who one associates with influences behavioral or perceptional pattern) (Krohn & Thornberry, 2008; Maxson, 2011). Applied to the current study, even if there is a potential selection effect from individual preference to particular media content, this does not rule out the possibility of facilitation effects of the media in shaping definitions. If individuals are exposed to particular content presented in

the media, they will form similar definitions consistent with the messages presented by the media, even after accounting for other variables.

Second, reflecting the theoretical development about perceptions of police, two dependent variables, confidence in the police and police legitimacy were treated separately. Following Cao's (2015) conceptual clarification, this study used the term "confidence in the police," which is a more suitable concept to represent the trust between individuals and institutions. Additionally, the use of this term can be particularly beneficial within the context of studying police legitimacy because previous studies have long used trust in the police as a subconstruct of the overall legitimacy, thereby making it hard to differentiate with legitimacy. The adoption of this term can demarcate the difference between police legitimacy and confidence in the police on the perceptual level. Therefore, introducing a term that has not been associated with legitimacy can facilitate fresh discussion without relying on previous notions of trust in the police. Previous studies that examined media effects on perceptions of police have failed to differentiate these two concepts (Dirikx et al., 2013; Dowler, 2002). Concerning police legitimacy, the obligation to obey was used as an integral component to represent police legitimacy in this study to remain consistent with the most frequently used definition of legitimacy.

Third, the elaboration of clear mechanisms based on prior studies can contribute to a better understanding about media effects on perceptions of police. The current study was conducted based on the premise that the traditional models used to explain perceptions of police can be informative regarding understanding the role of the media as an indirect social agent. Fourth, the current study employs a randomized experimental design that helps to establish the causal statement between variables (Weisburd & Piquero, 2008). The study aims to empirically

examine the possibility of two potential models by collecting pre-and post-data about respondents' perceptions of police, thereby estimating independent effects of the media. The intended between subjects design will be able to account for unobservable heterogeneity between subjects (Shadish et al., 2002).

Fifth, the current experimental design will advance ambiguous conceptualization of the media by using manifest treatments (Chiricos et al., 2000; Dowler, 2002; Dowler & Zawilski, 2007; Eschholz et al., 2003; Weitzer & Kubrin, 2004). More specifically, it employs experimental conditions (i.e., edited video clips) that center on television programs which are non-fictional. Lastly, moderating effects of respondents' characteristics were examined according to the differential reception thesis. The estimation of interaction effects between media exposure and respondents' characteristics are beneficial to draw policy implications by suggesting when and where the media can exert a greater influence on individuals.

CHAPTER III

METHODOLOGY

This dissertation examined media effects on perceptions of police. First, Chapter Three

provides several hypotheses based on a review of the literature. Then, an overview of the

sampling strategy and research design follows. The research seeks to determine if there are direct

media effects, indirect media effects through variations in different perceptions, and if media

effects differ depending on audience traits. Experimental methods with random assignment are

proposed and are best-suited to draw causal conclusions (Shadish et al., 2002); this is because

experimental methods fulfill the necessary conditions for determining causality in a relatively

straightforward manner. Randomly assigning treatments or interventions can offer clear evidence

of association between experimental conditions and dependent variables (Bachman & Schutt,

2015). Additionally, the temporal ordering of the independent variable and dependent variable is

unambiguous because the treatment or condition precedes the outcome. Lastly, spuriousness can

be avoided. While ruling out the influence of confounding variables is difficult in survey

methods with quasi-experimental designs, experimental design can exclude possible

spuriousness if a treatment is randomly assigned (Remler & Van Ryzin, 2015).

Using an undergraduate student sample, a between-within subjects design was employed.

Collecting pre- and post-test data, participants were randomly assigned to one of five conditions:

(1) viewing an edited video segment focusing on police misconduct, (2) viewing an edited video

segment focusing on positive police images, (3) viewing an edited video segment focusing on

crime news, (4) the control condition that includes viewing a noncontroversial video with no

relationship to policing, and (5) another control condition that includes viewing both positive and

negative police images. When treatments are randomly assigned, researchers do not need to

collect pre-test data to estimate treatment effects since the random assignment of the treatments controls for possible influences from extraneous variables (Shadish et al., 2002). The current study attempted to examine not only differences in between groups but also variations within groups; this provides advantages when testing variations within individuals before and after treatments (Tabachnick & Fidell, 2013). Accordingly, pre-and post-experimental data were collected from five different groups.

## Research Questions and Hypotheses

This study aimed to answer three broad questions regarding the media: if, when, and how the media influence perceptions of police. Additionally, the study tests whether individual characteristics and experiences moderate the mediated effects of the media exposure on perceptions of police. More specifically, the first research question involves the examination of direct effects of media exposure using five different video clips on perceptions of police. The second research question is related to interaction effects between media exposure and individual characteristics. Depending on participants' characteristics and experiences, the direct effects of media exposure were hypothesized to differ. The third research question pertains to mediation models hypothesizing that there are indirect media effects on perceptions of police through different key perceptions involving crime and justice. The fourth research question is about moderated mediation models expanding moderating roles of individual characteristics and experiences to indirect effects of media exposure.

As presented, the study first examines if, and to what extent, respondents' perceptions are affected by the media. Following Akers' social learning theory, the media are hypothesized to exert different effects depending on the content of the media. The content of the media that is favorable toward the police may imbue positive perceptions of police (i.e., confidence in the

police and perceived police legitimacy). On the other hand, the media content that focuses on negative aspects of policing may promote negative perceptions of police. Meanwhile, the influence of the media focusing on sensationalized crimes is not yet conclusive. Participants may hold the police responsible for increasing crimes, but it is also conceivable that they feel more dependent on the police. Regarding the mixed image, studies have suggested that negative police images can have a stronger impact than positive police images (Maguire et al., 2017). To address the research question of if perceptions of police are affected by media exposure, the following hypotheses were examined.

$H_{1a}$: Watching an edited video segment depicting police misconduct will negatively influence perceptions of police.

$H_{1b}$: Watching an edited video segment depicting positive police images will positively influence perceptions of police.

$H_{1c}$: Watching an edited video segment that contains both negative and positive police images will negatively influence perceptions of police.

$H_{1d}$: Watching an edited video segment focusing on crime news will influence perceptions of police.

$H_{1e}$: Watching an edited video segment that solely contains content unrelated to policing will not influence perceptions of police.

Furthermore, the current study examined whether there are differences in effect sizes between different conditions. Skogan's (2006b) study showed that the impact of encounters with the police could be asymmetrical. Empirical studies have shown that positive interactions with police officers have a null or small effect on positive attitudes toward the police, whereas negative encounters with the police significantly reduce positive perceptions of police (Miller &

Davis, 2008; Skogan, 2006b). Conversely, some researchers have shown that the ratio of negative effect to positive effect from encounters with police officers is not as high as Skogan (2006b) proposed (Bradford et al., 2009; Maguire et al., 2017; Myhill & Bradford, 2012). Nonetheless, considering the strong evidence of the asymmetrical effect of negative interaction with the police (Skogan, 2012), it is possible that negative portrayals of the police may have a stronger impact on perceptions of police as compared to positive depictions of the police. Based on the possibility of asymmetrical effect of media exposure, the following hypothesis was proposed.

$H_{1f}$: Watching an edited video segment that depicts police misconduct will exert a stronger effect on perceptions of police as compared to watching an edited video segment presenting positive police images.

Other research questions involve participant characteristics (i.e., race, gender, victimization, and police encounter) in which media effects are pronounced. In their seminal experiments, Tversky and Kahneman (1973) demonstrated that individuals use different cognitive heuristics when recalling information. For instance, when respondents were asked to estimate whether more words start with R than words that have R in the third place, respondents were more likely to judge that R is more likely to appear in the first position although the extensive word-count suggested the opposite. Tversky and Kahneman (1973) argued that individuals recall the memory according to "an assessment of the ease with which instances could be brought to mind" (p. 211). This finding is consistent with core arguments from the differential reception thesis that emphasizes audience characteristics in media effects since it assumes that individuals may recall different available information when they are exposed to the media (Chiricos et al., 1997). Considering that non-Whites are more likely to experience or

observe police misconduct (Zimring, 2017), they are more likely to be sensitive to media portrayals of police misconduct. By contrast, Whites are more likely to be immune to the same images (Kochel, 2017; Weitzer, 2002). Similarly, people who experience negative contact with the police (e.g., unreasonable stop) may be more sensitive to the media depicting police misconduct. Based on the findings that the impact of negative police representation of the media can differ depending on respondent race and their direct experiences with police, two hypotheses were tested.

H$_{2a}$: Non-Whites are more likely to be influenced by an edited video segment depicting police misconduct in comparison to Whites.

H$_{2b}$: People who have experienced negative contact with the police are more likely to be influenced by an edited video segment depicting police misconduct in comparison to people who have not experienced negative contact with the police.

Respondents' real-world experiences can be reversely applicable in a different context. Whites may have fewer collective memories that are associated with racial profiling or police misconduct. They may already have positive perceptions toward the police, so their perceptions of the police may not be improved drastically by the positive representation of the police in the media. Positive images of the police may merely confirm what Whites already believed (Dowler & Zawilski, 2007; Lasley, 1994). On the contrary, Whites may be more susceptible to negative portrayals of the police than non-Whites since their existing positive views of the police can turn into disappointment in the police when there is news about police misconduct or corruption. Likewise, people who have not experienced negative police contact may be less influenced by positive portrayals of the police because they do not have any strong perceptions of police that come from direct experiences. In other words, people with little experience of negative police

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contact do not need to confirm their negative views of the police. Based on the possibility that positive police representation in the media can influence perceptions of police differently according to race and negative interaction with police, the two following hypotheses were proposed.

H$_{2c}$: Whites are less likely to be influenced by an edited video segment depicting positive police images in comparison to non-Whites.

H$_{2d}$: People who have not experienced negative contact with the police are less likely to be influenced by an edited video segment depicting positive police images in comparison to people who have experienced negative contact with the police.

Interactions between individuals' characteristics and the media in predicting perceptions of police can also be found under different circumstances. Concerning the condition that focuses on crime news, media effects can be more pronounced among female respondents in comparison to male respondents because they may feel more physically vulnerable (Skogan & Maxfield, 1981). As previously noted, the direction of this condition is not definitive. Similarly, people who have victimized experiences may react to the condition that focuses on crime news. Victims may feel more vulnerable due to the media content that concentrates on crime news because it may provide recollections of bad experiences (Gerbner et al., 1980). It is also possible that victims are less susceptible to this condition compared to non-victims because they have become more realistic about crime issues due to their firsthand experiences (Weaver & Wakshlag, 1986). Based on the findings that sex and victimization experience can moderate the impact of media exposure, the two following hypotheses were proposed.

H$_{2e}$: Female participants are more likely to be influenced by an edited video segment focusing on crime news in comparison to male participants.

H$_{2f}$: Victims are more likely to be influenced by an edited video segment focusing on

crime news in comparison to non-victims.

Simultaneously, researchers have shown that students whose major is criminal justice

(CJ) tend to have different opinions about criminal justice officials in comparison to non-

criminal justice majors (Lambert, 2004; Lim, 2015; Tsoudis, 2000). Since the current study

employed a student sample, it is worth investigating whether there are differences in media

effects between CJ majors and non-CJ majors. In her study on predictors of trust in the police,

Lim (2015) found that students' major was significantly associated with students' trust in the

police with CJ major having a higher level of trust in the police. Interestingly, students who were

criminal justice majors tended to perceive biased policing as well. If CJ majors interpret the same

media content regarding crime and criminal justice differently, media effects on perceptions of

police will also differ depending on major. It is possible that CJ majors are more susceptible to

the information about police officers since their potential professions can be related to the

criminal justice system, but it is also conceivable that CJ majors are insulated by media effects

due to their own strong beliefs about criminal justice. Based on the speculation that major can be

a moderator of media effects on perceptions of police, two contrasting hypotheses were drawn.

H$_{2g}$: CJ majors are more likely to be influenced by watching edited video segments in

experimental conditions in comparison to non-CJ majors.

H$_{2h}$: CJ majors are less likely to be influenced by watching edited video segments in

experimental conditions in comparison to non-CJ majors.

In addition to moderating roles of the audiences' characteristics (i.e., race, gender,

victimization, police encounter, and major), the current research aimed to examine mediating

roles of perceptions derived from previous policing models (e.g., fear of crime, perceived

procedural justice). The following hypotheses were based on the instrumental model that treats

fear of crime and perceived risk of crime as indicators of police effectiveness (Jackson &

Sunshine, 2007).

H$_{3a}$: Watching edited video segments in experimental conditions will influence fear of

crime, which, in turn, influences perceptions of police (See Figure 4).

H$_{3b}$: Watching edited video segments in experimental conditions will influence the

perceived risk of victimization, which, in turn, influence perceptions of police.
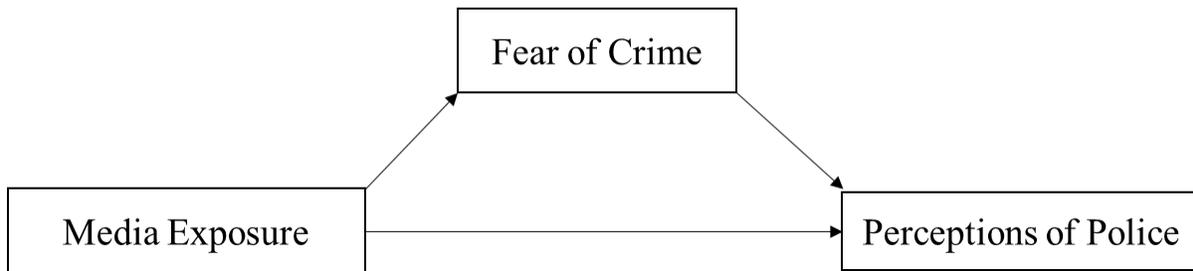


*Figure 4*. A diagram of the simple mediation model (Mediator: Fear of Crime).

The expressive model assumes that perceptions of neighborhoods are closely related to

perceptions of police because people consider police officers as defenders of community values

(Dirikx et al., 2012). This was tested with two hypotheses.

H$_{3c}$: Watching edited video segments in experimental conditions will influence perceived

incivility, which in turn influence perceptions of police.

H$_{3d}$: Watching edited video segments in experimental conditions will influence collective

efficacy, which in turn influence perceptions of police.

The following hypothesis is based on the procedural justice model (Tyler & Huo, 2002).

This model highlights the importance of the quality of treatment and the quality of decision

making. The media depictions of crime and punishment may change the audiences' ideas about police services when treating citizens.

H$_{3e}$: Watching edited video segments in experimental conditions will influence perceptions of procedural justice, which in turn influence perceptions of police.

Lastly, dynamic relationships between the media and real-world experiences may be better explained by moderated mediation models. This statistical model is particularly beneficial when estimating conditional indirect effects (Hayes, 2013). For example, Black audiences may be more susceptible to media that illuminate police misconduct. Therefore, negative images of the police in the media may lower the perceived level of procedural justice among Whites more substantially compared to their non-White counterparts. This lowered perceived level of procedural justice then affects the general perceptions of the police. Conditional indirect effects can be discovered from different conditions and people with varying characteristics of individuals. Accordingly, participants who have certain characteristics are more likely to experience changes in other perceptions that predict police perceptions compared to their counterparts.

H$_{4a}$: The indirect effect of the media on perceptions of police through fear of crime will be more pronounced among female in comparison to male participants (See Figure 5).

H$_{4b}$: The indirect effect of the media on perceptions of police through the perceived risk of victimization will be more pronounced among female in comparison to male participants.

H$_{4c}$: The indirect effect of the media on perceptions of police through fear of crime will be more pronounced among victims in comparison to non-victims.

H$_{4d}$: The indirect effect of the media on perceptions of police through the perceived risk

of victimization will be more pronounced among victims in comparison to non-victims.

H$_{4e}$: The indirect effect of the media on perceptions of police through the perception of

procedural justice will be more pronounced among non-Whites in comparison to Whites.

H$_{4f}$: The indirect effect of the media on perceptions of police through perceptions of

procedural justice will be more pronounced among people who have experienced

negative contact with the police in comparison to people who have not.

H$_{4g}$: The indirect effect of the media on perceptions of police through the perception of

distributive justice will be more pronounced among non-Whites in comparison to Whites.
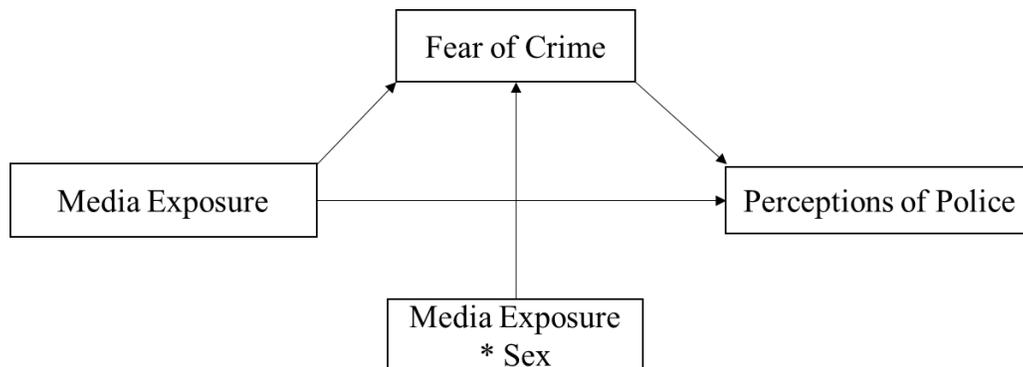


*Figure 5*. A diagram of the moderated mediation model (Mediator: Fear of Crime; Moderator: Sex).

**Sample Selection**

The target sample was 800 undergraduate students who were enrolled in courses at IUP

in the spring 2018 semester. To determine the minimum sample size for this study, a power

analysis was conducted using G*Power 3.1 (Faul, Erdfelder, Buchner, & Lang, 2009).

Considering that the current research employed a regression-based path analysis, the "Linear

multiple regression: Fixed model, $R^2$ deviation from zero" procedure was chosen from G*Power

3.1 using a traditional alpha level of .05.

Ellis (2010) noted that a prospective or a priori power analysis is useful when making informed decisions to build upon previous studies. Prior studies employing experimental design to test media effects have shown that media exposure produces small to moderate effect sizes (Granot et al., 2014; O'Toole & Fondacaro, 2017; Shrum et al., 2011). With 17 predictors (when all variables are used), a medium effect size of .09, at least 337 participants are recommended to achieve the customary power of .80. While this *a priori* power analysis is informative, larger sample size can provide better precision. Additionally, participants may not complete the survey, which reduces the number of usable surveys. Therefore, the adequate target sample size in the current study was adjusted to be 800.

While student samples have some limitations, several important studies regarding perceptions of police have been conducted with student samples (Gau, 2011; Piquero, Gomez-Smith, & Langton, 2004). Additionally, the goal of the current study was not in establishing strong external validity (i.e., generalizability), rather this study aimed to establish strong internal validity (i.e., causality) of the relationship between media exposure and perceptions of police. According to the study conducted for the Pew Research Center, young adults between 18 and 24 years old indicate a higher level of general internet access as compared to the general population (Smith, Rainie, & Zickuhr, 2011). Simultaneously, undergraduate students are more likely to use the internet in comparison to non-students who are between 18 and 24 years old. Given that the current study was designed to use a web-based survey in a classroom and students are generally comfortable with using computerized devices, they may be the most appropriate sample for reducing potential missing data.

This study utilized the sample derived from undergraduate students at IUP. The data were collected using disproportionate stratification, including larger samples of students from the

Department of Criminology and Criminal Justice since some key hypotheses of the current study are related to examining if there is any difference in media effects between CJ majors and non-CJ majors. Instead of using a list of entire students as a sampling frame, a list of courses available for the spring semester of 2018 was used to draw the sample. Specifically, available CJ courses and non-CJ courses were separately used to achieve disproportionate sample size for CJ majors and non-CJ majors. The courses that were not being held on the main university campus or online courses were excluded from the sampling frame. Similarly, when the online catalog indicated courses as TBA (To Be Announced), these classes were also excluded. From each sampling frame for CJ majors and non-CJ majors, 15 courses were randomly selected initially.

Instructors of the courses randomly selected were contacted through the university's e-mail system. Instructors were informed of the purpose of the study and that it would take $15 - 20$ minutes to complete. When permission from the instructors was obtained, times were scheduled for the researcher to visit the classes where professors or instructors agreed to participate in the survey. The requests for participation continued until the number of students in classes was analogous to the targeted sample size. When there was no permission granted within one week, random selections of classes continued. As a result, emails were sent to the instructors of 128 courses (i.e., 92 non-CJ major classes and 36 CJ major classes) randomly selected from the course list. Of these classes, only 23 professors/instructors of non-CJ major courses responded allowing the survey while most CJ major faculty (32 CJ major classes) authorized the survey administration. While more CJ major classes allowed access to survey administration, many CJ students were taking multiple CJ classes. Not all students in each CJ class could participate in the survey because they had already completed it another CJ class. Due to the possibility of taking the survey more than once, instructions stated that they should not participate in the survey more

than once, and they were referred to an alternative activity. Many instructors did not respond, and when they refused to permit survey administration, they indicated that they did not have enough time to allow for survey administration. Additional instructors of undergraduate classes in the sampling frame were contacted until the appropriate sample size was drawn. The invitation letter for requesting cooperation can be found in Appendix A. Survey administration was halted when a total of 778 surveys were collected. The summary of the online survey indicates that the response rate was 94.34%; this was estimated considering students who checked "no" for the question asking their willingness to continue to participate ($n = 27$) and those who opened the link but did not provide any answer as non-respondents ($n = 17$).

Regarding the actual collection of data, the survey was conducted within the classes with professors or instructors who had agreed to participate in the study. The link for the *Qualtrics* survey was generated and using *Google URL Shortener*, a shortened link to the online survey was created. In each classroom, the projector screen was on, and the shortened link for the online survey was displayed. Students accessed the informed consent instruction and the entire survey through their own internet-connected devices (e.g., smartphones, tablets, or laptop computers) by typing in the link for the survey. For students who did not wish to participate or those who were under 18 years, an alternative link was provided.

Using their own devices, students responded to the survey constructed in *Qualtrics*, a web-based survey service. Remler and Van Ryzin (2015) argued that web-based survey has become one of the most common forms of survey research because it saves cost and time. A web-based survey also allows researchers to use various visual aids in survey items (Maxfield & Babbie, 2014). Using the randomization function in *Qualtrics*, students were randomly assigned to the five experimental conditions that contained different video clips. The informed consent

page was attached to the first page of the *Qualtrics* survey (Appendix B). Students were reassured that there was minimal harm from participation; and the voluntary nature of this study was stated explicitly. If students were under 18 years old at the time of survey administration, they were asked not to participate in the study. Collected data were secured in an electronic database that was password-protected in an electronic folder to maintain the anonymity of participants.

In this study, participants watched and listened to the video clips through their cell phones or other available electronic devices. Since it was possible that some students may not have brought earphones, about fifty extra earphones and five adapters for iPhone were prepared for students who did not bring them. As described above, the following five conditions were randomly assigned: the edited video segment focusing on police use of excessive force, the edited video segment focusing on police sacrifice for the public good, the edited video segment focusing on crimes, a short video lecture about public speaking as the control condition, and the mixed condition that combines negative police condition and positive police conditions (O'Toole & Fondacaro, 2017). The experimental conditions exaggerated particular aspects of crime and punishment. Each video clip was a short-edited version of a full video to reduce the time necessary to create the experimental conditions and to avoid copyright claims on the videos; video segments were approximately two minutes long.

Before the experimental condition (i.e., the video presentation), participants were asked to answer questions about perceptions of police. After the experimental condition, participants were asked to answer various questions about perceptions of crime and police, and their socio-demographic information. To ensure that students did not rush while watching the video and answering the questions, it was announced that the survey would take 15-20 minutes to

complete. Students in each group were also asked to answer a question to check whether they focused on watching the shows (i.e., a manipulation check). Upon the completion of the survey, respondents were debriefed on more details of the study. While it is expected that the random assignment process offset the individual differences, it was empirically tested whether students' responses in the pre-test survey were significantly different between different groups using variables that are related to the current study (See Chapter IV. Balance Tests).

While there were a total of 778 surveys collected, not all data were used in statistical analyses. First, during the meeting with the Institutional Review Board (IRB), it was suggested that the survey should include the warning that says "YOU MAY VIEW VIDEO CONTENT REPORTING REAL CONDITIONS THAT INCLUDE DISCUSSION OF VIOLENCE AND DEATH. IF YOU WANT TO PARTICIPATE, PLEASE CLICK 'YES' BELOW. IF YOU DO NOT WANT TO PARTICIPATE OR IF YOU ARE UNDER 18 YEARS OLD, PLEASE CLICK 'NO.'" Twenty-seven students clicked no, and they did not provide information available for statistical analysis. Additionally, ten students did not choose the right answer for the manipulation check question. For instance, when participants were asked to pick the topic that best describes their video clip, some students chose wrong answers. Among students who were assigned to watch a *Ted talk*, there were a few students who checked another answer than public speaking. Finally, 46 participants had extensive missing values (> 60%), and these cases were dropped, resulting in a total of 699 individuals for analysis.

While the final sample size did not meet the target sample size of 800, the sample used can be justified considering that the power analysis initially recommended a total of 337 participants to estimate media effects hypothesized to have medium size effect. The reason why the target sample size was inflated was that there was some expectation that respondents would

stop responding to the survey and would not complete the survey from the beginning to end.

Also, as proposed, the proportion of CJ majors ($n = 352$) and non-CJ majors ($n = 334$) was

reasonably balanced (Unknown: $n = 17$) at the time survey administration was halted. A total of

699 surveys were considered to be an appropriate sample size to pursue the current study.

## Research Design

This research employed both between-subjects and within-subjects designs depending on

research questions (Tabachnick & Fidell, 2013). Portrayals of police and crime were manipulated

in the between-subjects experimental design. On the other hand, pre- and post-test data were

collected from each student in the within-subjects design (i.e., repeated measures designs). The

data from the within-subjects design were used to examine direct influence of media exposure on

perceptions of police and its moderation effects with audience traits. The data from the between-

subjects design were used to estimate mediation effects and conditional direct effects in a

regression-based path analysis. The following sections cover more specifics of the video

conditions and variables that were used for the study.

### Video Conditions

Five different edited video segments were used in this experimental design. According to

Potter and Chang (1990), media effects on perceptions are conditioned by "the degree of reality

that people 'see' in mediated messages" (p. 160). Considering that reality-based programming is

influential in shaping perceived reality in the media (Oliver & Armstrong, 1995), all

experimental conditions in this study were based on reality or documentary format. Edited video

segments were parts of full TV shows or similar documentary footage. These shows were edited

to be approximately two minutes long. Since there could be concerns regarding whether different

video conditions were comparable in terms of its intensity, two strategies were employed. First,

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the researcher attempted not to include provocative or stimulating images, which can cause unbalanced impacts on participant perceptions. Second, the edited video clips were reviewed by several criminal justice experts to determine content validity; that is, the video content was reviewed to determine that the negative imagery of the police was indeed negative and the positive imagery of the police was indeed positive. After reviewing the feedback on the edited video clips, the researcher concluded that none of the video conditions was particularly intense and that content validity had been achieved.

The police misconduct condition depicts victims or victims' family members who experience or reflect upon police use of force. This video segment was derived from *Once Upon a Crime: U.S. Police Brutality*. The positive police condition focused on the high risk of police work and the police officers' sacrifices. Previews of two documentaries were edited and compiled: *Heroes Behind the Badge* and *Fallen Project*. The crime condition centered on one actual crime involving a family massacre. A video segment from *ABC News* was edited; this highlighted the dramatic aspects of crimes while scarce attention was paid to causes and explanations for crimes. The control condition featured a short lecture about public speaking and contained no direct information related to police or crime. This video clip was derived from a *Ted Talk*. The other control condition was edited from both the police misconduct condition and the positive police condition so that mixed messages about the police could be produced.

Once respondents finished watching the randomly assigned video clip, they were asked to complete a manipulation check asking which topic bests described the video they watched. They were given four options: police misconduct, police sacrifice, violent crime, and public speaking. Students who were assigned to watch the mixed condition that contained both positive and negative police images were asked to check two responses.

**Measures**

Before watching the video, participants responded to questions related to perceptions of police. Participants then watched one of the edited video segments based on random assignment. In a post-viewing questionnaire, participants were asked to respond to questions related to their media use, perceptions of crime and police, demographic variables (e.g., gender, race), victimization experiences, and prior negative contact with the police. Scales regarding perceptions of crime and police are presented in Table 1 below.

Before viewing the video, respondents were asked to provide their general perceptions of police. After this was completed, the media clip was randomly provided. Once participants completed watching video clips, *Qualtrics* automatically distributed a post-viewing questionnaire that includes personal demographics and the set of questions measuring perceptions of police and crime. The following section provides details of each measure.

The first section of the survey contained general assessments of the police, including confidence in the police and perceived police legitimacy, which were used as dependent variables in the current study (Cao, 2015; Tyler & Huo, 2002). The first set of questions in pre-test were asked again in the post-test to estimate the changes in the means of perceptions of police. The second section of the survey contained perceptions of criminal penalties. The third section of the survey contained respondents' patterns of televising viewing, mirroring the findings based on cultivation theory (Gerbner et al., 1980; Nabi & Sullivan, 2001).

The fourth section of the survey, perceptions of procedural justice, included respondents' judgments concerning the quality of police decision-making and their treatment (Reisig et al., 2007; Sunshine & Tyler, 2003b). The fifth section of the survey, perceptions of distributive justice, included survey items adapted from Reisig et al. (2007). The sixth section of the survey,

perceptions of crime, concerned the instrumental model that argues perceptions of police are driven by their performance indicators such as fear of crime and perceived risk of crime (Jackson & Sunshine, 2007; Jang & Hwang, 2014).

The seventh section of the survey, perceptions of neighborhood, was designed to capture the expressive model that proposes that perceptions of police are influenced by respondents' perceptions regarding community values such as collective efficacy and perceived incivility (Dirikx et al., 2012; Jackson & Bradford, 2009). The eighth section of the survey focused on individual experiences with crime and police so that the moderating roles of these variables in predicting perceptions of police can be examined. These variables were included to reflect the development in studies involving the differential reception thesis (Dowler, 2002; Roche et al., 2016).

Items asking individuals' demographic variables were located at the end of the survey with the hope that respondents would be honest to sensitive questions if placed in earlier sections (Burns et al., 2008; Dillman, Smyth, & Christian, 2014). Participants' majors were also collected considering that the proportion of participants' majors can be different between groups, and this potential non-equivalence can confound the influence of the media (Lambert, 2004).

Seven sets of measures were based on previous studies, but some items were slightly changed to suit to the current study. Another important feature of this web-based survey is the use of visual analog scales (VAS). VAS refers to a psychometric scale that allows respondents to specify their response on a continuous line between two ends. Recent research method articles have demonstrated that VAS is beneficial in increasing the accuracy of responses and engaging respondents in the survey (Sikkel, Steenbergen, & Gras, 2014). Considering the recommendation

from Roster, Lucianetti, and Albaum (2015), clear instructions regarding the VAS were provided to respondents.

Table 1

*Item References by Measure*

| Concept | Item(s) | Source(s) |
|---|---|---|
| General Media Exposure | | |
| The number of hours watching television | 1-6 (6 items) | Nabi and Sullivan (2001), Shrum, Wyer Jr, and O'Guinn (1998) |
| The frequency of using different media channels | 7-11 (5 items) | Kubrin et al. (2009) |
| The Instrumental Model | | |
| Fear of Crime | 12-19 (8 items) | Kohm et al. (2012) |
| Perceived Risk of Victimization | 20-12 (3 items) | LaGrange and Ferraro (1989), Custers and Van den Bulck (2011) |
| The Expressive Model | | |
| Collective Efficacy (Social Cohesion + Informal Control) | 23-32 (10 items) | Sampson, Raudenbush, and Earls (1997) |
| Perceived Incivility | 33-40 (8 items) | LaGrange, Ferraro, and Supancic (1992) |
| The Procedural Justice Model | | |
| Procedural Justice scale (Quality of Decision Making + Quality of Treatment) | 41-46 (6 items) | Gau (2011, 2014), Reisig et al. (2007) Gau (2011), Correia et al. (1996) |
| The Distributive Justice Model | | |
| Police Distributive Justice scale | 47-49 (3 items) | Reisig et al. (2007) |
| General Perceptions of Police | | |
| Perceived Police Legitimacy | 50-52 (3 items) | (Gau, 2011), Reisig et al. (2007) |
| Confidence in the Police | 53-56 (4 items) | (Gau, 2011), Reisig et al. (2007) |
| Personal Experience with Crime and Police | | |
| Victimization Experience | 57-64 (8 items) | Custers and Van den Bulck (2013) |
| Negative encounter with police | 65-67 (3 items) | Lee and Gibbs (2015) |
| Demographics | | |
| Race and Ethnicity | 68 (1 items) | Ulmer, McFadden, and Nerenz (2009) |
| Gender | 69 (1 items) | Magliozzi, Saperstein, and Westbrook (2016) |
| Major | 70 (1 items) | Lim (2015) |

**Dependent variable.** Some researchers examined the validity of constructs involving perceptions of police (Gau, 2011, 2014; Reisig et al., 2007). Based on this development in measures, the current study differentiates two measures—confidence in the police and perceived police legitimacy—as separate dependent variables. Confidence in the police was measured with a four-item additive scale adapted from Gau (2011) and Reisig et al. (2007), (1) "*People's basic rights are well-protected by police officers in my community*," (2) "*Police officers can be trusted to make decisions that are right for my community*," (3) "*Most police officers in my community do their jobs well*," and (4) "*Police officers in my community are generally honest.*" The reliability test of the scale at pre-test (Cronbach's $\alpha$ = .94, mean interitem $r$ = .81) and post-test (Cronbach's $\alpha$ = .96, mean interitem $r$ = .86) indicated a high degree of internal consistency (DeVellis, 2012). A principal axis factoring analysis, using a direct oblimin method, was conducted to check the potential grouping of four items. Using the Kaiser-Guttman (or K1) criterion, the results indicated an emergence of one factor that had an eigenvalue of 1.00 or higher. For the other scales, the same steps to ensure reliability and validity were taken.

On the other hand, perceived police legitimacy was represented with three items that reflect obligation to obey the law, (1) "*People should accept police officers' decisions even if they think that the police are wrong*," (2) "*When the police issue a formal order, people should do what the police say even if they disagree with it*," and (3) "*Generally speaking, people should do what the police tell them to do.*" (Gau, 2011, p. 497; Reisig et al., 2007). Responses to these items were indicated on a seven-point VAS that ranges from 1 (*strongly disagree*) to 7 (*strongly agree*) with two decimals. Each scale was constructed by summing responses so that the higher score indicates positive perceptions of police (See Appendix C). The magnitudes of the reliability for the police legitimacy scale at pre-test (Cronbach's $\alpha$ = .82, mean interitem $r$ = .61)

and post-test (Cronbach's $\alpha$ = .84, mean interitem $r$ = .65) were both above the acceptable range (DeVellis, 2012). All three items loaded on only one factor for pre- and post-test data respectively with one eigenvalue greater than 1.00.

**Mediating variables.** An effective method to measure fear of crime has been a long and contested argument (Jackson, 2011; LaGrange et al., 1992; Warr, 1987). Researchers made the consensus that fear of crime is a negative emotional reaction, whereas the perceived risk of crime reflects more of a cognitive assessment (Gray, Jackson, & Farrall, 2011; Rountree & Land, 1996). To mirror this development in a scale, fear of crime was measured by asking how fearful participants were of being the victim of the eight specific crimes as follows: (1) "*I am afraid of having my money or my property stolen (e.g., pick-pocketing),* " (2) "*I am afraid of getting robbed (threat by force or threat of force),*" (3) "*I am afraid of being beaten or hurt,*" (4) "*I am afraid of being scammed,*" (5) "*I am afraid of being sexually harassed,*" (6) "*I am afraid of having my property damaged,*" (7) "*I am afraid someone will break into my house,*" and (8) "*I am afraid someone will follow me and pick on me persistently*" (Chiricos, Welch, & Gertz, 2004, p. 370; Kohm et al., 2012, p. 80; Appendix C). These items can be comparable to items that were used in previous studies (Chiricos et al., 1997; Eschholz et al., 2003; Kohm et al., 2012), but these items were modified and developed to be more suitable for college students by excluding crimes that are less likely (e.g., murder) and including crimes that can occur among students (e.g., picking on). The responses were indicated on a 7-point VAS ranging from 1 to 7, with 1 representing *strongly disagree* and 7 representing *strongly agree*. The fear of crime scale was constructed by summing so that the higher score indicates a higher fear of crime (range 8–56). The reliability test score was examined to compare with the widely accepted standard from Nunnally (1978). The computed alpha score (Cronbach's $\alpha$ = .93, mean interitem $r$ = .63)

exceeded an acceptable level of internal consistency. The items for this scale were all loaded on one factor (DeVellis, 2012).

Perceived risk of victimization is adopted from Custers and Van den Bulck (2011) and LaGrange and Ferraro (1989). In particular, respondents were asked how likely they were to become a victim of the following crimes within the next year: (1) "*I will be beaten-up and assaulted by someone*," (2) "*I will be raped*," and (3) "*I will experience a 'property' crime (such as burglary or theft)*," (Custers & Van den Bulck, 2011, p. 114; LaGrange et al., 1992, pp. 701-702). The response was indicated on a 7-point VAS, ranging from 1 (*very unlikely*) to 7 (*very likely*) with two decimal points. The scale was summated so that the higher score indicates a higher level of perceived risk of victimization (range 3-21). An internal consistency reliability test was performed to examine the reliability of the measure, and the scale was internally consistent (Cronbach's $\alpha$ = .78, mean interitem $r$ = .56). A factor analysis using principal axis factor model indicated that all three items loaded on one construct.

In the current study, collective efficacy was hypothesized to mediate the effects of media on perceptions of police according to the expressive model (Jackson & Bradford, 2009). Depending on the researchers, the scale for collective efficacy has been used differently (Cohen, Inagami, & Finch, 2008; DeKeseredy, Alvi, & Tomaszewski, 2003). This study operationalized collective efficacy based on one of the most often replicated items from Sampson et al. (1997). This scale consists of two sub-dimensions: social cohesion and informal social control. There has been a dispute over whether researchers should separate the two subscales or aggregate them (Brisson & Altschul, 2011; DeKeseredy et al., 2003). The current study employed an aggregate measure of collective efficacy as Sampson and Raudenbush (1999) used it for the parsimony of

the analysis. Respondents were asked to base their answers regarding neighborhood on their permanent home address (e.g., family home).

Social cohesion was measured by asking the extent to which respondents agree or disagree with the given statements: (1) "*My neighbors are willing to help each other,*" (2) "*My neighborhood is close-knit,*" (3) "*People in this neighborhood can be trusted,*" (4) "*People in this neighborhood generally don't get along with each other,*" and (5) "*People in this neighborhood do not share the same values*" (Sampson et al., 1997, p. 920; See Appendix C). Answers were reported on a 7-point VAS ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) instead of the five-point scale to increase variation of each item. The fourth and the fifth items were reversely recoded.

Similarly, to measure the informal control scale, respondents were asked to indicate the likelihood that they would intervene in the following five situations: (1) "*Children were skipping school and hanging out on a street corner,*" (2) "*Children were spray-painting graffiti on a local building,*" (3) "*Children were showing disrespect to an adult,*" (4) "*A fight broke out in front of their house,*" and (5) "*The fire station closest to their home was threatened with budget cuts*" (Sampson et al., 1997, pp. 919-920; See Appendix C). Responses were reported on a 7-point VAS ranging from 1 (*very unlikely*) to 7 (*very likely*). All items were summed to construct the additive scale so that a higher score indicates a higher level of collective efficacy (range 10–70).

Factor analysis was conducted to check factor loading, and the result indicated an emergence of two factors with an eigenvalue of 1.00 or higher (DeVellis, 2012). That said, an aggregate scale was used for three reasons. First, as previously discussed, there has been a dispute over whether the collective efficacy scale should be separated, but sub-dimensionality of the scale is not an important focus of the current study. Second, a result from correlation analysis

between an aggregate measure of collective efficacy and the two extracted factors demonstrated that the first factor and the aggregate construct are greatly correlated (sharing 93.3% of variance). Lastly, the aggregate scale for collective efficacy was moderately reliable (Cronbach's $\alpha$ = .68, mean interitem $r$ = .17).

In addition to collective efficacy, perceived incivility was measured following LaGrange et al. (1992). In their original study, eight items were used to construct the general incivility index (LaGrange & Ferraro, 1989). They listed different social and physical disorders and asked respondents to what extent they considered each item to be a problem: (1) *"Trash and litter lying around my neighborhood,"* (2) *"Neighborhood dogs running loose,"* (3) *"Inconsiderate or disruptive neighbors,"* (4) *"Vacant houses and unkept lots,"* (5) *"Unsupervised youth,"* (6) *"Too much noise,"* (7) *"People drunk or high on drugs in public,"* and (8) *"Abandoned cars or car parts lying around."* (LaGrange et al., pp. 329-330). These eight items were scored on a 7-point VAS ranging from 1 (*not a problem*) to 7 (*very serious problem*). Scores were summated so that higher scores reflect higher levels of incivility. The reliability test score was high (Cronbach's $\alpha$ = .91, mean interitem $r$ = .54). The items were all loaded on one factor, suggesting that the perceived incivility scale is a unitary construct.

Perceptions directly related to the police are primarily adopted from Reisig et al. (2007) since they refined original items from earlier studies by taking into account multicollinearity issues and factor loadings (Sunshine & Tyler, 2003a; Tyler, 1990; Tyler & Huo, 2002). Reisig et al.'s (2007) results from extensive exploratory factor analyses (EFA) have been supported by other researchers who conducted confirmatory factor analyses with the items endorsed by Reisig et al. (2007) (Gau, 2011). Specifically, the procedural justice scale is comprised of two subscales: quality of treatment and quality of decision making. Quality of treatment was

measured using a three-item scale (i.e., "*Police officers in my community treat people with dignity and respect*," "*Police officers in my community treat people fairly*," and "*Police officers in my community take time to listen to people*" (Gau, 2011, p. 492; 2014, p. 195; Reisig et al., 2007). These items reflect global judgments regarding procedural justice rather than specific assessments of police officers from their own experience with the police.

Similar to quality of treatment, quality of decision making is a three-item scale measured with the following survey items: (1) "*Police officers in my community explain their decisions to people*," (2) "*Police officers in my community make decisions based on legal facts and not on their own opinions*," and (3) "*Police officers in my community make decisions to handle problems fairly*" (Gau, 2011, p. 492; Reisig et al., 2007, p. 1014). The responses for these items were measured on a VAS, ranging from 1 (*strongly disagree)* to 7 (*strongly agree*). The procedural justice scale was constructed by summing two subscales so that higher scale scores can reflect higher perceived levels of procedural justice (range 6-42). The reliability test score was also computed, and the scale was reliable (Cronbach's $\alpha$ = .96; mean interitem $r$ = .79). Principal component factor analysis suggested a unidimensionality of the scale, explaining for 82.91% of the variance across six items.

The distributive justice scale was drawn from Reisig et al. (2007). This three-item scale is developed to tap into respondents' perceptions regarding how well police services are distributed across social groups: (1) "*Police officers in my community provide the same quality of service to all people*," (2) "*Police officers in my community give minorities less help because of their race*," and (3) "*Police officers in my community provide better services to wealthier people*". Respondents were required to rate items on a VAS from 1 (*strongly disagree*) to 7 (*strongly agree*). The last two items were negatively worded, and they were reverse coded in the analyses.

The items were summated so that higher scores can reflect higher levels of distributive justice (range 3-21). The internal consistency reliability test score was acceptable according to Nunnally's (1978) standard (Cronbach's $\alpha$ = .86; mean interitem $r$ = .65), and all three items were loaded on one factor.

**Moderating variables.** Direct experience with crime was considered as a moderating variable (Custers & Van den Bulck, 2011). Victimization experience were measured with eight different questions about respondents' previous experience of victimization incidences over the past one year: (1) "*having my money or my property stolen (e.g., pick-pocketing)*," (2) "*getting robbed (threat by force or threat of force)*," (3) "*being beaten or hurt*," (4) "*being scammed*," (5) "*being sexually harassed*," (6) "*having my property damaged*," (7) "*someone broke into my house*," and (8) "*someone followed and picked on me persistently.*" The response categories were *yes* or *no*. Direct experience index was generated by summing and dichotomizing the responses (0 = non-victim, 1= victim).

Negative contact with police was measured with three dichotomous indicators that ask about respondents' previous experience with an unreasonable stop, insulting language, or physical force in the previous year (Lee & Gibbs, 2015). The response categories were *yes* or *no*. Negative contact with police index was generated by summing and dummy-coding the responses (0 = no negative encounter with police, 1 = negative encounter with police).

Race was measured according to the recommendation of Ulmer et al. (2009). Participants were asked to indicate what their races are. They were allowed to indicate more than one race: *White*, *Black or African American*, *American Indian or Native American*, *Asian*, *Native Hawaiian* or *Other Pacific Islander*, and *Some other race*. One of the main purposes of the current study is to test the moderating effect of race. Thus, it is critical to distinguish between

different races. Especially, it was hypothesized that white students have different perceptions of police in comparison to non-white students (Lim, 2015). Race was dummy-coded (0 = non-white, 1= white). Sex was measured with a single item asking respondents' sex at birth (Magliozzi et al., 2016) (0 = female, 1 = male).

Previous studies have shown that students' majors are influential in shaping their perceptions of the criminal justice system because opportunities to learn about the criminal justice system differ between students who major in academic studies related to criminal justice and those who do not (Lambert, 2004; Lim, 2015; Tsoudis, 2000). The major variable was dichotomized depending on students' majors and minors; students who major in or minor in criminology and criminal justice (CJ) majors were coded as 1, whereas non-CJ majors were coded as 0.

**Variables for balance tests.** In this study, television viewing was included to test whether the random assignment process was accomplished. Scholars have used different measures of media: overall exposure to media, exposure to specific media channels, and exposure to a particular content type (Callanan & Rosenberger, 2015; Eschholz et al., 2003; Fedorek, 2013; Weitzer & Kubrin, 2004). These scales have respective weaknesses. For example, measures using the overall exposure to a particular medium have failed to consider types of content that audiences are exposed to (Weitzer & Kubrin, 2004). While asking respondents about how frequently they watch particular programs addresses this issue, this measure also is not free from several limitations (Shrum et al., 1998). First, one retrospective item asking the overall TV use makes it hard to estimate the exact amount of time that audiences spent (Maeder & Corbett, 2015). Second, since there are multiple forms of media that respondents can use other than television, measuring the exposure of crime-related media only

by the extent of exposure to television may be futile (Chiricos et al., 1997; Roche et al., 2016). Thus, it may be beneficial to consider types of media channels.

To address this design deficiency, two scales were used to tap into media exposure. The first measure specifically targeted respondents' hours watching television. For the average weekday, specific time periods were provided for respondents to increase the precision of their memory: *6 a.m. to noon*, *noon to 6 p.m.*, *6 p.m. to midnight*, *and midnight to 6 a.m.* (Nabi & Sullivan, 2001, p. 812). Respondents were also asked to indicate the average amount of hours that they spend watching television on Saturday and Sunday respectively. The scale was constructed by weighting the average amount of television watching during the average weekday by five and summating that with the amount of television viewing during the weekend.

The second media scale tapped into a variety of media exposure. Weitzer and Kubrin's (2004) media scale was adapted. This measure was developed to consider diverse channels and specific content. In particular, respondents were asked the extent to which respondents agreed with the following statement: (1) "*I often watch national evening news programs such as World News with David Muir or cable news programs like CNN,*" (2) "*I often watch local television news for information other than weather and sports,*" (3) "*I often read the news or editorial sections of a daily newspaper,*" (4) "*I often listen to radio shows that invite listeners to call in to discuss current events, public issues, and politics,*" and (5) "*I often go online to get information on current events, public issues, and politics*" (See Appendix C). Each item was measured on a VAS where 1 is *strongly disagree*, and 7 is *strongly agree*. The composite scale was created by summation (range 5-35). The scale was internally consistent (Cronbach's $\alpha$ = .69; mean interitem $r$ = .31).

**Data Analysis**

The current section provides detailed information about what was done to analyze the data. At the outset, it should be clarified that the current study did not attempt to replace missing data. There were two reasons for that. First, while there are various ways to handle the missing data (e.g., mean imputation, regression coefficient replacement or multiple imputation techniques) (Marston et al., 2010), such substitution for missing values should be allowed only when there is a clear pattern indicating missing values are completely random (MCAR) (Allison, 2002; Graham, 2009). The missing data in the current study were systematic and not random. Most missing data came from students who stopped participating. When participants did not have extensive missing data, they were more likely to be demographic information, making it difficult to replace them with generated values. More importantly, the online survey in the current study was designed to require an answer to all questions when participants forgot to check the response or tried to skip questions. Thus, 719 students (including students who indicated that they do not wish to participate the survey) out of 778 completed the entire survey (the survey completion rate = 95.24%), reducing the need for the missing data replacement. Where it was possible, pairwise deletion method was preferred in conducting statistical analysis over listwise deletion technique to minimize the loss of the data.

The data analysis was divided into three parts. The first part examined the reliability and validity of measures that were employed in the current study. Many measures employed in the study were revised from the scales adapted from previous studies. Cronbach's alpha score was computed to ensure the internal consistency of the multiple indicators (Remler & Van Ryzin, 2015). Following the commonly accepted standard (Spector, 1992), the current study examined if computed Cronbach's alpha values of scales were higher than .70. That being said, the number

of scale items influences Cronbach's alpha value (DeVellis, 2012). Scales with less than ten items are prone to show a low alpha score. Briggs and Cheek (1986) suggested that mean inter-item correlation for the questions should be noted and this value should be above .2. Therefore, inter-item correlations were examined to test the reliability of all measures. The results from reliability tests and factor analyses were discussed in the measures section.

Next, two forms of construct validity (i.e., convergent validity and discriminant validity) were examined to ensure whether the measures in the current study represent "the trust construct of interest" correctly (Remler & Van Ryzin, 2015, p. 106). Construct validity concerns "the theoretical relationship of variable (e.g., a score on some scale) to other variables" (DeVellis, 2012, p. 64). Put simply, variables (e.g., confidence in the police) should logically or theoretically correspond with other variables based on theory and prior research. Correlations between key variables were confirmed. For instance, the perceived level of procedural justice was positively correlated with police legitimacy at post-test survey ($r = 64$, $p < .01$). Since the calculated correlations between key variables confirmed the theoretically proposed relationships, the current study assumed that convergent validity was met. There were also variables that are expected to be independent of other variables. For instance, a student's major is not expected to have a logical connection with whether that student has victimization experience. Since the correlation between two variables was small ($r = -.01$, n.s), discriminant validity was assumed to be ensured. Additionally, exploratory factor analysis (EFA) was performed to examine the dimensionality of scales and reduce multiple items to a fewer number of factors (Spector, 1992).

The second part of the analysis provides descriptive information about the sample. Various demographic data (e.g., sex, race, victimization experience, police contact, major, media use) from the sample was provided. Additionally, the researcher examined if the random

assignment process occurred as it was expected. To compare the difference in individuals'

characteristics across five experimental groups, a series of bivariate analysis (chi-square tests and

analysis of variance) were performed (Table 2).

The last part of the analysis consists of inferential statistics. Proposed hypotheses were

tested using the data from a between-within subjects design. Specifically, the hypotheses

regarding direct influences of video viewing were tested in several ways. First, paired-samples $t$-

tests were performed to estimate the mean differences between pre- and post-test data (Field,

2013). To test interaction effects between individual characteristics (race, sex, CJ major,

victimization experience, and negative encounter with police) and the media condition, a series

of mixed between-within subjects analysis of variance (ANOVAs) were conducted. To confirm

the findings from the with-in subject design, a one-way between-groups ANOVA was performed

to compare differences in means between experimental groups (Field, 2013). If there was a

significant difference in perceptions of police between the video conditions, post-hoc comparison

(e.g., police misconduct condition vs. control group) was planned to be implemented.

Another hypothesis regarding an asymmetrical impact on perceptions of police from

negative media representations was tested by comparing the impact of the negative police

condition and the impact of the positive police condition (Bradford et al., 2009; Maguire et al.,

2017; Skogan, 2012). The data collected from the within-subjects design was used for the

comparison between the impacts of the negative police condition and the positive police

condition. Based on these proposed analyses, this dissertation research can improve knowledge

about the relationships between media consumption and perceptions of the police.

Even when there was no direct effect of the media condition since it is still possible that

the video condition indirectly influenced perceptions of police through changes in different key

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perceptions (Hayes, 2013). This possibility was first explored using a series of ANOVAs. It was tested whether there were impacts of the video conditions on critical perceptions of crime, community, and criminal justice (i.e., fear of crime, perceived risk of victimization, collective efficacy, perceived incivility, procedural justice, and distributive justice) that were proposed as intervening variables from previous studies. When significant changes in the variance of these perceptions when compared the groups between different media conditions, it was tested if these variables were correlated with perceptions of police using a series of bivariate correlation analyses with Pearson product-moment correlation coefficient. If correlations between proposed mediating variables and perceptions of police were significant, a series of simple mediation analyses were conducted to examine if experimental conditions (as opposed to other experimental conditions) affected perceptions of police through changes in key perceptions (O'Toole & Fondacaro, 2017). Regression-Based path analysis by a bootstrapping approach was employed to estimate indirect effects of the media condition with 10,000 resamples. This process was performed using a computational tool (PROCESS Macro) added on SPSS.

Finally, the hypotheses involving both interactions and mediations were tested simultaneously. Moderated mediation models were tested using regression-based path analysis with the assistance of the PROCESS Macro to estimate interactions and conditional indirect influences (Hayes, 2013; Yang, Salmon, Pang, & Cheng, 2015). More specifically, the researcher examined whether the impact of the media condition on crucial perceptions was contingent on individuals' characteristics and experiences. A series of bias-corrected bootstrapped moderated mediation analyses were carried out to compute indirect effects with 10,000 resamples (Hayes, 2009; Preacher, Rucker, & Hayes, 2007). The post-test data from the

between-group subjects design were used to estimate conditional indirect effects (Figure 6)

(Granot et al., 2014; O'Toole & Fondacaro, 2017; Pollack, Vanepps, & Hayes, 2012).
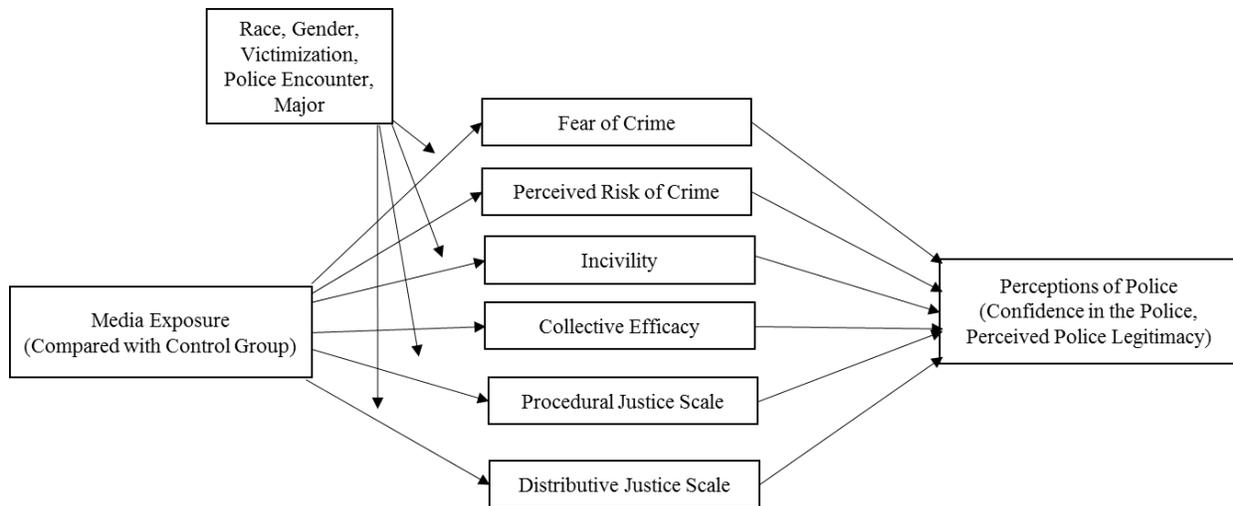


*Figure 6*. The conceptual diagram of the full mediated moderation model.

Before carrying out various statistical models, the assumptions for each mathematical

model were checked. For instance, for the independent-samples *t*-test, Levene's test for equality

of variances was conducted to see whether the variance of outcome variables was the same for

different experimental groups. In terms of paired-samples t-test, the sample size was checked in

case the level of perceptions of police (confidence in the police and police legitimacy) were not

normally distributed. Before performing a regression-based path analysis, several assumptions

were also examined: multicollinearity, normality, linearity, homoscedasticity, independence of

residuals (Tabachnick & Fidell, 2013). More detailed discussion about the assumption tests can

be found from Chapter IV findings.

**Human Subjects Protection**

The current study was approved by the Institutional Review Board of the university

where the data collection was implemented. Special attention was paid to ensure that all steps for

the data collection and management were taken as it was proposed in the approved IRB protocol.

Participants were informed that any personal information obtained in this study that might identify individual participants would be kept anonymous. Additionally, students were assured that they can withdraw their participation at any time and that if they wanted to stop responding to the online survey, all they needed to do was to close the webpage. On the projector screen in each classroom, an alternative link for students who wished not to participate or those who stopped participating was provided. They were instructed to open a new web browser window to open a distinct video link to view content unrelated to the survey that would require the rest of the time allotted for survey administration.

In case there was psychological influence from the video clip, a wider range of services in the community and hotlines for the research subjects were presented in the informed consent, at the end of the survey, and in the thank you email that was sent after the students participated in the survey. The services included Armstrong-Indiana Crisis Hotline (1-877-333-2470), 911, and the Emergency Department at Indiana Regional Medical Center.

CHAPTER IV

FINDINGS

Results from statistical analyses are provided in this chapter. The research was conducted using a randomized experimental design to see if media exposure influences perceptions of police. The first research question involved direct effects of media exposure on perceptions of police. The second research question centered on interaction effects between participant characteristics and media exposure. The third research question is related to indirect effect of media exposure on perceptions of police. The fourth research question concerned moderated mediation model hypothesizing indirect effects of media exposure are contingent on participant characteristics. Before examining the impact of experimental conditions, whether the random assignment process was successfully accomplished was statistically tested. To ensure the randomization, the following section first presents the results from balance tests. It was tested whether individual characteristics and some variables (i.e., firsthand experiences of crime and police, TV consumption and media consumption) that could potentially affect the relationship between the experimental conditions were equally distributed. After descriptive statistics of participants are discussed, the results from paired $t$-tests will be first presented from each condition (with-subject effects) to analyze whether experimental conditions caused changes in individuals' perceptions of police. Next, the researcher examined whether various experimental conditions brought about changes in different perceptions of crime and criminal justice in addition to global attitudes toward police. The comparisons in perceptions of crime and criminal justice were conducted using analyses of variance (ANOVAs).

Then, the following section presents the findings from independent-samples $t$-tests to explore the possibility of interaction effects between experimental conditions and respondent

characteristics and experiences. Once individual characteristics and experiences that were

associated with perceptions of police are identified, the results from mixed design ANOVAs will

be presented to answer research question as to whether individual characters and experiences

interact with media effects to influence perceptions of police. Finally, whether there were mean

differences in perceptions of crime and criminal justice will be examined. This is to examine if

the results from the current study meet the assumption to investigate the mediating roles of key

factors discussed in the previous studies. If differences in perceptions of crime and criminal

justice were found, the results of mediation analyses would be elaborated.

### Assumptions for Statistical Analysis

Before proceeding, it should be stated that all statistical analyses were conducted after

checking whether there were violations of basic assumptions. Regarding independent-samples t-

test, the results of Levene's test for equality of variances were considered (Tabachnick & Fidell,

2013). When equal variances were not assumed across groups (e.g., experimental conditions,

race, sex, CJ major, victimization experience, and negative encounter with police), the adjusted $t$-

test results were calculated using the option of equal variances not assumed in SPSS. For

ANOVAs, Levene's tests for homogeneity of variance were performed if the variance in key

variables were the same for different groups. When there was an indication of the violation of the

homogeneity of variance, a more robust test (i.e., Welch) was conducted to compare different

groups (Field, 2013). Additionally, before carrying out a regression-based path analysis, the

current data were examined if they met the assumptions for ordinary least squares regression.

First, multicollinearity was checked using Variance Inflation Scores (VIF) and correlation

coefficients ($r = .9$ and above). Variables that were used for regression-based path analyses did

not have VIF values higher than 3 (Kennedy, 1985). Second, the distributions of perceptions of

police were checked following Kline's (2005) conventions of 3 for skewness and 10 for kurtosis. Both distributions of the confidence in the police and police legitimacy scales were nearly normal (skewness < absolute value of 1.0). Simultaneously, the residual scatter plots were drawn to check normality, linearity, and independence of residuals (Tabachnick & Fidell, 2013). No significant issue was found, enabling regression-based path analysis to be performed.

## Sample Demographics

Table 2 shows the demographic information of the participants, their experiences of crime and police in addition to their level of self-reported TV/media consumption. The sample was comprised of 699 students. There were more females (n = 375, 54.7%) than males (n = 311, 45.3%). Concerning race, 78.1% (n = 528) of the respondents indicated that they are White, and 14.8% (n = 100) reported as Black or African American. Additionally, six participants (0.9%) reported as Native Americans, while 2.5% (n = 17) reported as Asian. There was only one participant (0.1%) who reported as Native Hawaiian or Pacific Islander, and 3.6% reported being of other races or ethnicities (n = 24). Regarding their firsthand experiences with crime and police, two factors were used: victimization experience and negative encounter with police. More than a half of respondents (n = 447, 65.5 %) reported that they had not experienced any crime listed in the survey, but 34.5% (n = 235) reported that they experienced at least one crime in the previous year. About a fifth (n = 154, 22.4%) of the sample reported having a negative encounter with police in the last year at least once, whereas the majority (n = 532, 77.6%) of the sample reported that they did not have any negative interaction with police in the previous year. The overall sample is fairly evenly split between CJ majors (n = 352, 51.3%) and non-CJ majors (n = 334, 48.7%).

In addition to categorical variables, several continuous variables were measured to confirm an equal distribution of the participants: TV consumption, other media consumption, confidence in the police at Time 1, and police legitimacy at Time 1. The focus of the current study involved media, and it was hypothesized that media exposure can impact individuals' perceptions. Thus, the level of TV consumption and other media consumption were measured. Respondents scored an average of 34.25 hours watching TV per week ($SD = 25.66$; range: 0–183 hours). The average score of media consumption was 15.44 ($SD = 5.74$; range: 5–33.21), drawing a positively skewed distribution. Respondents rated an average of 19.55 ($SD = 5.65$; range: 4–28), indicating a high level of confidence in the police in general. Similarly, the average score of police legitimacy was 13.96 ($SD = 4.04$; range: 3–21), meaning that respondents perceived that the police institution is legitimate on average.

## Balance Tests

Confidence in experimental research can be under threat when random assignment is not successfully accomplished. Balance tests or randomization checks are conducted to check whether the distribution of measures before the experiment is homogenous across experimental groups. It is expected that baseline information is independent of assigned experimental condition. Bivariate analyses were conducted to ensure whether a random assignment was performed in a way that minimizes pre-existing differences between experimental groups. Table 2 includes the results of the bivariate analyses. Overall, there were no significant differences between groups regarding variables of interest and demographic information. More specifically, chi-square tests were performed to compare the distribution of the categorical variables across different experimental groups, while ANOVA tests were conducted for the continuous variables to compare the group means.

There was no significant difference in respondents' sex between the five groups, $\chi^2(4, n = 686) = 2.39$, $p = .66$. A chi-square test for independence also indicated that there was no significant association between race and experimental conditions, $\chi^2(20, n = 676) = 2.39$, $p = .32$. The number of students in CJ majors and non-CJ majors did not differ significantly across experimental groups, $\chi^2(4, n = 686) = .63$, $p = .96$. The group difference in victimization experience also did not reach statistical significance, $\chi^2(4, n = 682) = 4.87$, $p = .30$. The group comparison test revealed that there was no unequal distribution of participants who experienced negative interaction with police across different conditions, $\chi^2(4, n = 686) = 5.40$, $p = .25$. Put simply, it was not necessary to include any of these categorical variables as covariates when examining the effect of experimental conditions.

Turning to the results from ANOVAs, there was no significant difference found regarding TV consumption between different groups, $F(4, 692) = .730$, $p = .572$. Also, the average level of media consumption was not significant across different groups, $F(4, 691) = 1.10$, $p = .357$. The researcher tested whether confidence in the police before media exposure differs depending on the experimental group, if there was no significant difference, $F(4, 693) = .896$, $p = .466$. This was also true for police legitimacy measured before treatment was randomly assigned, $F(4, 694) = 2.13$, $p = .08$.

Table 2

*Participant Characteristics and Bivariate Statistic Results*

|  | Video 1 Violent Crime (n = 142) | Video 2 Negative Police (n = 144) | Video 3 Positive Police (n = 141) | Video 4 Control Condition (n = 133) | Video 5 Mixed Condition (n = 139) | Total Sample (n = 699) | Bivariate Statistics $X^2$ |
|---|---|---|---|---|---|---|---|
| Sex |  |  |  |  |  |  | $\chi^2(4, n = 686) =$ 2.39, $p = .66$ |
| Male | 42.4% (59) | 46.5% (66) | 48.2% (67) | 41.1% (53) | 48.2% (66) | 45.3% (311) |  |
| Female | 57.6% (80) | 53.5% (72) | 51.8% (76) | 58.9% (76) | 51.8% (71) | 54.7% (375) |  |
| Race |  |  |  |  |  |  | $\chi^2(20, n = 676) =$ 2.39, $p = .32$ |
| White | 75.4% (104) | 77.0% (107) | 80.9% (110) | 82.0% (105) | 75.6% (102) | 78.1% (528) |  |
| Black or African American | 14.5% (20) | 15.1% (21) | 12.5% (17) | 11.7% (15) | 20.0% (27) | 14.8% (100) |  |
| American Indian/ Native American | 2.9% (4) | 0.7% (1) | 0.0% (0) | 0.0% (0) | 0.7% (1) | 0.9% (6) |  |
| Asian | 2.9% (4) | 2.2% (3) | 1.5% (2) | 3.9% (5) | 2.2% (3) | 2.5% (17) |  |
| Native Hawaiian/ Pacific Islander | 0.0% (0) | 0.0% (0) | 0.7% (1) | 0.0% (0) | 0.0% (0) | 0.1% (1) |  |
| Other | 4.3% (6) | 5.0% (7) | 4.4% (6) | 2.3% (3) | 1.5% (2) | 3.6% (24) |  |
| CJ Major |  |  |  |  |  |  | $\chi^2(4, n = 686)$ = .63, $p = .96$ |
| Yes | 51.1% (71) | 50.7% (72) | 51.1% (71) | 54.3% (70) | 49.6% (68) | 51.3% (352) |  |
| No | 48.9% (68) | 49.3% (70) | 48.9% (68) | 45.7% (59) | 50.4% (69) | 48.7% (334) |  |
| Victimization Experience |  |  |  |  |  |  | $\chi^2(4, n = 682) =$ 4.87, $p = .30$ |
| Yes | 37.7% (52) | 27.5% (39) | 37.7% (52) | 37.0% (47) | 32.8% (45) | 34.5% (235) |  |
| No | 62.3% (86) | 72.5% (103) | 62.3% (86) | 63.0% (80) | 67.2% (92) | 65.5% (447) |  |
| Negative Encounter with Police |  |  |  |  |  |  | $\chi^2(4, n = 686) =$ 5.40, $p = .25$ |
| Yes | 24.5% (34) | 19.0% (27) | 24.5% (34) | 17.1% (22) | 27.0% (37) | 22.4% (154) |  |
| No | 75.5% (105) | 81.0% (115) | 75.5% (105) | 82.9% (107) | 73.0% (100) | 77.6% (532) |  |

|  | Video 1 Violent Crime (n = 142) | Video 2 Negative Police (n = 144) | Video 3 Positive Police (n = 141) | Video 4 Control Condition (n = 133) | Video 5 Mixed Condition (n = 139) | Total Sample (n = 699) | Bivariate Statistics F |
|---|---|---|---|---|---|---|---|
| Mean (SD) | | | | | | | |
| TV Consumption | 32.80 (27.60) | 35.55 (24.77) | 34.23 (24.05) | 32.02 (25.45) | 36.54 (26.43) | 34.25 (25.66) | $F(4, 692) = .730$, $p = .572$ |
| Media Consumption | 15.04 (5.90) | 16.15 (5.54) | 14.92 (5.75) | 15.37 (5.68) | 15.73 (5.80) | 15.44 (5.74) | $F(4, 691) = 1.10$, $p = .357$ |
| Confidence in the Police | 19.22 (5.75) | 20.12 (5.49) | 19.10 (5.27) | 19.42 (5.88) | 19.76 (5.86) | 19.55 (5.65) | $F(4, 693) = .896$, $p = .466$ |
| Police Legitimacy | 13.42 (4.08) | 14.27 (4.09) | 13.44 (4.09) | 14.18 (4.09) | 14.49 (3.79) | 13.96 (4.04) | $F(4, 694) = 2.13$, $p = .08$ |

*Note*: Some variables include missing values. Since most of them were demographic information, these missing values were not replaced with imputed scores. CJ major stands for Criminology and Criminal Justice major.

## Research Question 1: Direct Impact of the Media on Perceptions of Police

The first research question centered on direct effects of media exposure. Depending on the media content, the direction of media effect was hypothesized to differ. To answer whether media exposure influences perceptions of police, two types of statistical analyses were employed. First, paired *t*-tests were used to investigate whether there were changes in individual perceptions within each group. Second, a series of ANOVA tests were conducted to analyze if there were group differences between different experimental conditions and the results from this between-subject design are compared to the findings from the within-subject design. These results are presented in Tables 3 and 4.

### Paired *t*-tests (Within-Subject Design)

Table 3 provides the differences between respondents' perceptions of police before and after the experimental condition. Several interesting differences were observed. First, there was a significant decrease in confidence in the police ($M = 19.63$, $SD = 5.99$) after watching the video that portrayed police misconduct as compared to the confidence in the police at Time 1 before media presentation ($M = 20.26$, $SD = 5.51$), $t(142) = 3.57$, $p < .001$ (two-tailed). The magnitude of the effect can be considered between small and medium (i.e., Cohen's $d = .31$; following Cohen's guidelines, an effect size of .5 is considered 'medium,' whereas that of .2 is considered 'small') (Cohen, 1988). Additionally, those who watched the video clip showing mixed images of police experiences showed a decrease in confidence in the police ($M = 19.39$, $SD = 5.81$) prior to watching the video clip ($M = 19.76$, $SD = 5.86$), $t(139) = 2.07$, $p = .041$ (two-tailed). Nonetheless, the estimated effect size (Cohen's $d = .17$) of the mixed video condition was small. It was also found that exposure to the video condition of violent crime caused a reduction of participants' judgements about police legitimacy ($M = 13.74$, $SD = 4.48$) when compared to their

prior perceptions of police legitimacy ($M = 13.43$, $SD = 4.09$), $t(141) = -1.95$, $p = .053$ (two-tailed). Although this effect was marginally significant, the magnitude of this effect was equivalent to the media effect of the mixed condition on confidence in the police (Cohen's $d = -.17$).

Table 3

*Paired t-tests for Perceptions of Police Within Each Experimental Group*

| Variable | Video group | Pre-test | | Post-test | | t-Statistic | Cohen's d |
|---|---|---|---|---|---|---|---|
| | | M | SD | M | SD | | |
| Confidence in the Police | Violent Crime | 19.22 | 5.75 | 19.16 | 5.88 | 0.37 | 0.03 |
| | Negative Police | 20.26 | 5.51 | 19.63 | 5.99 | 3.57*** | 0.31 |
| | Positive Police | 19.14 | 5.28 | 18.99 | 5.65 | 1.108 | 0.07 |
| | Control | 19.53 | 5.82 | 19.33 | 6.11 | 1.27 | 0.11 |
| | Mixed images | 19.76 | 5.86 | 19.39 | 5.81 | 2.07* | 0.17 |
| Police Legitimacy | Violent Crime | 13.43 | 4.09 | 13.74 | 4.48 | −1.95† | −0.17 |
| | Negative Police | 14.26 | 4.10 | 14.10 | 4.04 | 1.08 | 0.09 |
| | Positive Police | 13.43 | 4.07 | 13.67 | 4.36 | −1.60 | −0.13 |
| | Control | 14.27 | 4.05 | 14.32 | 4.04 | −0.35 | −0.03 |
| | Mixed images | 14.52 | 3.78 | 14.58 | 3.79 | −0.47 | −0.04 |

† $p < 0.06$, * $p < .05$, ** $p < .01$, *** $p < .001$.

In short, when comparing pre-test perceptions of police to post-test measures, the video conditions that contained negative police images (negative police condition and mixed condition) appeared to reduce confidence in the police. The negative impact of media exposure was more pronounced among students assigned to watch only negative police images. On the other hand, the violence condition increased perceived police legitimacy among participants.

**Analyses of Variance (Between-Subject Design)**

Additionally, a series of ANOVA tests were conducted comparing the five experimental conditions. It was expected that there would be significant differences between the average perceptions of police between groups who watched different video clips. Table 4 presents the

results of these ANOVA tests; however, there was no statistical difference in both confidence in the police and police legitimacy: $F(4, 689) = .302$, $p = .877$ and $F(4, 688) = 1.189$, $p = .314$. The estimated effect size of the between-subjects design was small in both outcome variables according to Cohen's (1988) conventions, .01 is a small effect regarding eta-squared value. The results from ANOVAs indicated that the resulting eta-squared values were substantially smaller than .01.

Table 4

*Analyses of Variance (ANOVAs) of Perceptions of Police Between Experimental Groups*

| Variable | *df1, df2* | *F* | *p* | Partial $\eta^2$ |
|---|---|---|---|---|
| Confidence in the Police | 4, 689 | .302 | .877 | .002 |
| Police Legitimacy | 4, 688 | 1.189 | .314 | .007 |

*Note: df1* is degrees of freedom of between groups, whereas *df2* is degrees of freedom for within groups. *F* statistics reflect the overall difference between experimental groups. Partial $\eta^2$ is an indication of the effect size regarding the proportion of the variance in the outcomes associated with the experimental conditions.

In sum, a series of ANOVAs comparing mean scores of perceptions of police across the experimental conditions did not confirm significant impacts of media exposure on perceptions of police from previous paired *t*-tests. A discrepancy concerning media effects may stem from methodological differences between within-subject and between-subject designs (Shadish et al., 2002). Within-subject design has a unique strength in that it can control for individual differences that the experimental participants may have.

Ideally, the random assignment process should make treatment exogenous; it is still probable that potential differences between individuals may contribute to difficulty in estimating the independent effect of treatment (Remler & Van Ryzin, 2015). Even when bivariate analysis does not statistically support the problem of non-equivalent groups as in this case, uncontrolled

individual differences between groups may have remained as a threat to internal validity of the experiment. Within-subject design helps overcome challenges in constructing comparable groups in between-subjects. In other words, the reason why significant media effects from the within-subject design were not discovered from the between-subject design may be the strength of the within-subject design in offsetting individual differences. In the next section, whether there were other individual characteristics related to perceptions of police are presented based on the results from independent *t*-tests, and the findings from mixed-design ANOVAs are provided to look at interaction effects between media condition and individuals' real-world experiences.

## Research Question 2: Interaction Effects Between Media Exposure and Individual Characteristics

The second research question involved interaction effects between participant characteristics and media exposure. It was hypothesized that media effects could differ depending on participant demographic information and their experiences with crime and justice. To answer the second research question, it must be first confirmed whether there were individual characteristics and experiences associated with perceptions of police using post-test data. A series of independent-sample *t*-tests were performed to compare the means of perceptions of police between individuals who could be categorized into qualitatively different groups. In particular, five individual characteristics and experiences were used to compute the mean differences: sex, race, CJ major, victimization experience, and negative encounter with police. These results are displayed in Tables 5 through 9.

**Independent-Samples *t*-tests for Perceptions of Police**

In Table 5, the results from independent-sample *t*-test from White students and non-White students were shown using post-test perceptions of police. There was significant

difference in confidence in the police for White students ($M$ = 20.75, $SD$ = 5.06) and non-White students ($M$ = 14.44, $SD$ = 5.92; $t$ (211.03) = 11.81, $p$ < .001, two-tailed), meaning that White students indicated significantly higher confidence in the police than non-White students. The magnitude of the differences in the means of confidence in the police (Cohen's $d$ = 1.15) was large according to the guideline proposed by Cohen (1988). Similarly, the mean difference in police legitimacy between White students ($M$ = 14.83, $SD$ = 3.81) and non-White students ($M$ = 11.66, $SD$ = 4.34; $t$ (673) = 8.66, $p$ < .001, two-tailed) were statistically supported. The magnitude of the differences in the means of police legitimacy (Cohen's $d$ = 1.15) was medium according to Cohen (1988).

Table 6 presents the results from independent-sample $t$-test from males and females using post-test data. There was significant difference in confidence in the police for males ($M$ = 20.03, $SD$ = 5.69) and females ($M$ = 18.70, $SD$ = 6.00; $t$ (682) = 2.95, $p$ = .003, two-tailed). Namely, males exhibited more favorable attitudes toward police in comparison to females. The magnitude of the differences in the means of confidence in the police (Cohen's $d$ = .23) was small according to the guideline proposed by Cohen (1988). The mean difference in police legitimacy between males ($M$ = 14.33, $SD$ = 4.43) and females ($M$ = 13.90, $SD$ = 3.90; $t$ (623.30) = 1.37, $p$ = .177, two-tailed) was not statistically different.

Table 5

*Independent-samples t-test Results from White and Non-White Students*

| | White (n =526) | | Non-White (n = 148) | | | |
|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *t*-Statistic | Cohen's *d* |
| Confidence in the Police | 20.75 | 5.06 | 14.44 | 5.92 | 11.81*** | 1.15 |
| Police Legitimacy | 14.83 | 3.81 | 11.66 | 4.34 | 8.66*** | .53 |

*Note*. The sample size for white in the police legitimacy model was 527. Since the independent-samples *t*-test for confidence in the police did not pass the Levene's statistic, when computing the *t*-test for this outcome variable, the equal variance was not assumed. *** $p < .001$.

Table 6

*Independent-samples t-test Results from Males and Females*

| | Males (n =310) | | Females (n = 374) | | | |
|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *t*-Statistic | Cohen's *d* |
| Confidence in the Police | 20.03 | 5.69 | 18.70 | 6.00 | 2.95*** | .23 |
| Police Legitimacy | 14.33 | 4.43 | 13.90 | 3.90 | 1.37 | .10 |

*Note*. The sample size for males in the police legitimacy model was 371. Since the independent-samples *t*-test for police legitimacy did not pass the Levene's statistic, when computing the *t*-test for this outcome variable, the equal variance was not assumed. *** $p < .001$.

Table 7 presents the results from independent-sample *t*-test from CJ majors and non-CJ majors. There was significant difference in confidence in the police for CJ majors (*M* = 20.05, *SD* = 5.80) and non-CJ majors (*M* = 18.52, *SD* = 5.90; *t* (682) = 3.42, *p* = .001, two-tailed). Put simply, CJ majors expressed more favorable sentiment toward police in comparison to non-CJ majors. The magnitude of the differences in the means of confidence in the police (Cohen's *d* = .23) was between small and medium according to the guideline proposed by Jacob Cohen

(1988). The mean difference in police legitimacy between CJ majors ($M = 14.72$, $SD = 3.88$) and

non-CJ majors ($M = 13.43$, $SD = 4.33$; $t (683) = 1.37$, $p < .001$, two-tailed) was also statistically

different. The estimated effect size was between small and medium (Cohen's $d = .31$).

       Table 8 shows the mean differences in perceptions of police between people who had

been victimized in the previous year and those who had not. An independent-samples $t$-test

revealed that non-victims ($M = 19.79$, $SD = 5.80$) had higher confidence in the police than

victims had ($M = 18.35$, $SD = 5.95$; $t (679) = 3.05$, $p = .002$, two-tailed). The magnitude of the

differences in the means of confidence in the police (Cohen's $d = .24$) was between small and

medium according to the guideline proposed by Cohen (1988); however, there was no significant

difference in police legitimacy between non-victims ($M = 14.26$, $SD = 4.11$) and victims ($M =$

$13.74$, $SD = 1.56$; $t (680) = 1.37$, $p = .12$, two-tailed) although the direction of the effect of

victimization experience was consistent with the confidence in the police model.

Table 7

*Independent-samples t-test Results from CJ Majors and Non-CJ Majors*

| | CJ Majors (n =350) | | Non-CJ Majors (n = 334) | | | |
|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *t*-Statistic | Cohen's *d* |
| Confidence in the Police | 20.05 | 5.80 | 18.52 | 5.90 | 3.42*** | .26 |
| Police Legitimacy | 14.72 | 3.88 | 13.43 | 4.33 | 4.10*** | .31 |

*Note*. The sample size of CJ majors in the police legitimacy model was 351.
*** $p \leq .001$.

Table 8

*Independent-samples t-test Results from Victims and Non-Victims*

| | Non-Victims (n = 446) | | Victims (n = 235) | | | |
|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *t*-Statistic | Cohen's *d* |
| Confidence in the Police | 19.79 | 5.83 | 18.35 | 5.95 | 3.05** | .24 |
| Police Legitimacy | 14.26 | 4.11 | 13.74 | 4.25 | 1.56 | .12 |

*Note*. The sample size of non-victims in the police legitimacy model was 447.
** $p \leq .01$.

In Table 9, the results from independent-samples *t*-tests illuminate that the quality of interaction with police is critical regarding forming perceptions of police (Skogan, 2012; Tyler & Jackson, 2014). More specifically, there was a statistically significant difference in perceptions of police between people who had a negative encounter with the police in the previous year (*M* = 15.08, *SD* = 6.12) and those who had not (*M* = 20.53, *SD* = 5.23; *t* (221.94) = 10.02, *p* < .001, two-tailed). Equally important, there was a significant difference in police legitimacy between students who experienced poor interaction with police (*M* = 12.08, *SD* = 4.43) and those who had not (*M* = 14.68, *SD* = 3.88; *t* (683) = 7.07, *p* < .001, two-tailed). The between-subject variable, a negative encounter with police, exerted strong effects on perceptions of police. The estimated effect size in each model was moderate to large (Cohen's *d* = .93 and Cohen's *d* = .63, respectively).

Table 9

*Independent-samples t-test Results from Negative Police Experience and Non-Experience Groups*

| | Non-Experience (n = 530) | | Negative Experience (n = 154) | | | |
|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *t*-Statistic | Cohen's *d* |
| Confidence in the Police | 20.53 | 5.23 | 15.08 | 6.12 | 10.02*** | .96 |
| Police Legitimacy | 14.68 | 3.88 | 12.08 | 4.43 | 7.07*** | .63 |

*Notes.* The sample size of the non-experience group in the police legitimacy model was 531. Since the independent-samples *t*-test for the confidence in the model did not pass the Levene's statistic, when computing the *t*-test for this outcome variable, the equal variance was not assumed.
\*\* $p \le .01$.

In summary, the results indicate that all five individual characteristics and experiences were significantly related to perceptions of police. Concerning confidence in the police, all five individual characteristics and experiences appeared significant. Race and negative police encounter were the most important, yielding large effect sizes (Cohen's $d$ = 1.15 and Cohen's $d$ = .93, each). Regarding police legitimacy, three individual characteristics and experiences (race, CJ major, and negative encounter with police) were significantly correlated. More specifically, White students were more likely to exhibit a higher level of perceived police legitimacy compared to non-White students. CJ majors tended to express higher perceived police legitimacy in comparison to non-CJ majors. Lastly, those without a negative police encounter were more likely to indicate higher police legitimacy compared to their counterparts.

**Interaction Effects Between Experimental Conditions and Individual Characteristics**

Given the significant differences found between groups of interest, a series of mixed between-within subjects ANOVAs were conducted to test for interactions between experimental conditions (i.e., type of media exposure) and individual characteristics. Reflecting the results

from paired *t*-tests presented above, only three within-subject variables were examined; specifically, these include the negative video condition, the mixed video condition, and the violent video condition. Recall that, regarding confidence in the police, the negative media condition lessened confidence in the police among participants, $t(142) = 3.57$, $p < .001$ (two-tailed). Similarly, the mixed condition reduced confidence in the police, $t(139) = 2.07$, $p = .041$ (two-tailed), and this effect reached statistical significance. Regarding police legitimacy, the violent crime condition lowered people's assessment about police legitimacy, and this effect was marginally significant, $t(141) = -1.95$, $p = .053$ (two-tailed). Because of the significance identified in the previous analyses, only these three conditions were used to test interaction effects involving categorical variables related to individual characteristics.

Individual characteristics and experiences considered in the previous analyses were all significantly related to confidence in the police, whereas not all factors were associated with police legitimacy. Accordingly, regarding confidence in the police, all individual characteristics (sex, race, CJ major, victimization experience, and negative encounter with police) were examined to estimate interaction effects with two experimental conditions (negative condition and mixed condition). As a result, ten combinations of individual characteristics and experimental conditions were created. These results are presented in Tables 10 through 19. Concerning police legitimacy, three individual characteristics (race, CJ major, and negative encounter with police) that were significantly associated with post-test perceptions of police were used to detect interaction effects with violent crime condition. These results are presented in Tables 10 through 22.

First, the moderating role of race was tested in relation to the negative video condition. There was no significant interaction between race (i.e., being White vs. being non-White) and the

negative video condition concerning confidence in the police, Wilks' Lambda = .990, $F$ (1, 136) = 1.365, $p$ = .245, partial eta-squared = .01 (see Table 10).

Similarly, the impact of the negative video condition did not differ significantly depending on sex, Wilks' Lamda = .999, $F$ (1, 139) = .201, $p$ = .139, partial eta-squared = .001 (see Table 11). Simultaneously, there was no significant interaction between CJ major and the negative condition in predicting confidence in the police, Wilks' Lamda = .987, $F$ (1, 139) = 1.831, $p$ = .178, partial eta-squared = .013 (see Table 12).

Table 10

*Confidence in the Police for White and Non-White Between Pre-test and Post-test (Negative Police Condition)*

|  | White | | | Non-White | | |
|---|---|---|---|---|---|---|
| Time Period | *n* | *M* | *SD* | *n* | *M* | *SD* |
| Pre-test | 106 | 21.66 | 4.72 | 32 | 16.13 | 5.68 |
| Post-test | 106 | 21.18 | 5.82 | 32 | 15.15 | 6.07 |

*Note. M* stands for mean, and *SD* represents standard deviation.

Table 11

*Confidence in the Police for Males and Females Between Pre-test and Post-test (Negative Police Condition)*

|  | Males | | | Females | | |
|---|---|---|---|---|---|---|
| Time Period | *n* | *M* | *SD* | *n* | *M* | *SD* |
| Pre-test | 65 | 21.23 | 4.89 | 76 | 19.45 | 5.93 |
| Post-test | 65 | 20.68 | 5.82 | 76 | 18.74 | 6.22 |

*Note. M* stands for mean, and *SD* represents standard deviation.

Table 12

*Confidence in the Police for CJ Majors and Non-CJ Majors Between Pre-test and Post-test*

*(Negative Police Condition)*

|  | CJ Majors | | | Non-CJ Majors | | |
|---|---|---|---|---|---|---|
| Time Period | *n* | *M* | *SD* | *n* | *M* | *SD* |
| Pre-test | 71 | 20.59 | 5.44 | 70 | 19.95 | 5.64 |
| Post-test | 71 | 20.19 | 5.99 | 70 | 19.07 | 5.44 |

*Note.* CJ refers to criminology and criminal justice major. *M* stands for mean, and *SD* represents standard deviation.

A significant interaction effect also was not observed from the victimization and negative video condition model, Wilks' Lamda = .988, *F* (1, 139) = 1.745, *p* = .189, partial eta-squared = .012 (See Table 13). Finally, negative encounter with police did not moderate the impact of the negative condition on confidence in the police, Wilks' Lambda = .999, *F* (1, 139) = .096, *p* = .757, partial eta-squared = .001 (Table 14). Simply put, interaction effects between individual characteristics and the negative video condition were not found in the sample used in this study.

Table 13

*Confidence in the Police for Victim and Non-Victim Between Pre-test and Post-test (Negative Police Condition)*

|  | Victim | | | Non-Victim | | |
|---|---|---|---|---|---|---|
| Time Period | *n* | *M* | *SD* | *n* | *M* | *SD* |
| Pre-test | 39 | 19.50 | 5.87 | 102 | 20.57 | 5.39 |
| Post-test | 39 | 19.24 | 5.91 | 102 | 19.79 | 6.07 |

*Note. M* stands for mean, and *SD* represents standard deviation.

Table 14

*Confidence in the Police Between Pre-test and Post-test Depending on Negative Encounter*

*with Police (Negative Police Condition)*

|  | People with Experience | | | People without Experience | | |
|---|---|---|---|---|---|---|
| Time Period | *n* | *M* | *SD* | *n* | *M* | *SD* |
| Pre-test | 27 | 15.09 | 5.87 | 114 | 21.50 | 4.80 |
| Post-test | 27 | 14.34 | 5.91 | 114 | 20.89 | 5.49 |

*Note. M* stands for mean, and *SD* represents standard deviation.

Second, it was also tested whether individual demographics and experiences moderated the impact of the mixed video condition. No significant interaction effect was found between race and the mixed video condition, Wilks' Lambda = .999, $F (1, 133) = .083$, $p = .774$, partial eta squared = .001 (Table 15). Participants' sex also did not significantly influence the relationship between the mixed condition and confidence in the police, Wilks' Lamda = .998, $F (1, 135) = .220$, $p = .640$, partial eta-squared = .002 (Table 16).

Table 15

*Confidence in the Police for White and Non-White Between Pre-test and Post-test (Mixed*

*Condition)*

|  | White | | | Non-White | | |
|---|---|---|---|---|---|---|
| Time Period | *n* | *M* | *SD* | *n* | *M* | *SD* |
| Pre-test | 102 | 21.47 | 4.76 | 33 | 14.67 | 5.74 |
| Post-test | 102 | 21.14 | 4.82 | 33 | 14.22 | 6.01 |

*Note. M* stands for mean, and *SD* represents standard deviation.

Table 16

*Confidence in the Police for Males and Females Between Pre-test and Post-test (Mixed Condition)*

|  | Males | | | Females | | |
| --- | --- | --- | --- | --- | --- | --- |
| Time Period | *n* | *M* | *SD* | *n* | *M* | *SD* |
| Pre-test | 66 | 20.89 | 4.90 | 71 | 18.84 | 6.54 |
| Post-test | 66 | 20.42 | 4.87 | 71 | 18.54 | 6.50 |

*Note. M* stands for mean, and *SD* represents standard deviation.

There was a marginally significant interaction effect between CJ major and the mixed condition, Wilks' Lambda = .978, $F$ (1, 135) = 2.982, $p$ = .086, partial eta squared = .022. In other words, while the impact of the mixed condition was negative and significant across all respondents who were randomly assigned to this group, non-CJ majors were more influenced by the mixed video condition in comparison to CJ majors (Table 17; Figure 7). This finding is striking considering that a large body of research underlines that the criminal justice system is permeated by confirmation bias (Pollock, 2017; Schehr & Sears, 2005). The media often contain both positive and negative images regarding the practice of criminal justice agents (Jewkes, 2010; Surette, 2014). If people who serve the criminal justice system are less influenced by negative media coverages of criminal justice agents in comparison to those who do not work for criminal justice when they were presented contradicting images, the media can be a source of great misunderstandings.

Table 17

*Confidence in the Police for CJ Majors and Non-CJ Majors Between Pre-test and Post-test*

*(Mixed Condition)*

|  | CJ Majors | | | Non-CJ Majors | | |
|---|---|---|---|---|---|---|
| Time Period | *n* | *M* | *SD* | *n* | *M* | *SD* |
| Pre-test | 68 | 20.97 | 5.35 | 69 | 18.69 | 6.19 |
| Post-test | 68 | 20.91 | 5.82 | 69 | 18.01 | 6.07 |

*Note.* CJ refers to criminology and criminal justice major. *M* stands for mean, and *SD* represents standard deviation.
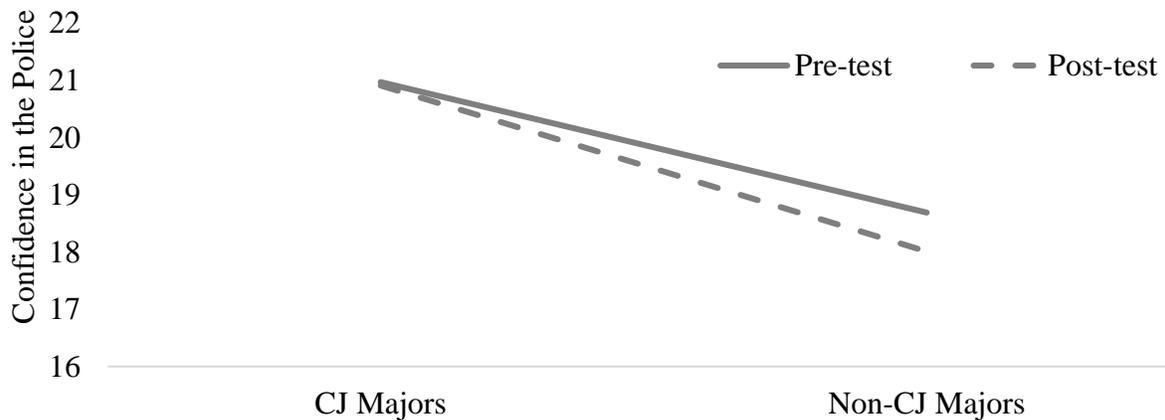


*Figure 7*. Interaction effects between mixed condition and majors

In contrast, direct experiences of crime and criminal justice did not significantly change the impact of the mixed video condition on confidence in the police. Victimization experience did not moderate the relationship between the mixed video condition and confidence in the police, Wilks' Lambda = .986, $F$ (1, 135) = 1.877, $p$ = .173, partial eta-squared = .014 (See Table 18). Similarly, there was no interaction effect between negative police encounters and the mixed video condition, Wilks' Lamda = 1.000, $F$ (1, 135) = .019, $p$ = .891, partial eta-squared = .000 (See Table 19).

Table 18

*Confidence in the Police for Victim and Non-Victim Between Pre-test and Post-test (Mixed*

*Condition)*

|  | Victim | | | Non-Victim | | |
|---|---|---|---|---|---|---|
| Time Period | *n* | *M* | *SD* | *n* | *M* | *SD* |
| Pre-test | 45 | 18.01 | 5.43 | 92 | 20.71 | 5.91 |
| Post-test | 45 | 17.99 | 5.53 | 92 | 20.16 | 5.53 |

*Note. M* stands for mean, and *SD* represents standard deviation.

Table 19

*Confidence in the Police Between Pre-test and Post-test Depending on Negative Encounter*

*with Police (Mixed Condition)*

|  | People with Experience | | | People without Experience | | |
|---|---|---|---|---|---|---|
| Time Period | *n* | *M* | *SD* | *n* | *M* | *SD* |
| Pre-test | 37 | 15.34 | 6.48 | 100 | 21.48 | 4.68 |
| Post-test | 37 | 15.01 | 6.43 | 100 | 21.09 | 4.64 |

*Note. M* stands for mean, and *SD* represents standard deviation.

Turning attention to the police legitimacy model, only the violent video condition was examined in relation to interaction effects with individual characteristics. Specifically, three individual factors that were statistically related to differences in police legitimacy were investigated: race, CJ major, and negative encounter with police. First, there was no significant interaction effect between race and the violent crime video condition, Wilks' Lambda = .990, *F* (1, 136) = 1.929, *p* = .167, partial eta squared = .014 (See Table 20). Similarly, no interaction effect was found between CJ major and the crime video condition in determining police legitimacy, Wilks' Lamda = .987, *F* (1, 137) = 1.867, *p* = .174, partial eta-squared = .013 (See Table 21). Negative encounters with police also did not moderate the impact of the violent video

condition on police legitimacy, Wilks' Lamda $= .989$, $F$ $(1, 137) = 1.485$, $p = .225$, partial eta-

squared $= .011$ (See Table 22).

Table 20

*Police Legitimacy for White and Non-White Between Pre-test and Post-test (Violent Crime*

*Condition)*

|  | White | | | Non-White | | |
|---|---|---|---|---|---|---|
| Time Period | *n* | *M* | *SD* | *n* | *M* | *SD* |
| Pre-test | 104 | 14.38 | 3.71 | 34 | 10.81 | 4.10 |
| Post-test | 104 | 14.85 | 4.00 | 34 | 10.78 | 4.34 |

*Note. M* stands for mean, and *SD* represents standard deviation.

Table 21

*Police Legitimacy for CJ Majors and Non-CJ Majors Between Pre-test and Post-test (Violent*

*Crime Condition)*

|  | CJ Majors | | | Non-CJ Majors | | |
|---|---|---|---|---|---|---|
| Time Period | *n* | *M* | *SD* | *n* | *M* | *SD* |
| Pre-test | 71 | 14.46 | 3.69 | 68 | 12.41 | 4.29 |
| Post-test | 71 | 14.57 | 4.10 | 68 | 12.95 | 4.77 |

*Note.* CJ refers to criminology and criminal justice major. *M* stands for mean, and *SD*
represents standard deviation.

Table 22

*Police Legitimacy Between Pre-test and Post-test Depending on Negative Encounter with*

*Police (Violent Crime Condition)*

|  | People with Experience | | | People without Experience | | |
|---|---|---|---|---|---|---|
| Time Period | *n* | *M* | *SD* | *n* | *M* | *SD* |
| Pre-test | 34 | 11.39 | 3.96 | 139 | 14.13 | 3.95 |
| Post-test | 34 | 11.36 | 4.37 | 139 | 14.56 | 4.27 |

*Note. M* stands for mean, and *SD* represents standard deviation.

In summary, 13 combinations of individual characteristics and experimental conditions were created to investigate interaction effects between media exposure and individual characteristics in predicting perceptions of police. A series of mixed between-within subjects ANOVAs indicated that almost all interaction effects were not statistically significant. Only one interaction term appeared to be marginally significant. The influence of being exposed to the mixed condition differed depending on students' majors. While the mixed condition reduced confidence in the police among both non-CJ majors and CJ majors, non-CJ majors experienced a more significant drop in confidence in the police when they were presented with the mixed video condition compared to CJ majors.

**Research Question 3: Mediation Models Linking Media Exposure to Perceptions of Police**

To know whether there were intervening mechanisms through which the media condition impacted perceptions of police, variance should be tested depending on media condition. Baron and Kenny (1986), in their causal step strategy, contended that an indirect effect of the independent variable can take place only when there is a direct effect of the independent variable (Tal-Or, Cohen, Tsfati, & Gunther, 2010); however, Hayes (2013) illustrated that even when there is no direct effect of the independent variable, there still can be indirect effects. In the current study, while between-subject variables or experimental conditions did not have direct impacts on perceptions of police, it is still probable that the experimental condition influenced perceptions of police through changes in different perceptions of crime and criminal justice that are related to general attitudes toward police (Jackson & Bradford, 2009; Sunshine & Tyler, 2003a; Tyler & Huo, 2002).

First, means and standard deviations of key variables are presented in Table 23. This table illustrates the results of post-hoc tests later. Second, a series of ANOVAs were conducted

to see if there were changes in variations of key variables across the experimental conditions. The results are displayed in Table 24. If hypothesized mediating variables differ significantly across the experimental conditions, this leaves open the possibility of mediation analysis. In other words, the changed variations in mediating variables after media exposure can result in changes in perceptions of police. When significant variances in variables across the experimental conditions were found, a bias-corrected bootstrapped mediation analysis was performed to estimate indirect effects with 10,000 resamples.

**ANOVAs of Key Perceptions Between Different Experimental Groups**

Table 23

Mean *and Standard Deviations of Key Variables for Experimental Groups*

| | Violent Crime | | Negative Police | | Positive Police | | Control Condition | | Mixed Images | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *M* | *SD* | *M* | *SD* | *M* | *SD* |
| Fear of Crime | 27.32 | 12.78 | 26.04 | 12.15 | 23.78 | 11.26 | 28.92 | 13.51 | 25.12 | 13.37 |
| Perceived Risk of Victimization | 7.48 | 4.19 | 7.14 | 3.99 | 6.76 | 3.43 | 7.50 | 4.04 | 6.67 | 3.75 |
| Collective Efficacy | 40.67 | 8.54 | 40.04 | 8.51 | 37.54 | 8.56 | 37.29 | 8.62 | 39.65 | 8.78 |
| Perceived Incivilities | 27.35 | 12.29 | 25.52 | 12.20 | 24.16 | 10.66 | 25.96 | 11.15 | 26.62 | 12.26 |
| Procedural Justice | 27.13 | 8.72 | 27.79 | 8.94 | 26.74 | 8.36 | 27.91 | 8.87 | 27.21 | 8.79 |
| Distributive Justice | 11.37 | 2.74 | 11.51 | 3.03 | 11.54 | 2.81 | 11.09 | 2.86 | 11.26 | 2.54 |

A series of ANOVAs were conducted to compare five different groups regarding the proposed six mediating variables: fear of crime, perceived risk of crime, collective efficacy, perceived incivilities, procedural justice and distributive justice. Fear of crime and perceived risk of crime were used to represent the instrumental model, while collective efficacy and perceived disorders were used to capture the expressive model (Jackson & Bradford, 2009; Sun et al., 2014). Simultaneously, procedural justice and distributive justice were also compared between experimental groups to acknowledge the findings from prior research which suggests that these perceptions are related to a broader understanding about the police institution (Reisig et al., 2007; Tyler & Wakslak, 2004). When statistically significant mean differences between experimental groups were found, these variables were considered candidates for mediating variables. The results from a series of ANOVAs indicated that two variables among the six variables differed across different experimental conditions: fear of crime and collective efficacy (see Table 24).

Table 24

*Analyses of Variance (ANOVAs) of Key Perceptions Between Different Experimental Groups*

| Variable | df1, df2 | F | p | Partial $\eta^2$ |
|---|---|---|---|---|
| Fear of Crime | 4, 684 | 3.377[1] | .010 | .019 |
| Perceived Risk of Victimization | 4, 683 | 1.361 | .246 | .007 |
| Collective Efficacy | 4, 682 | 4.285 | .002 | .025 |
| Perceived Incivilities | 4, 680 | 1.461 | .212 | .008 |
| Procedural Justice | 4, 687 | .425 | .791 | .002 |
| Distributive Justice | 4, 686 | .597 | .665 | .003 |

*Notes: df1* is degrees of freedom of between groups, whereas *df2* is degrees of freedom for within groups. *F* statistics reflect the overall difference between experimental groups. Partial $\eta^2$ is an indication of the effect size regarding the proportion of the variance in the outcomes associated with the experimental conditions.
[1]Since Levene's test for homogeneity of variances of fear of crime indicated that the assumption of homogeneity of variance was violated, the result of a more robust *F*-test (Welch) was used.

**Post-hoc Comparisons**

While the results from a series of ANOVAs were helpful in examining whether there are significant mean differences across the experimental conditions, they did not specify which of the groups differ. Post-hoc tests were conducted to know which combinations of experimental groups were significantly related to fear of crime and collective efficacy. For instance, students assigned to watch the violent crime condition could indicate higher fear of crime in comparison to those assigned to watch the control condition. Post-hoc tests allow researchers to compare the variables of interest across all the possible combinations of groups. Post-hoc comparisons using the Tukey HSD test indicated that there were significant differences in fear of crime and collective efficacy between some groups, but not all. First, the average level of fear of crime for the respondents who were assigned to watch positive police image ($M = 23.78$, $SD = 11.26$) was significantly different from the group who were assigned to watch a lecture on public speaking skills ($M = 28.92$, $SD = 13.51$). In other words, the individuals in the experimental group who watched positive police work were less afraid of crime in comparison to the individuals in the control group on average (see Table 23 and Table 25).

Additionally, the participants in the violent crime condition ($M = 40.67$, $SD = 12.78$) exhibited higher collective efficacy in comparison to the individuals assigned to watch positive police work ($M = 37.29$, $SD = 8.62$) or the control condition ($M = 37.29$, $SD = 8.62$). The positive effect of the violent crime condition on collective efficacy is consistent with Durkheim's (1933) functionalist perspective, arguing that the common conscience can arise when people perceive communal threat such as crime.

Table 25

*A Summary of Post-hoc Comparisons Between Experimental Groups*

| Variable | Positive Police Condition vs. Control Condition | Violent Crime Condition vs. Positive Police Condition | Violent Crime Condition vs. Control Condition |
|---|---|---|---|
| Fear of Crime | –5.14** | 1.28 | –1.61 |
| Collective Efficacy | .25 | 3.13* | 3.37* |

*Note*: Post-hoc comparisons were conducted using the Tukey HSD test. The control video condition introduced public speaking skills, not directly related to crime and criminal justice. † $p < 0.06$, * $p < .05$, ** $p < .01$.

In sum, findings indicate that the mean score of fear of crime was significantly different between the positive police condition and control condition. Simultaneously, students in the violent crime condition perceived higher collective efficacy in comparison to those in the positive police condition and control condition. As a result, these two variables were used as mediating variables in the following analyses.

**Bivariate Correlations**

Before performing mediation analysis using two mediating variables, fear of crime and collective efficacy, it was important to confirm whether these two variables were correlated with the outcome variables, perceptions of police. To explore the relationships between experimental conditions, mediating variables, and perceptions of police, bivariate correlations between them were investigated using estimates for the Pearson product-moment correlation coefficient. If significant correlations between mediating variables and outcome variables are found, it is more likely that proposed variables mediated the relationship between media exposure and perceptions of police. These results are presented in Tables 26 through 28.

Preliminary analysis using scatterplots indicated that there was no violation of assumptions for Pearson correlations. Listwise deletion was employed when conducting the

correlation analysis because only the respondents who were assigned to certain experimental conditions were used in each of the final analyses. More specifically, the control condition was used as a reference group to the positive police condition in the first correlation matrix displayed in Table 26. These results suggest there is a small but statistically significant correlation between fear of crime and confidence in the police, $r_{pc} = -.164$, $n = 269$, $p < .01$, with higher fear of crime associated with lower confidence in the police; however, a significant correlation was not found between fear of crime and police legitimacy.

Table 26

*Correlations Between Media Exposure, Fear of Crime, and Perceptions of Police (Positive Police Condition vs. Control Condition)*

|  | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Media exposure (Positive Police vs. Control) | — | | | |
| 2. Fear of Crime | −.204** | — | | |
| 3. Confidence in the Police | −.037 | −.164** | — | |
| 4. Police Legitimacy | −.076 | −.012 | .648** | — |

*Note.* Media exposure correlation reported in $r_{pc}$
** $p < .01$

      Table 27 presents the results of Pearson correlation analyses between media exposure (Violent Crime Condition vs. Positive Police Condition), collective efficacy, and perceptions of police. In this analysis, the positive police condition was treated as a reference group to the violent crime condition. There was a small, positive correlation between collective efficacy and confidence in the police, $r_{vp} = .250$, $n = 278$, $p < .01$, with high levels of collective efficacy associated with higher levels of confidence in the police. Similarly, there was a significant and positive correlation between collective efficacy and police legitimacy, $r_{vp} = .182$, $n = 278$, $p < .01$.

Table 27

*Correlations Between Media Exposure, Collective Efficacy, and Perceptions of Police (Violent Crime Condition vs. Positive Police Condition)*

|  | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Media exposure (Violent Crime vs. Positive Police) | — |  |  |  |
| 2. Collective Efficacy | .181** | — |  |  |
| 3. Confidence in the Police | .037 | .250** | — |  |
| 4. Police Legitimacy | .018 | .182** | .735** | — |

*Note*. Media exposure correlation reported in $r_{vp}$
** $p < .01$

As seen in Table 28, the relationship between media exposure (Violent Crime Condition vs. Control Condition), collective efficacy and police legitimacy was investigated using Pearson correlation. The control condition was designated as a reference group. Supporting an assumed linear relationship between collective efficacy and perceptions of police, the correlation coefficients indicated that there was a significant relationship between collective efficacy and confidence in the police, $r_{vc} = .223$, $n = 269$, $p < .01$. Additionally, police legitimacy also was associated significantly and positively with collective efficacy, $r_{vc} = .158$, $n = 269$, $p < .01$.

Table 28

*Correlations Between Media Exposure, Collective Efficacy, and Perceptions of Police (Violent*

*Crime Condition vs. Control Condition)*

|  | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Media exposure (Violent Crime vs. Control) | — |  |  |  |
| 2. Collective Efficacy | .194** | — |  |  |
| 3. Confidence in the Police | .037 | .223** | — |  |
| 4. Police Legitimacy | .018 | .158** | .652** | — |

*Note*. Media exposure correlation reported in $r_{vc}$

** $p < .01$

In summary, when examining bivariate correlations between media exposure, mediating

variables (fear of crime and collective efficacy), and perceptions of police, most results

supported significant associations between media exposure and mediating variables as well as

significant correlations between mediating variables and perceptions of police. When examining

correlations using students assigned to the positive police condition and control condition, fear of

crime was not significantly correlated with police legitimacy. The remaining significant bivariate

correlations signals the possibility of mediation models proposed theoretically based on Akers'

social learning theory.

**Simple Mediation Path Analyses**

As previously noted, when comparing different experimental conditions, no direct effect

of media exposure was significant. This still does not rule out the possibility of indirect effects of

media exposure through mediating variables. Specifically, the current study hypothesized that

fear of crime and collective efficacy can mediate the relationship between media exposure and

perceptions of police. To confirm that there were associations between mediating variables

discussed in the literature review, a series of ordinary least squares simple mediation path

analyses was performed. These results are presented in Figure 8 through 12.

First, the researcher tested whether the positive police condition (vs. the control

condition) influenced confidence in the police through its effect on fear of crime (Hayes, 2013).

This indirect effect was statistically significant ($b = 0.431$, $p = .03$). A biased-corrected bootstrap

confidence interval for this indirect effect based on 10,000 bootstrap samples did not straddle

zero (0.133 to 0.948) (Figure 8).
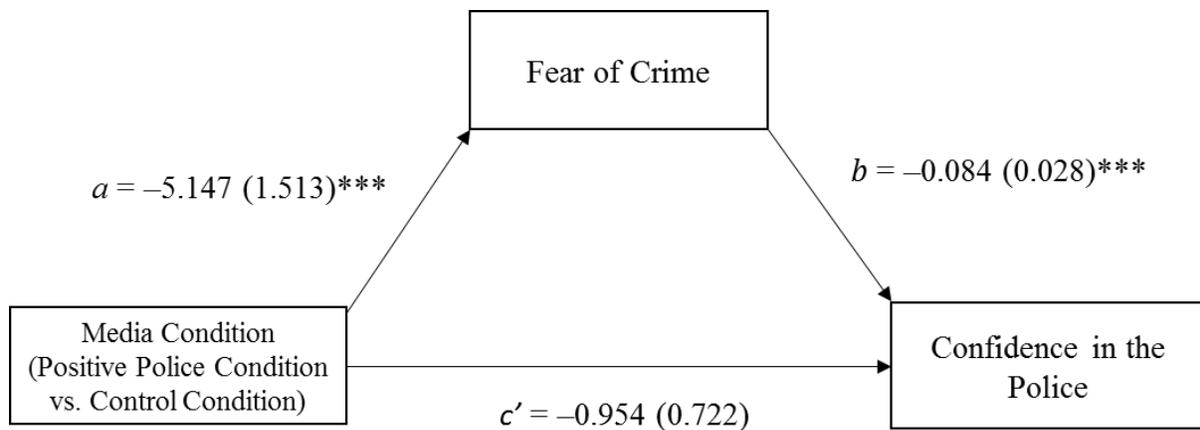


*Figure 8*. The indirect effect of the positive police video on confidence in the police through fear of crime. Unstandardized regression coefficients and standard errors in parentheses. *** $p$ < .001. $n = 269$.

Next, ordinary least squares simple mediation path analyses were conducted to

investigate whether collective efficacy served as a mediator in the relationship between

experimental conditions and perceptions of police. Specifically, it was tested whether those who

viewed the violent crime condition as opposed to the positive police condition reported on

average significantly more collective efficacy; those who experienced increased collective

efficacy expressed higher confidence in the police. Results using bootstrap approach showed that

the indirect effect of the violent crime condition was statistically significant ($b = 0.525$, $p =$

.015). A biased-corrected bootstrap interval for this indirect effect based on 10,000 bootstrap

samples did not include zero (0.172 to 1.118) (Figure 9).

Collective Efficacy

$a = 3.128\ (1.025)**$

$b = 0.168\ (0.040)***$

Media Condition (Violent Crime Condition vs. Positive Police Condition)

$c' = -0.149\ (0.684)$

Confidence in the Police
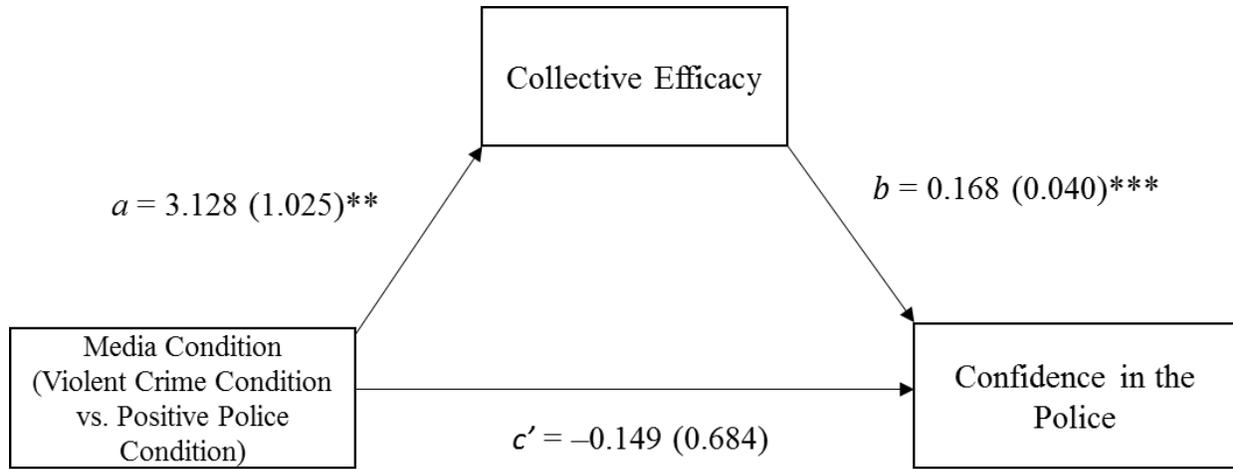
*Figure 9*. The indirect effect of the violent crime condition on confidence in the police through collective efficacy. Unstandardized regression coefficients and standard errors in parentheses. ** $p < .01$, *** $p < .001$. $n = 278$.

Similarly, a significant indirect effect of the violent crime condition was found in the

police legitimacy model [$b = 0.294$, standard error (*SE*) = 0.1395, $p = .034$; 95% confidence

interval (*CI*) = (0.079, 0.662)] (Figure 10).

Collective Efficacy

$a = 3.128\ (1.025)**$

$b = 0.094\ (0.031)**$

Media Condition (Violent Crime Condition vs. Positive Police Condition)

$c' = -0.139\ (0.531)$

Police Legitimacy
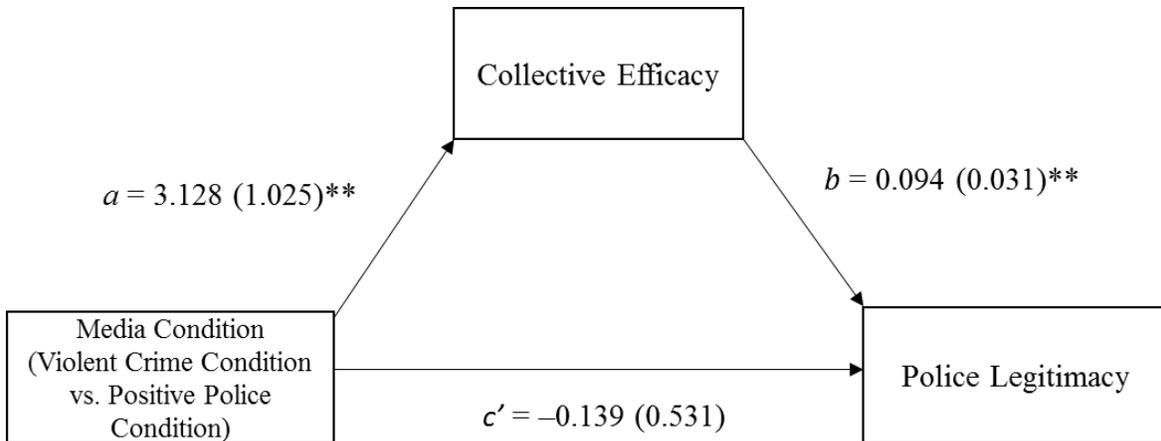
*Figure 10*. The indirect effect of the violent crime video on confidence in the police through collective efficacy. Unstandardized regression coefficients and standard errors in parentheses. ** $p < .01$. $n = 278$.

As seen in Figure 10, ordinary least squares simple mediation path analyses indicated that collective efficacy mediated the relationship between the violent crime condition (as opposed to the control condition) and perceptions of police (Figure 11). Findings using the bootstrap approach showed that the indirect effect of the violent crime condition (vs. the control condition) on confidence in the police was statistically significant ($b = 0.544$, $p = .016$). A biased-corrected bootstrap interval for this indirect effect based on 10,000 bootstrap samples did not straddle zero (0.155 to 1.168) (Figure 11).

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                          ┌─────────────────────┐
                          │  Collective Efficacy │
                          └─────────────────────┘
        a = 3.374 (1.049)**                b = 0.162 (0.042)**

┌─────────────────────┐                    ┌─────────────────────┐
│   Media Condition   │                    │  Confidence in the  │
│(Violent Crime Cond. │                    │       Police        │
│ vs. Control Cond.)  │   c' = –0.660 (0.733)                    │
└─────────────────────┘                    └─────────────────────┘
```
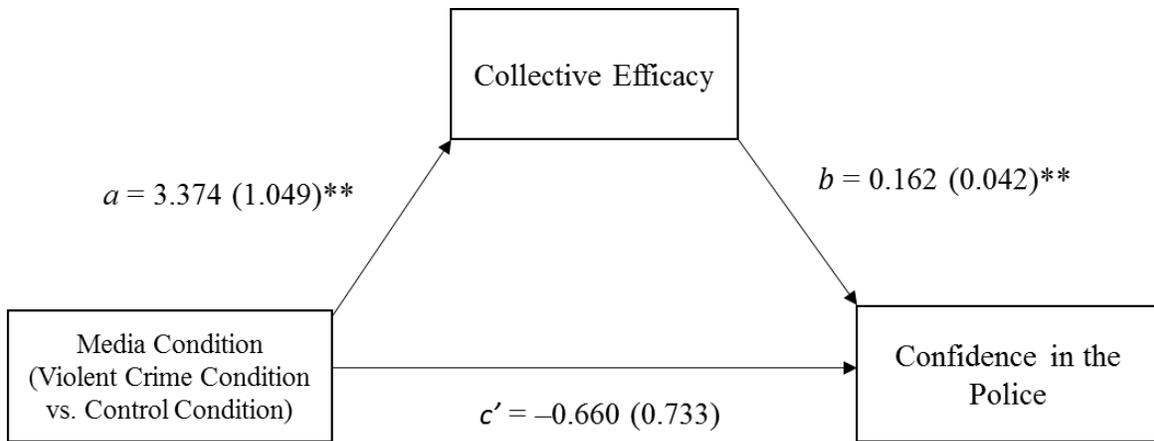
*Figure 11.* The indirect effect of the violent crime video on confidence in the police through collective efficacy. Unstandardized regression coefficients and standard errors in parentheses. ** $p < .01$. $n = 278$.

When examining the indirect effect of the violent crime condition as opposed to the control condition, a biased-corrected bootstrap confidence interval for the indirect effect based on 10,000 bootstrap samples was entirely above zero (0.077 to 0.633). More specifically, the unstandardized regression coefficient of this indirect effect of the violent crime condition on police legitimacy was 0.292 ($p = .038$) (Figure 12).
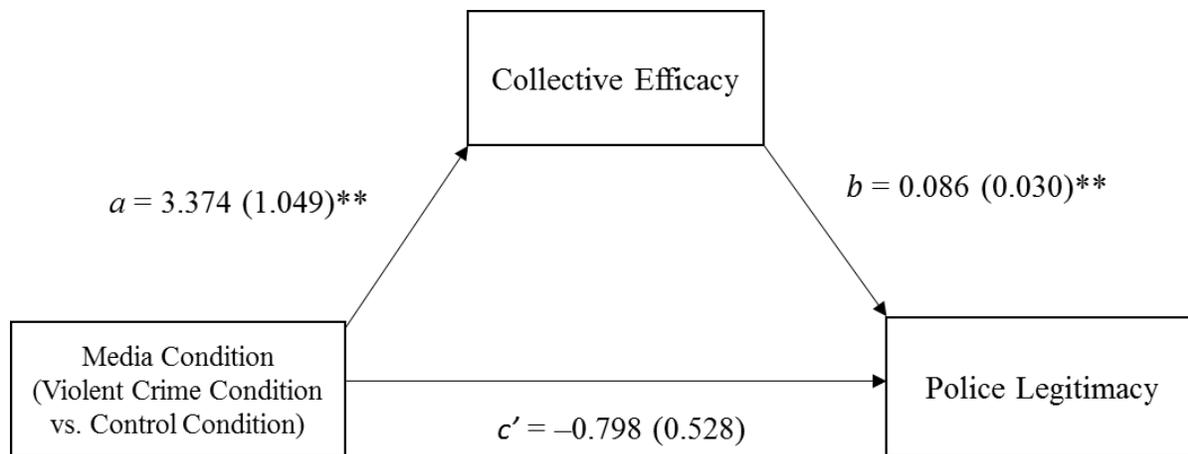
*Figure 12*. The indirect effect of the violent crime video (vs. control condition) on police legitimacy through collective efficacy. Unstandardized regression coefficients and standard errors in parentheses. ** $p < .01$. $n = 278$.

In summary, the results from mediation analyses supported that there were indirect effects of media exposure on perceptions of police through mediating variables. More specifically, the positive police condition, as opposed to the control condition, reduced fear of crime, and this led to an increase in confidence in the police. The violent crime condition, as opposed to both the control condition and positive police condition, increased collective efficacy, which resulted in increases in confidence in the police and perceived police legitimacy. Empirical support for mediation models justified the further exploration of moderated mediation models. In the following section, the results from moderated mediation models are presented.

**Research Question 4: Moderated Mediation Models Linking Media Exposure to**

**Perceptions of Police**

The fourth research question involved moderated mediation models. In other words, indirect media effects on perceptions of police are hypothesized to be conditional. Not all variables hypothesized to mediate the relationship between experimental conditions and

perceptions of police were statistically significant. Only fear of crime and collective efficacy served as mediators linking some experimental conditions to perceptions of police.

Before conducting moderated mediation models, it was necessary to check if individual characteristics were significantly correlated with mediating variables, fear of crime and collective efficacy. Only when individual characteristics are significantly related to mediating variables can moderated mediation models be further pursued. If there is no significant interaction effect between media exposure and individual characteristics in causing changes in fear of crime and collective efficacy, there is no chance of significant moderated mediation models. Accordingly, it was tested whether fear of crime and collective efficacy differed depending on individual characteristics and experiences to further explore the possibility of the moderated mediation relationship between media and perceptions of police. These results are presented in Tables 29 through 33.

**Independent-Samples *t*-tests for Fear of Crime and Collective Efficacy**

In Table 29, the results from independent-sample *t*-tests from White students and non-White students are shown. There was significant difference in fear of crime for White students ($M = 24.40$, $SD = 11.78$) and non-White students ($M = 32.35$, $SD = 13.79$; $t (210.947) = -6.39$, $p < .001$, two-tailed), meaning that White students indicated significantly lower fear of crime in comparison to non-White students. The magnitude of the difference in fear of crime (Cohen's *d* $= -.62$) was medium according to the guideline proposed by Cohen (1988). That said, the mean difference in collective efficacy between White students ($M = 39.25$, $SD = 8.58$) and non-White students ($M = 38.38$, $SD = 9.10$; $t (673) = 1.07$, $p = .285$, two-tailed) was not statistically significant. The magnitude of the differences in collective efficacy (Cohen's *d* $= .10$) was small according to Cohen (1988).

Table 29

*Independent-samples t-test Results Regarding Fear of Crime and Collective Efficacy Between*

*White and Non-White Students*

| | White (n =527) | | Non-White (n = 148) | | | |
|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *t*-Statistic | Cohen's *d* |
| Fear of Crime | 24.40 | 11.78 | 32.35 | 13.79 | −6.39*** | −.62 |
| Collective Efficacy | 39.25 | 8.58 | 38.38 | 9.10 | 1.07 | .10 |

*Note*. Since the independent-samples *t*-test for fear of crime did not pass the Levene's statistic, when computing the *t*-test for this outcome variable, the equal variance was not assumed. *** $p < .001$.

Table 30 presents the results from the independent-samples *t*-test regarding fear of crime and collective efficacy between males and females. There was a significant difference in fear of crime for males (*M* = 21.17, *SD* = 10.75) and females (*M* = 30.44, *SD* = 12.68; *t* (682.744) = 10.35, $p < .001$, two-tailed). Namely, females expressed more fear of crime comparison to males. The magnitude of the differences in fear of crime (Cohen's *d* = −.79) was close to large according to the guideline proposed by Cohen (1988). The mean difference in collective efficacy between males (*M* = 38.75, *SD* = 8.90) and females (*M* = 39.31, *SD* = 8.52; *t* (623.30) = .84, *p* = .403, two-tailed) was not statistically different.

Table 30

*Independent-samples t-test Results Regarding Fear of Crime and Collective Efficacy Between*

*Males and Females*

| | Males (n =311) | | Females (n = 374) | | | |
|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *t*-Statistic | Cohen's *d* |
| Fear of Crime | 21.17 | 10.75 | 30.44 | 12.68 | 10.35*** | −.79 |
| Collective Efficacy | 38.75 | 8.90 | 39.31 | 8.52 | .84 | −.06 |

*Note*. Since the independent-samples *t*-test for fear of crime did not pass the Levene's statistic, when computing the *t*-test for this outcome variable, the equal variance was not assumed.
*** $p < .001$.

Table 31 displays the results from independent-samples *t*-test regarding fear of crime and collective efficacy from CJ majors and non-CJ majors. There was no significant difference in fear of crime for CJ majors ($M = 25.91$, $SD = 12.53$) and non-CJ majors ($M = 26.57$, $SD = 12.89$; $t (683) = .67$, $p = .501$, two-tailed). The magnitude of the differences in fear of crime (Cohen's *d* $= −.05$) was small. The mean difference in collective efficacy between CJ majors ($M = 39.72$, *SD* $= 8.65$) and non-CJ majors ($M = 38.36$, $SD = 8.70$; $t (683) = –2.04$, $p < .05$, two-tailed) was statistically different. CJ majors were more likely to have higher collective efficacy in comparison to non-CJ majors. The estimated effect size was small (Cohen's $d = .16$).

Table 31

*Independent-samples t-test Results Regarding Fear of Crime and Collective Efficacy Between*

*CJ Majors and Non-CJ Majors*

| | CJ Majors (n =351) | | Non-CJ Majors (n = 334) | | | |
|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *t*-Statistic | Cohen's *d* |
| Fear of Crime | 25.91 | 12.53 | 26.57 | 12.89 | .67 | .26 |
| Collective Efficacy | 39.72 | 8.65 | 38.36 | 8.70 | −2.04* | .31 |

* $p \leq .05$.

Table 32 shows the mean differences in fear of crime and collective efficacy between people who had been victimized in the last year and those who had not. An independent-samples *t*-test revealed that non-victims (*M* = 24.24, *SD* = 12.57) had lower fear of crime in comparison to victims (*M* = 29.91, *SD* = 12.16; *t* (680) = −5.66, *p* < .001, two-tailed). The magnitude of the differences in fear of crime (Cohen's *d* = −.46) was between small and medium (Jacob Cohen, 1988). Also, there was significant difference in collective efficacy between non-victims (*M* = 39.63, *SD* = 8.40) and victims (*M* = 37.97, *SD* = 9.17; *t* (440.896) = 1.37, *p* = .02, two-tailed), but the effect size was small.

Table 32

*Independent-samples t-test Results Regarding Fear of Crime and Collective Efficacy Between Victims and Non-Victims*

|  | Non-Victims (n = 447) | | Victims (n = 235) | | | |
|---|---|---|---|---|---|---|
|  | *M* | *SD* | *M* | *SD* | *t*-Statistic | Cohen's *d* |
| Fear of Crime | 24.24 | 12.57 | 29.91 | 12.16 | −5.66*** | −.46 |
| Collective Efficacy | 39.63 | 8.40 | 37.97 | 9.17 | 2.31* | .19 |

*Note*. Since the independent-samples *t*-test for collective efficacy did not pass the Levene's statistic, when computing the *t*-test for this outcome variable, the equal variance was not assumed.
* *p* < .05, *** *p* < .001.

In Table 33, the results from independent-samples *t*-tests illustrate the difference in fear of crime and collective efficacy between people who had negative experiences with police and those who did not in the previous year. There was no statistically significant difference in fear of crime between people who had a negative encounter with the police in the previous year (*M* = 25.81, *SD* = 12.64) and those who had not (*M* = 27.69, *SD* = 12.87; *t* (683) = −1.62, *p* = .11, two-tailed). On the other hand, there was a significant difference in collective efficacy between students who experienced poor interaction with police (*M* = 39.79, *SD* = 8.38) and those who had

no negative encounter with police ($M = 36.54$, $SD = 9.29$; $t (683) = 4.13$, $p < .001$, two-tailed). The estimated effect size was small to moderate (Cohen's $d = .37$).

Table 33

*Independent-samples t-test Results Regarding Fear of Crime and Collective Efficacy Between Negative Police Experience and Non-Experience Groups*

| | Non-Experience (n = 531) | | Negative Experience (n = 154) | | | |
|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *t*-Statistic | Cohen's *d* |
| Fear of Crime | 25.81 | 12.64 | 27.69 | 12.87 | −1.62 | −.15 |
| Collective Efficacy | 39.79 | 8.38 | 36.54 | 9.29 | 4.13*** | .37 |

*Note*. The sample size of the non-experience group in the police legitimacy model was 531. Since the independent-samples *t*-test for the confidence in the model did not pass the Levene's statistic, when computing the *t*-test for this outcome variable, the equal variance was not assumed.
** $p \leq .01$.

In summary, the current section investigated whether proposed mediating variables, fear of crime and collective efficacy, differed significantly according to individual characteristics. A series of independent-samples t-tests indicated that only some individual characteristics were significantly correlated with fear of crime and collective efficacy. Concerning fear of crime, three (race, sex, and victimization experience) out of five individual characteristics were significantly related. Whites were less afraid of crime in comparison to non-Whites, and males exhibited lower fear of crime compared to females. Those with victimization experience displayed a higher level of fear of crime in comparison to those without victimization experience. Regarding collective efficacy, three (major, victimization experience, and negative police encounter) of five individual characteristics were significantly associated. CJ majors tended to have higher perceived collective efficacy compared to non-CJ majors, and students with victimization experiences possessed lower collective efficacy in comparison to their

counterparts. Finally, people who had not experienced a negative police encounter indicated higher collective efficacy as opposed to those who had.

**Moderated Mediation Analyses**

Taken together, a series of independent-samples $t$-tests in the previous section indicated that there were differences in fear of crime and collective efficacy between some categorical factors. In short, these findings opened a possibility of the moderated mediation relationship between the experimental conditions and perceptions of police. Given that not all individual characteristics and experiences were associated with significant differences in fear of crime and collective efficacy, only factors that were significantly associated with two outcome variables were used as moderating variables. Considering that only fear of crime and collective efficacy served as mediators linking some experimental conditions to perceptions of police, they were used as intervening variables. It should also be noted that there was no evidence to support a direct effect of experimental conditions at least from the between-subjects data. Therefore, the current study intended to examine only conditional indirect effects but not conditional direct effects (Hayes, 2013). Conceptual models of conditional indirect effects in the current study are displayed in Figure 12 through 14. These results are presented in Table 34 through 36.
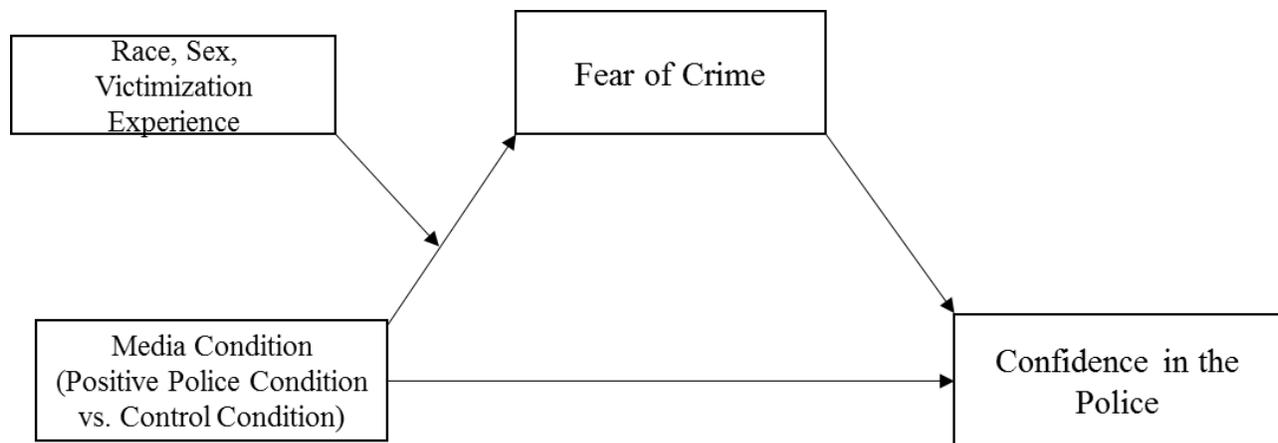
*Figure 13*. A conceptual model in which the indirect effect of media exposure (Positive Police Condition vs. Control Condition) on confidence in the police is moderated by race, sex, victimization experience.

Figure 12 displays a conceptual diagram of the first moderated mediation model. According to a series of moderation mediated analyses on the basis of 10,000 bootstrap samples, none of the individual characteristics failed to moderate either a direct effect of media exposure (Positive Police Condition vs. Control Condition) on confidence in the police or an indirect effect. In particular, the influence of media exposure on fear of crime was not contingent on race ($b = -.976$, $p = .800$), sex ($b = 4.243$, $p = .131$), and victimization ($b = -5.525$, $p = .069$) in each respective model (see Table 34). These findings suggested that there was no conditional indirect effect of the media exposure on confidence in the police because there was no conditional effect of the media exposure on fear of crime depending on race, sex, or victimization. The confidence intervals for the conditional indirect effect constructed from 10,000 bootstrap samples also confirmed this conclusion.

Table 34

*The Conditional Effect of Media Exposure (Positive Police Condition vs. Control Condition)*

*on Fear of Crime Depending on Race, Sex, or Victimization*

| Interaction | Effect on | *b* | *SE* | 95% CI |
|---|---|---|---|---|
| Media Exposure × Race (*n* = 263) | Fear of Crime | −.976 | 3.847 | (−8.551, 6.598) |
| Media Exposure × Sex (*n* = 267) | Fear of Crime | 4.243 | 2.800 | (−1.270, 9.757) |
| Media Exposure × Victimization (*n* = 265) | Fear of Crime | −5.525 | 3.029 | (−11.489, .439) |

*Note*. Entries are unstandardized regression coefficients (*b*), standard errors (*SE*), and 95% confidence intervals (CI). Only conditional indirect effects were indicated from three different models.
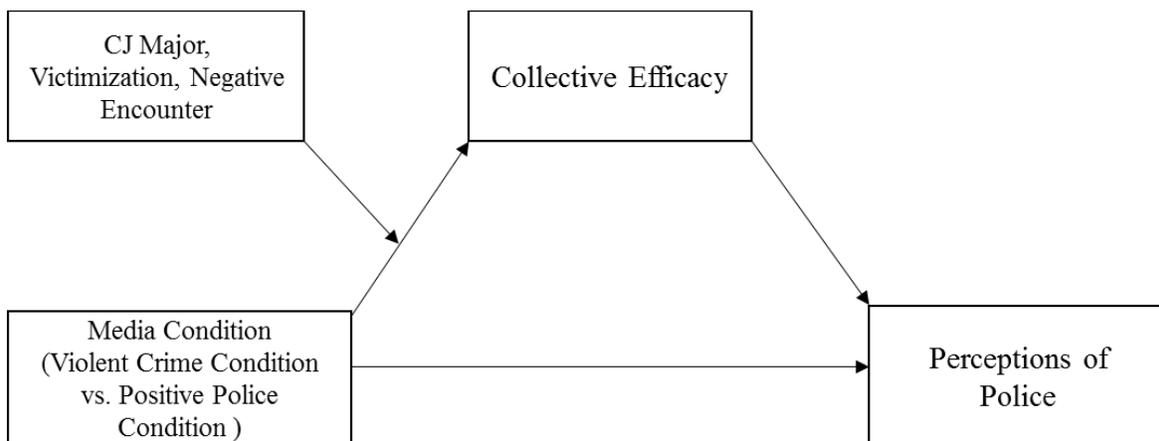


*Figure 14*. A conceptual model in which the indirect effect of media exposure (Violent Crime Condition vs. Positive Police Condition) on perceptions of police is moderated by CJ major, victimization experience, and negative encounter with police.

As seen in Figure 14, it was tested whether the effect of media exposure (Violent Crime Condition vs. Positive Police Condition) on perceptions of police was carried indirectly through collective efficacy, with this process being moderated by CJ major, victimization, and negative

encounter with police. Inference about the indirect effect of the media condition was carried out using a bootstrap approach (Preacher et al., 2007).

Table 35 presents the results from ordinary least squares regression in which the impact of the media condition on collective efficacy was moderated by CJ major, victimization experience, and negative encounter with police. However, no significant conditional effect on collective efficacy was found (CJ major: $b = -1.203$, $p = .559$; victimization: $b = .139$, $p = .065$; negative encounter: $b = 1.908$, $p = .416$), suggesting that there was no conditional indirect effect of media exposure on confidence in the police and police legitimacy. Calculated 95% bootstrap confidence intervals for the conditional indirect effect also provided support for the earlier finding from a simple ordinary least squares regression.

Table 35

*The Conditional Effect of Media Exposure (Violent Crime Condition vs. Positive Police Condition) on Collective Efficacy Depending on CJ Major, Victimization, and Negative Encounter with Police*

| Interaction | Effect on | $b$ | *SE* | 95% CI |
|---|---|---|---|---|
| Media Exposure × CJ Major ($n = 277$) | Collective Efficacy | −1.203 | 2.059 | (−5.257, 2.850) |
| Media Exposure × Victimization ($n = 276$) | Collective Efficacy | .139 | 2.127 | (−4.048, 4.326) |
| Media Exposure × Negative Encounter ($n = 277$) | Collective Efficacy | 1.908 | 2.342 | (−2.702, 6.518) |

*Note*. Entries are unstandardized regression coefficients (*b*), standard errors (*SE*), and 95% confidence intervals (CI). Only conditional indirect effects were indicated from three different models.
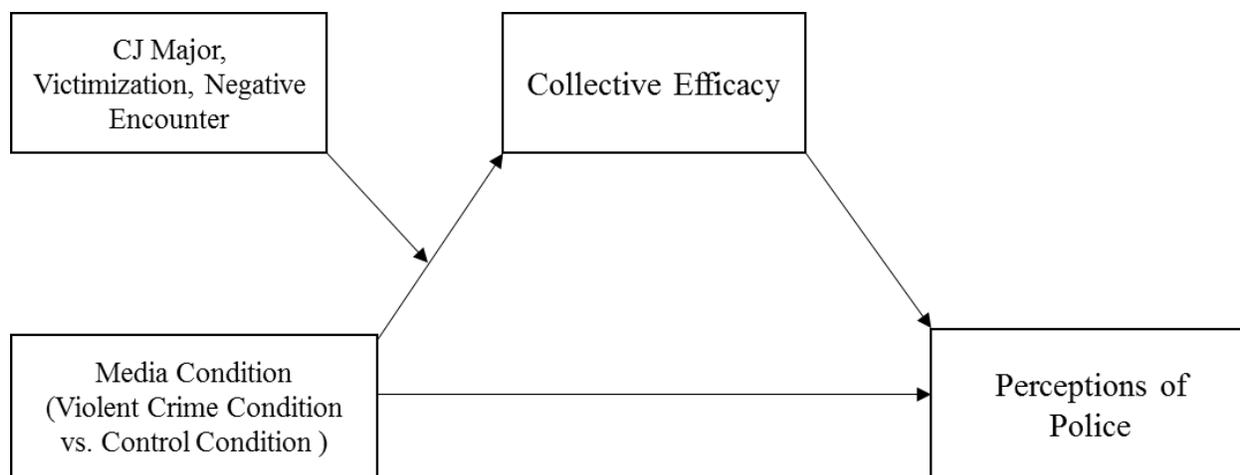
*Figure 15*. A conceptual model in which the indirect effect of media exposure (Violent Crime Condition vs. Control Condition) on perceptions of police is moderated by CJ major, victimization experience, and negative encounter with police.

Figure 15 displays a conceptual diagram in which the media condition (Violent Crime Condition vs. Control Condition) influences perceptions of police indirectly through collective efficacy, and this indirect effect is conditional on respondents' major, victimization experience, and negative encounter with police. The results from ordinary least squares regressions, presented in Table 36, indicated that respondents' major ($b = -.985$, $p = .369$), victimization experience ($b = .925$, $p = .671$), and negative encounter with police ($b = -1.389$, $p = .596$) did not moderate the impact of media exposure on collective efficacy. These findings imply that there was no conditional indirect effect of media exposure on perceptions of police as well (see Table 36). A 95% bootstrap confidence interval based on 10,000 bootstrap samples also confirmed the null conditional indirect effect.

Table 36

*The Conditional Effect of Media Exposure (Positive Police Condition vs. Control Condition)*

*on Collective Efficacy Depending on CJ Major, Victimization, and Negative Encounter with*

*Police*

| Interaction | Effect on | $b$ | $SE$ | 95% CI |
|---|---|---|---|---|
| Media Exposure × CJ Major ($n = 277$) | Collective Efficacy | −.985 | 2.106 | (−5.131, 3.161) |
| Media Exposure × Victimization ($n = 276$) | Collective Efficacy | .925 | 2.175 | (−3.358, 5.208) |
| Media Exposure × Negative Encounter ($n = 277$) | Collective Efficacy | −1.389 | 2.614 | (−6.536, 3.759) |

*Note*. Entries are unstandardized regression coefficients (*b*), standard errors (*SE*), and 95% confidence intervals (CI). Only conditional indirect effects were indicated from three different models.

Findings from ordinary least squares regression models and mediated moderation analysis using a bootstrapping approach indicated that there was no significant conditional indirect effect of the media condition on perceptions of police. The current analysis provided four major findings. First, the results appeared to provide support for the direct effects of media exposure. Interestingly, the negative police condition exerted the strongest effect among various experimental conditions. Second, while most interaction effects between participant characteristics and media exposure were not supported, CJ majors were more susceptible than non-CJ majors when the mixed video condition that contained both positive and negative police images. Third, the mediation analyses showed that media exposure can influence perceptions of police indirectly through changes in perceptions of crime and neighborhood. Fourth, moderated

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mediation models were not supported. More interpretations of the results are presented in the

following chapter.

CHAPTER V

DISCUSSION

Media have often been criticized for shaping people's view regarding crime and criminal justice by presenting distorted images (Surette, 2014). Considering the popularity of this claim, it is striking that there is a dearth of research that has investigated the impact of the media on perceptions of police with experimental designs (Morgan & Shanahan, 2010). In fact, the lack of research using experimental design has been pointed out as a critical limitation in criminology (Weisburd & Piquero, 2008). A recent systematic review of police legitimacy echoes the importance of randomized experiments to understand better the factors that influence people's perceptions of police (Mazerolle, Bennett, Davis, Sargeant, & Manning, 2013).

There is a growing body of research using an experimental design to investigate factors that determine perceptions of police. Some researchers have conducted randomized field experiments (MacQueen & Bradford, 2015; Mazerolle, et al., 2012; Sahin, Braga, Apel, & Brunson, 2017), and others have started to pay attention to the role of indirect experiences in forming perceptions of police (Johnson et al., 2017; Lowrey et al., 2016; Maguire et al., 2017; Parry, Moule, & Dario, 2017). Nonetheless, none of these studies was intended to understand the impact of popular media on perceptions of police. Even the studies that employed the video condition to explore the impact of vicarious experiences on perceptions of police failed to test the impact of popular media (Johnson et al., 2017; Maguire et al., 2017). For instance, Maguire et al. (2017) used experimental conditions that were based on simulated traffic stops with the focus on the impact of police interactions.

The current study undertook a randomized experiment to estimate the effects of popular media on perceptions of police. To explore media effects on perceptions of police, the current

study relied on Akers's (2009) social learning theory and linked the influence of the media to four different objectivist models from policing literature: the instrumental model, the expressive model, the procedural justice model, and the distributive justice model (Braga, Winship, Tyler, Fagan, & Meares, 2014; Jackson & Bradford, 2009; Tyler, 2011a). Specifically, a within-between subject design was used, and one of five video conditions was randomly assigned to each research participant: the violent crime condition, the negative police condition, the positive police condition, the control condition (i.e., public speaking), and the mixed condition. The effects of each experimental condition on respondents' perceptions of police were investigated in two ways. First, pre-test and post-test data regarding perceptions of police were compared and examined for significant changes within individuals. Second, the average perceptions of police were compared across different experimental groups. The use of a randomized experiment ensures the internal validity of the relationship between media exposure and perceptions of police.

Simultaneously, one major contribution of the current study lies in the efforts to identify when and how media effects took place. Based on social learning theory and cultivation theory, it was hypothesized that there would be interaction effects between the video condition and individual characteristics, including their experiences. Additionally, the possibility of indirect effects of media exposure was examined. The mediation pathways were derived from traditional policing models, assuming that the media may have not only direct effects on global attitudes toward police but also on other types of perceptions regarding crime, community, and criminal justice (Chiricos et al., 1997; Eschholz et al., 2003; Intravia, Wolff, Paez, & Gibbs, 2017; Roche et al., 2016). Finally, indirect effects on perceptions of police through perceptions of community and crime, whether they were contingent on individual characteristics had remained unexplored

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before the current research (Pollack et al., 2012). The possibility of conditional indirect effects has been empirically tested.

In the following sections, findings from analyses are discussed in combination with policy implications that can be drawn from each finding. The discussion is divided into three parts. The first section responds to the first research question as to whether there were media effects on perceptions of police. The discussion centers on how these findings can be used to deter further erosion of confidence in the police via media coverage. The second part involves the answer to the second research question regarding interaction effects between media conditions and individual characteristics as well as experiences. Interpretations of these findings are presented and suggestions are made for how these interaction effects should be considered when formulating criminal justice policy. The final section concerns the mediated impact of the media on perceptions of police. By clarifying mechanisms through which media influence perceptions of police, policymakers can specify how to intervene in the development of negative perceptions of police.

## Findings Regarding RQ1: Media Matter but Negative Police Images Matter

While there is a small body of research on media effects on perceptions of police, these studies were mostly based on cross-sectional surveys or panel surveys at best (Dowler, 2003; Intravia, Wolff, & Piquero, 2017; Kochel, 2017; Lasley, 1994). Overall, the current findings seem to provide mixed support for the hypothesized direct impacts of the media (Table 37).

Table 37

*Summary of Results Regarding Direct Effects of the Media Exposure*

| Hypothesis | Results |
|---|---|
| H$_{1a}$: Watching an edited video segment depicting police misconduct will negatively influence perceptions of police. | Supported |
| H$_{1b}$: Watching an edited video segment depicting positive police images will positively influence perceptions of police. | Not Supported |
| H$_{1c}$: Watching an edited video segment that contains both negative and positive police images will negatively influence perceptions of police. | Supported |
| H$_{1d}$: Watching an edited video segment focusing on crime news will influence perceptions of police. | Supported |
| H$_{1e}$: Watching an edited video segment that solely contains content unrelated to policing will not influence perceptions of police. | Supported |
| H$_{1f}$: Watching an edited video segment that depicts police misconduct will exert a stronger effect on perceptions of police as compared to watching an edited video segment presenting positive police images. | Supported |

Some findings from the current study were in line with previous studies. Specifically, a series of paired *t*-tests using the data from the within-subject design indicated that the negative police condition (Cohen's *d* = .31) and the mixed police condition (Cohen's *d* = .17) significantly reduced confidence in the police; however, the violent crime condition, the positive police condition, and the control condition were not related to changes in participants' perceptions of police. It is notable that the positive police condition did not influence perceptions of police. Policing researchers have repeatedly demonstrated that people's negative interactions with police have stronger effects on perceptions of police than the impact of positive interaction with police (Bradford et al., 2009; Myhill & Bradford, 2012; Skogan, 2006b). This asymmetrical impact of experiences with police is consistent with what some social psychologists have concluded as "bad is stronger than good" (Baumeister et al., 2001). What is interesting about this study is that this asymmetrical impact is not limited to individuals' firsthand experiences with the police.

Recently, Maguire et al. (2017) investigated whether exposure to video clips of mock traffic stops can change perceptions of police. They specifically compared the relative effect of the video footage describing positive interactions with police that included elements of procedural justice to the effect of the video footage that contained the negative police interaction. When these experimental conditions were compared to the control condition, it was found that the effect of the negative condition was greater than that of the positive condition. Notably, their study also pointed that the asymmetrical effect of negative interaction to positive impact was discovered in relation to global attitude toward police. The findings from the current study lend further credence to the asymmetrical impact of negative police work as opposed to positive police work.

The findings illuminate the importance of recognizing negative consequences of police misconduct. When the police discuss adverse ripple effects of police misconduct, they should be concerned about not just direct victims who were abused, but also their family members, friends and the audience who comes to know what happened to victims (Augustyn, 2016).

**Recognizing Limitations of Portrayed Images of Police**

The current study shows that perceptions of police are not just driven by actual interactions with police but by vicarious experiences that can be presented through media. While many researchers mentioned this potential possibility, only a few studies have examined this relationship with randomized experiments (Johnson et al., 2017; Maguire et al., 2017; Parry et al., 2017). Nonetheless, their focus was not on testing the impact of popular media on perceptions of police. The findings of this study suggest that people can form their perceptions through exposure to media, and this effect is particularly pronounced when the media contain negative police images.

If people's perceptions of police do not solely stem from their firsthand experiences, the implication is clear. Currently, police experience pervasive animosity from many segments of the public, and it has been assumed that the negative perceptions of police are byproducts of the illegal or unfriendly performances of police; however, if negative perceptions of police can be partly attributed to distorted representations of police in media, blaming the police alone may not be fair (Pollock, 2017). In the media, police officers often are presented as engaging in shooting suspects when the level of proof (or probable cause) has not been met, shooting people of color, especially Blacks, based on racial biases, conducting illegal search and seizures, or using physical force to elicit information or confessions from suspects (Britto et al., 2007; Chiricos & Eschholz, 2002; Dirikx et al., 2012; Donovan & Klahm, 2015).

Contrary to what media present, one should never forget law enforcement strategies in the United States varies greatly (Banks, Hendrix, Hickman, & Kyckelhahn, 2016). The generalization of police work with the information from the media can lead to significant misunderstandings about police. One recent report from the Bureau of Justice Statistics estimated that there were as many as 1,076,054 law enforcement employees with 12,028 agencies in the United States in 2012. Considering that these figures were only based on full-time officers who were reported to the Uniform Crime Reporting (UCR) program, the actual numbers could be higher than the estimates. Therefore, the caution should be made so that media representations of the police are not conflated to reflect the entire police institution.

A small portion of police misconduct, especially the use of lethal force, should not be construed as regular police work. Empirical evidence supports this claim. Research indicates that the use of excessive force only accounts for a small proportion of all police encounters (Adams, 1995; Micucci & Gomme, 2005). A recent federal report revealed that among 39,914 U.S.

residents who had interaction with police in 2008, 776 of them reported that they had experienced the use or threat of use of force by police officers (Eith & Durose, 2011). The majority of types of force used or threatened by police were concentrated on pushing or grabbing, threatening force, and shouting at residents (Eith & Durose, 2011). Moreover, Adams (1995) reported that almost two-thirds of the total use of force were justifiable. Taken together, only a miniscule portion of all encounters with police can be considered excessive uses of force. Put simply, distorted images of police reflect only part of the reality (Donovan & Klahm, 2015).

If misrepresentation of police permeates, police officers can be discouraged, and the negative relationship between community and police can become exacerbated (Nix & Wolfe, 2016, 2017; Wolfe & Nix, 2016). Some researchers have investigated media effects on police (Nix & Wolfe, 2016, 2017; Wolfe & Nix, 2016), and found that negative publicity can reduce officers' willingness to engage in a community partnership. Part of the reason why police officers are demoralized by publicized police misconduct is that officers think that they are misunderstood and wrongfully blamed, regardless of their actual performance (Pollock, 2017; Weitzer, 2015). The audience of the media should recognize that police are not entirely responsible for problematic policing, but the public is, in part, influenced by the negative media portrayal of the police.

Although the findings from the current study indicated that negative police images, and even when mixed with positive police images, resulted in decreases in confidence in the police, these findings should not be read as evidence to support closer police-media relations to negotiate the amount of media coverage about police misconduct (Mawby, 2002). Recent studies indicate that the relationship between the police and the press has become "inappropriately close and if not actually corrupt, very close to it" (Mawby, 2014, p. 241). There were cases where a

police department was accused of developing inappropriate relationships with media

corporations to better manage their public impression (Mawby, 2014). Additionally, police

organizations often have the upper hand in their relationship with the press because they are a

source of information for the media (Ericson et al., 1987; Mawby, 2010). This asymmetrical

power of the police over the press already carries the risk of manipulating news reporting as the

police may want to withhold information or provide selective information. In other words, trying

to change the patterns of media coverage is not a constructive policy implication that can be

derived from the current findings.

**Reducing Police Misconduct**

The current finding emphasizes that people are sensitive to negative images of police in

the media. This suggests that police need to pay special attention to reducing negative police

performance presented in the media. The best way to cut down the amount of negative

information involving police is to improve the quality of police performance. Specifically, police

have recently received much attention due to several incidents involving use of excessive force

(Pollock, 2017). Media coverage often scrutinizes whether the use of force in the publicized

cases was fair and legitimate, and it illuminates that police officers' actions were

unconstitutional. Put simply, negative police representation in the media can only be diminished

by reducing the number of illegal activities in which police have involved.

While severe forms of police misconduct are not as pervasive as they are often portrayed

in the media, it is undeniable that there are obvious corrupt cases that are involved in misuses of

police authority, ranging from police disrespect, to use of non-lethal force and lethal force, to

traffic stops (Greene, Piquero, Hickman, & Lawton, 2004; Hickman, Piquero, & Garner, 2008;

Ross, Fazzalaro, Barone, & Kalinowski, 2016; Voigt et al., 2017; Zimring, 2017). Given that the

negative video condition in the study included police misconduct described by a victim's family members, police should pay special attention to attempts to reduce misconduct (President's Task Force on 21st Century Policing, 2015).

Use of excessive force is rare in all police encounters (Micucci & Gomme, 2005). Nonetheless, the chance of experiencing police use of force may not be small if one looks at an individual's lifetime. Currently, there is no way to estimate the precise number of police use of illegal force incidents due to the decentralized structure of police departments in the United States (Hickman et al., 2008). A few studies have estimated the prevalence of police use of illegal force by asking officers for their perceptions of the extent of corruption (Barker & Carter, 1994; Stevens, 1999). Using data from 925 randomly selected police officers, Weisburd and Greenspan (2000) found that 22% of officers agreed or strongly agreed that officers in their police department use excessive force. Similarly, another study reported that 39% of them had engaged in brutality by their own account (Barker & Carter, 1994), and another study examining 255 narcotic officers indicated that 63% of the officers frequently heard about the use of excessive force including the use of lethal force. Not surprisingly, a report from the 2010 National Police Misconduct Statistics and Reporting Project indicated that almost a quarter (23.5%) of all reported allegations of misconducts were related to excessive force, followed by misconduct (0.3%) (Packman, 2011). In short, use of excessive force may not be unusual events in many police departments. If so, one reason why the public is sensitive to the news regarding police use of force would be attributable to the actual prevalence of these encounters.

Researchers have proposed various ways to decrease police misconduct and corruption (Crank & Caldero, 2004; Fitch, 2014; Pollock, 2017). First, it is imperative to use a rigorous pre-employment screening instrument to identify candidates who are susceptible to the temptation of

abuse of authority (Pollock, 2017). Second, there should be a more efficient system that keeps

track of problem police officers in the police department. Research indicates that a small portion

of police officers are involved in a large portion of civil lawsuits and complaints regarding the

use of excessive force and sexual misconduct (Harris, 2010a, 2010b). Nonetheless, there are only

a few institutionalized systems to track lawsuits from the officers' records in the police

department (Pollock, 2017). To identify problem officers, it is critical to establish a system that

can identify a pattern of abuse. In this regard, early warning systems can serve as effective

deterrent to problematic behaviors of some police officers although these systems are more

concerned with departmental level monitoring rather than tracking official lawsuits (Walker,

Alpert, & Kenney, 2000; Walker et al., 2012). While there are great variations between police

departments, most departments use civil complaints, use of weapon reports, discipline records,

and reprimands to identify high-risk officers. Based on this data, the police department can adopt

diverse intervention programs ranging from counseling to supervision and reassignment. Despite

the endorsement from the National Institute of Justice, research indicates that many police

departments did not incorporate early warning systems into their programs or even when they

have early warning systems, they do not use them to intervene with officers in advance (Pollock,

2017).

Third, there should be more trainings designed to de-escalate conflict situations and to

handle the mentally ill in the community more effectively. Publicized negative police use of

lethal force has often involved police response to the mentally ill, resulting in killing a mentally

ill person. Almost 95% of the individuals within mental hospitals were deinstitutionalized to the

community without proper treatment since the Community Mental Health Centers Act of 1963

took effect (Slate, Buffington-Vollum, & Johnson, 2013). Thus, police frequently encounter a

situation where they have to handle mentally ill people. Crisis Intervention Training (CIT) helps officers to know how to react to people with mental illnesses in the community and locate the resources available in their locals (Jennings & Hudak, 2005). Some police departments even have hired clinicians so that police officers can team up with them when they patrol. This type of program can effectively reduce the use of a threatening approach by police officers, avoiding the need for the use of force (Morabito & Socia, 2015).

**Identifying Intervention Points**

Another notable finding regarding the first research question was that the exposure to the video clip that described violent crime led to increases in perceived police legitimacy. Given that a large body of research focuses on adverse consequences of exposure to violent media (Anderson, Bushman, Donnerstein, Hummer, & Warburton, 2015; Gerbner & Gross, 1976; Gunter, 2008), the current finding that the violent media can enhance police legitimacy is interesting. That said, this finding was not entirely unpredictable. As noted, Durkheim (1933) discussed the functionality of crime to maintain a social life. According to Durkheim (1933), crime and deviance help society to set moral boundaries by eliciting common reactions to them. The exposure to violent crime may have reassured participants to recognize the importance of the police institution to control crime.

Of course, this result should not be translated into encouragement of greater presentations of violent media, especially considering the weak contribution of the violent media to police legitimacy. The public is already saturated with media that sensationalize crimes and deviance, and these topics have become the staple of media consumers. Rather, the implication should be directed toward identifying mechanisms through which the media affect police legitimacy positively. By elaborating on intervening processes, police, and policymakers can specify how to

improve perceptions of police. For instance, if media indirectly form positive perceptions of police through decreased fear of crime, policymakers should develop programs that can reduce fear of crime and increase collective efficacy more effectively.

**Reflecting on How Responsible Media are in Shaping Perceptions of Police**

While the findings from the present study provide some support for the argument that negative coverage of the police in the media reduces perceptions of police, it is also true that these media effects were not so strong. In other words, holding the media responsible for an unfavorable view of police may have limits in understanding the current antagonistic relationship between the community and police.

The efforts to change perceptions of police can begin with an accurate assessment of the current policing status. Some researchers proposed to use better police accountability measures that include the presence of the oversight agency and citizen review board (De Angelis, 2009; De Angelis & Wolf, 2016). For instance, De Angelis (2009), using a pre and post-survey, evaluated the impact of the creation of a citizen oversight agency that substituted for an internal complaint investigation process on complainant satisfaction. Other initiatives that can be considered as measures of accountability include police auditors and police monitors (Finn, 2001). When police improve their quality of service, people have a higher level of satisfaction with police (De Angelis & Wolf, 2016), which would make them insulated from the impact of negative media coverage of police. If more trust between the community and the police is established, the public would perceive publicized police misconduct as the problem of a few bad apples rather than the crisis of general police institutions.

**Findings Regarding RQ2: Some are More Sensitive to the Media**

The current study intended to examine whether individual characteristics and experiences moderate the relationship between media and perceptions of police. Overall, the current findings did not support interaction effects between media exposure and individual characteristics except for their major (see Table 38). While previous studies have argued that there are interaction effects between media consumption and audience characteristics (Chiricos et al., 1997; Dowler & Zawilski, 2007; Kochel, 2017; Lasley, 1994), these studies were mostly based on cross-sectional survey or quasi-experimental designs. The current study, based on a randomized experimental design, did not provide strong support for the previous findings. The lack of statistical significance can partly be attributed to the features of experimental conditions. Akers (2009) argued that the impact of associations on social learning could be conditioned by four key factor: priority, duration, frequency, and intensity. If the video clips were designed to last longer (duration) and contained more graphic or provoking images (intensity), media effects could have been more substantial. Another important reason for the lack of support for interaction effects could be related to the sample size. While the overall sample size for the current study was not small, the sample size for each subgroup analysis was decreased substantially when individual characteristics and the video condition were considered to investigate interaction effects. Stated differently, the lack of support for the proposed interaction effects should be read with caution considering the limited sample size and video conditions.

Table 38

*Summary of Results Regarding Interaction Effects Between the Media Exposure and*

*Individual Characteristics*

| Hypothesis | Results |
|---|---|
| $H_{2a}$: Non-Whites are more likely to be influenced by an edited video segment depicting police misconduct in comparison to Whites. | Not Supported |
| $H_{2b}$: People who have experienced negative contact with the police are more likely to be influenced by an edited video segment depicting police misconduct in comparison to people who have not experienced negative contact with the police. | Not Supported |
| $H_{2c}$: Whites are less likely to be influenced by an edited video segment depicting positive police images in comparison to non-Whites. | Not Supported |
| $H_{2d}$: People who have not experienced negative contact with the police are less likely to be influenced by an edited video segment depicting positive police images in comparison to people who have experienced negative contact with the police. | Not Supported |
| $H_{2e}$: Females are more likely to be influenced by an edited video segment focusing on crime news in comparison to males. | Not Supported |
| $H_{2f}$: Victims are more likely to be influenced by an edited video segment focusing on crime news in comparison to non-victims. | Not Supported |
| $H_{2g}$: CJ majors are more likely to be influenced by watching edited video segments in experimental conditions in comparison to non-CJ majors. | Not Supported |
| $H_{2h}$: CJ majors are less likely to be influenced by watching edited video segments in experimental conditions in comparison to non-CJ majors. | Supported |

Nonetheless, one interesting finding from this study was related to the interaction effect

between respondents' academic majors and the mixed video condition. When respondents were

presented with the video condition that portrayed both positive police images and negative

images, all respondents experienced a decrease in confidence in the police, but this effect was

more pronounced among non-CJ majors. In other words, CJ majors were less susceptible to

media effects, at least when the media involve mixed images of police.

This finding suggests that CJ majors might have a better understanding about police

work, making them less swayed by the information presented by media. While there have been

numerous news reports involving police use of excessive force and other serious problems that police need to address, statistically speaking, excessive force accounts for only a small portion of total interactions with police (Adams, 1995; Micucci & Gomme, 2005). Using survey data from 200 students, Tsoudis (2000) investigated differences in perceptions of criminal justice issues between CJ majors and non-CJ majors. Her findings indicated that CJ majors were less supportive of harsh punishment and less likely to be opposed to criminal rights in comparison to non-CJ majors. Tsoudis (2000) concluded that differences in perceptions of criminal justice issues support the value of criminal justice education, leading them to make more informed decisions. Other studies indicated that CJ majors are more susceptible to certain biases (Miller & Kim, 2012; Olson, 2017). For instance, Miller and Kim (2012) found that CJ majors exhibited more negative attitude toward gay males and were prone to demonstrate less support for gay male rights as compared to non-CJ majors. Similarly, Olson (2017) found that CJ majors displayed more negative perceptions toward homosexuals.

The results from Lim's (2015) study are directly relevant to the findings from the current study. Using a university sample from two universities, Lim (2015) examined whether there were differences in perceptions of police between CJ majors and non-CJ majors. The findings from regression analyses indicated that CJ majors are more likely to have trust in the police than non-CJ majors. Interestingly, CJ majors tended to perceive more biased policing. In the current study, CJ majors displayed higher confidence in the police and police legitimacy, supporting Lim's (2015) study. However, the empirical examination as to how differently CJ majors interpret media coverage of the police from non-CJ majors remained understudied.

The finding that CJ majors had more favorable perceptions of police than non-CJ majors can be connected to the finding that CJ majors were less influenced by the mixed images than

non-CJ majors. Again, this can be indicative of more objective knowledge about policing, but this can also reflect one persistent problem in the criminal justice system: selective information processing (Pollock, 2017). According to Pollock (2017), selective information processing can be defined as "only recognizing evidence to fit one's theory" (p. 207). This type of cognitive bias is frequently related to practices of criminal justice agents (Schehr & Sears, 2005). This idea can be applied to how criminal justice agents would interpret the information given to them through media outlets. If CJ majors are more prone to adhering to their original favorable sentiment toward police and focus more on the positive side of a police story, there are potential issues.

Clearly, human beings are all subject to implicit bias (Staats, Capatosto, Wright, & Contractor, 2015), but law enforcement officers are situated at a unique position where they can exercise coercive power on citizens. Thus, it is paramount that police maintain a critical view toward their discretion that can be interpreted as coercive force. Considering that many CJ majors want to be criminal justice professionals, they should have more sensitivity toward news media that present ethical misconduct occurring in the criminal justice system. If CJ majors do not recognize the seriousness of police misconduct as non-CJ majors do, it would be hard for them to understand why there is a great deal of animosity in the police-community relationship. Numerous news reports underline that the source of hatred toward police among disadvantaged community members comes from a negative encounter with police. This directly influences the effectiveness of police function since residents are reluctant to report crime incidents to the police and are not willing to cooperate with police (Tyler, 2011b; Weitzer, 2015).

**Increasing Criminal Justice Education Programs Designed to Increase Awareness**

The results illuminate the necessity to educate CJ majors so that they have a better understanding about police misconduct and how to deter it. If there is a difference in interpreting

publicized police use of force between police officers and other people, different perceptions between them can be deepened as news coverage about police misconduct increases. Considering that what the media present reflect what the audiences perceive (Surette, 2014), one should not solely focus on what media deliver. The media may simply mirror the public's sentiment toward the police. Thus, the discussion about improving perceptions of police should not be restricted to better police impression management skills. Unless the underlying cause of negative perceptions is removed, the public's attitude toward police will not change quickly.

One major source of negative attitudes toward the police can be found from the negative quality of encounters with police (Nix, Pickett, Wolfe, & Campbell, 2017; Tyler & Huo, 2002; Weitzer & Tuch, 2006). The evidence substantiates (Jonathan-Zamir, Mastrofski, & Moyal, 2015; Kochel, Parks, & Mastrofski, 2013), positive interactions with police based on procedural justice can enhance confidence in the police. If so, it is critical that CJ majors be familiar with the concept of procedural justice and the importance of trust from the public (Schuck & Rosenbaum, 2011). There are various ways to increase awareness regarding police misconduct among CJ majors. First, CJ curricula should include instruction that addresses the relationship between the community and criminal justice institutions. It can start from a historical context where distrust between community members and police developed. For example, CJ majors would learn that, historically, police have engaged in slave patrols, serving as a tool for white power. They would also learn that police have been instrumental in suppressing legitimate civil rights movements (Van Craen & Skogan, 2017); this could provide CJ majors with a chance to bridge the gap in understanding about police.

Curricula can also incorporate instrumental rationales for improving perceptions of police. For instance, when discussing the importance of police building a good relationship with

community members, evidence regarding crime reporting and willingness to cooperate with police can be presented. CJ students should also learn about evidence-based practice to improve public perceptions of police. Research has consistently supported the benefit of incorporating procedural justice principles into police encounters with citizens (Mazerolle et al., 2013; Tyler, 2005; Van Craen, 2013). By learning elements of procedural justice and why they matter, CJ students would consider police officers' missions not just from the crime control model, but also from the public servant model (Pollock, 2017).

Second, educational curricula emphasizing the relationship between the community and police should not be limited to students who study criminology and criminal justice. Considering that police officers often interpret media coverage about police misconduct in a different way from the general population (Federal Bureau of Investigation, 2017), training and education that can ameliorate their understanding about perceptions of police should be provided. Training and education can be instrumental in reducing the large financial settlements due to actions of errant police officers.

Researchers have used various research designs ranging from cross-sectional survey design to experimental design to investigate the benefit of training police officers (Fyfe & Kane, 2006; Rosenbaum & Lawrence, 2011; Schuck & Rosenbaum, 2011; Skogan, Van Craen, & Hennessy, 2015). For instance, Skogan et al. (2015) evaluated the short-term and long-term effects of Chicago's training program, which was developed to promote procedural justice principles when police officers exercise their authority. The training incorporated various modules, including lectures, video clips, and group exercises that helped the trainers to understand the relationship between the community and police from a historical context, and to think and develop strategies to improve the quality of encounter with community members. Their

findings indicate that training improved officers' support for procedural justice principles after they received the training, and more importantly, their study shows that the effects of training could persist long after the training workshop. Their findings suggest that increased attention to training and education can transform the police institution. In addition to incorporating procedural justice principles, police training should also include the sessions to increase fundamental knowledge about the Constitution. Many incidents involving police use of lethal force could have been avoided if the police officer had known several U.S Supreme Court rulings that instruct when police can use gun (Graham v. Conner, 1989; Tennessee v. Garner, 1985; White v. Pauly, 2017). If police can effectively reduce misconduct by institutionalizing evidence-based trainings, media coverage of police misconduct will diminish accordingly. The reduction in police misconduct is the most essential step to prevent the police from media attention to their wrongdoings.

**Changing the Culture of Noble Cause Corruption**

The current findings demonstrated that the media can produce differential effects on perceptions of police depending on CJ majors and non-CJ majors. This finding suggests that bridging the gap in their views at an earlier stage can be critical. When police cannot see what community members see, misunderstandings between them can be deepened. The subculture within a police department can be significant in this process. If police rely on their own subculture that is not compatible with the public's expectation, police can be further alienated from the community, perpetuating the vicious cycle of the poor relationship.

If police are reluctant to listen to voices from the community, there should be organizational initiatives to change the police subculture. One of the distinct tenets of police subcultures is that they place a higher value on the ends over the means. Some researchers have

argued that police officers may engage in corrupt behaviors not because they pursue their interests but because they care about the welfare of the society (Crank & Caldero, 2004; Delattre, 1996; Kleinig, 2002). This moralistic type of corruption is committed in the name of justice and is referred to as noble cause corruption (Crank & Caldero, 2004; Delattre, 1996). According to Crank and Caldero (2004), the noble cause can be defined as "a moral commitment to make the world a safer place to live" (p. 29). In other words, noble cause corruption is premised on the assumption that police officers engage in morally wrong activities to keep bad guys off the street. The noble cause corruption includes a range of misconduct such as deceptive interrogation, manufacturing evidence, and testifying (Barker & Carter, 1994).

Part of the reasons why police do not find the use of excessive force problematic is because they care more about the ends. Police often identify themselves as protectors rather than agents of the state (Cooper, 2012). The former is more in line with Packer's (1968) crime control model that stresses repression of criminal activities. The latter is consistent with the due process model that highlights protection of innocents by ensuring procedural rights to determine individuals' guilt. When role conflicts arise, Cooper (2012) argued that police officers are more likely to assume the role of the protector because they perceive the crime-control mission as the most compelling task. To change this perception, it is crucial that police departments recognize, honor, and value activities that are aligned with the public service model (Sandel, 2009), while they discipline officers who violate codes of ethics and abuse their authority. Research indicates that when supervisors are tolerant of line officers' misconduct, officers perceive police misconduct as less serious (Lee et al., 2013). Put simply, adequate discipline and punishment are essential in fostering officers' unfavorable attitudes toward misconduct.

Administrators can also promote high ethical standards by treating line officers in a fair and respectful manner, which is related to the concept of procedural justice discussed by Tom Tyler. Using the self-reported data from officers working for the Philadelphia Police Department, Wolfe and Piquero (2011) discovered that officers who perceived higher procedural justice in their organization were less likely to engage in police misconduct. Similarly, Van Craen and Skogan (2017) proposed that police officers can model their supervisor's behaviors. Their quantitative analysis revealed that the quality of supervision by administrators was linked to how police officers exercise procedural justice toward citizens. These findings point to the importance of ethical leadership to develop a sense of procedural justice, reducing police misconduct.

Another way to identify errant officers and punish them is to set up an internal affairs department. Since internal affair mechanisms are often perceived to be incompetent and biased, the internal discipline mechanism should be strengthened by providing citizens with various platforms for filing their complaints (Pollock, 2017). The internal affairs department can also develop more feasible disciplinary options other than suspension or termination. Simultaneously, a civilian review board can be considered to monitor and investigate police misconduct. While there is no consensus on which civilian review board model is the most effective (Walker, 1997), the external nature of a civilian review board can ensure the independence of investigation as compared to the internal affairs model.

**Findings Regarding RQ3 and RQ4: Media Influence Perceptions of Police Through Fear of Crime and Collective Efficacy**

A series of mediation analyses from the current study showed that the media condition could influence perceptions of police through fear of crime and collective efficacy. Overall, the current findings provide partial support for some mediation models (see Table 39). More

specifically, the positive police images that portrayed police sacrifice and their efforts to stop crime (as opposed to the control condition) reduced the fear of crime, and this, in turn, increased confidence in the police. This finding is consistent with the accountability model proposed by Skogan (2009). This model argues that perceptions of police flow from police performance regarding local crime and fear. In contrast, the reassurance model argues that perceptions of police determine fear of crime. In his study using longitudinal data from Texas, Skogan (2009) claimed that the reassurance model is more valid than the accountability model. The current finding qualifies his conclusion. This does not mean that perceptions of police cannot changes in people's perceptions of crime. Evidence lends support to how perceptions of police can affect fear of crime (Hale, 1996; Zhao, Schneider, & Thurman, 2002). In other words, while there can be a positive feedback loop between perceptions of police and fear of crime, the current study reveals that police performance can indirectly influence people's evaluation of police work (Jackson et al., 2009; Jackson & Sunshine, 2007), supporting the instrumental model (Baumer et al., 2003; Tyler & Boeckmann, 1997).

Table 39

*Summary of Results Regarding Mediation Models Linking the Media Exposure to Perceptions*

*of Police*

| Hypothesis | Results |
|---|---|
| H$_{3a}$: Watching edited video segments in experimental conditions will influence fear of crime, which in turn influences perceptions of police. | Supported |
| H$_{3b}$: Watching edited video segments in experimental conditions will influence the perceived risk of victimization, which in turn influence perceptions of police. | Not Supported |
| H$_{3c}$: Watching edited video segments in experimental conditions will influence perceived incivility, which in turn influence perceptions of police. | Not Supported |
| H$_{3d}$: Watching edited video segments in experimental conditions will influence collective efficacy, which in turn influence perceptions of police. | Supported |
| H$_{3e}$: Watching edited video segments in experimental conditions will influence perceptions of procedural justice, which in turn influence perceptions of police. | Not Supported |

Another finding involving mediation models was that the media exposure could change

perceptions of police through a variation in collective efficacy. Violent crime condition (as

opposed to the positive police condition and the control condition) increased collective efficacy,

and this increased collective efficacy leads to enhanced perceptions of police (both confidence in

the police and perceived police legitimacy). Considering Durkheim's (1933) contention

regarding the functionality of crime, this finding should not come as a surprise. Nonetheless,

predominant studies have assumed that the media would deteriorate the relationship with other

community members (Gerbner, 1998; Gerbner et al., 1977; Morgan, 2011; Morgan & Shanahan,

2010). This assumption mostly relies on Gerbner's thesis about mean-world view, arguing that

people who heavily consume media would develop distrust toward their neighbors. Due to an

exclusive focus on cultivation effect on fear of crime, how media affect perceptions of the

community has been much neglected. Thus, the current study may serve as one of a few studies

that directly tested the functionality of crime proposition set forth by Durkheim (1933) and Gerbner's claim (1977) regarding mean-world view. The results appear to be in favor of Durkheim's (1933) argument.

Several key hypotheses were not supported by the current study. The lack of support for indirect effect of media exposure on perceptions of police through perceived procedural justice is noteworthy given that at least one variable from the instrumental model and the expressive model was supportive of the predictions. Simultaneously, numerous studies have reported that perceptions of procedural justice are critical in predicting general perceptions of police (e.g., Engel, 2005; Tyler, 1990; Tyler & Huo, 2002). Part of the reason for the weak indirect effect of media exposure could be found from the previous research regarding media effects on perceptions of police (Johnson et al., 2017; Lowrey et al., 2016; Maguire et al., 2017). Their findings indicated that the impact of a brief media exposure was largely limited to encounter-specific perceptions of police and did not bring considerable changes in global perceptions of police. Additionally, the video condition that contained negative police images did not present the quality of direct interactions between police officers and citizens. The inclusion of such information in the video clips may have resulted in greater indirect effects of media exposure. Thus, the conclusion regarding the lack of indirect effect of media exposure through perceived procedural justice should be reserved.

Table 40

*Summary of Results Regarding Mediated Moderation Models Linking the Media Exposure to*

*Perceptions of Police*

| Hypothesis | Results |
|---|---|
| H$_{4a}$: The indirect effect of the media on perceptions of police through fear of crime will be more pronounced among females in comparison to males. | Not Supported |
| H$_{4b}$: The indirect effect of the media on perceptions of police through the perceived risk of victimization will be more pronounced among females in comparison to males. | Not Supported |
| H$_{4c}$: The indirect effect of the media on perceptions of police through fear of crime will be more pronounced among victims in comparison to non-victims. | Not Supported |
| H$_{4d}$: The indirect effect of the media on perceptions of police through the perceived risk of victimization will be more pronounced among victims in comparison to non-victims. | Not Supported |
| H$_{4e}$: The indirect effect of the media on perceptions of police through the perception of procedural justice will be more pronounced among Non-Whites in comparison to Whites. | Not Supported |
| H$_{4f}$: The indirect effect of the media on perceptions of police through perceptions of procedural justice will be more pronounced among people who have experienced negative contact with the police in comparison to people who have not. | Not Supported |
| H$_{4g}$: The indirect effect of the media on perceptions of police through the perception of distributive justice will be more pronounced among Non-Whites in comparison to Whites. | Not Supported |

Regarding moderated mediation models, none of the hypothesized relationships was supported (Table 40). Given that there were weak interaction effects between media exposure and individual characteristics in predicting perceptions of police, this finding should not come as a surprise. The lack of support for moderated mediation models could be attributable to various reasons discussed previously. For instance, a small sample size for each subgroup makes it hard to detect conditional indirect effects of media exposure on perceptions of police. Simultaneously, the reduced intensity of the media content in the video clips after the revision following the

suggestions of the IRB committees may be partly responsible for weak indirect effects of media exposure. Considering the presence of direct effects of media exposure even with the limited duration and media content, the possibility of indirect effects of media exposure should not be underestimated.

**Broadening Efforts to Use Communication Tools Considering Media Content**

The current findings regarding mediation models highlight the potentials of media use of police departments. While positive representation of police performance can be limited in improving perceptions of police, police use of the media can still result in changes in people's perceptions of crime and neighborhoods. As demonstrated in mediation analyses, sharing the information about police work and crime can lead to changes in perceptions of police through changes in fear of crime and collective efficacy. The current section discusses the prospect of police use of social media.

In a recent report, the Task Force on Policing in the 21st Century proposed a list of action items involving six main areas after considering diverse stakeholders' voices from hearings (President's Task Force on 21st Century Policing, 2015). One of six pillars was about the effective use of technology and social media to fully engage in communications with community members and to promote a dialogue regarding agencies' missions and their performance. In discussing the potential benefits of using social media, the President's Task Force on 21st Century Policing (2015) cited the success of the Boston Police Department in using social media to keep the public informed about their performance, to request cooperation, and to correct misinformed information by the media. They concluded that police departments can promote trust in them from the public by improving the quality of interaction online.

Other law enforcement agencies also began to use Social Network Service (SNS), a group of technologies including Twitter, YouTube, and Facebook on a daily basis to facilitate the communication with the public (Meijer & Thaens, 2013). Their social media strategy focuses on disseminating information about crime and incidents. Approximately half of the information distributed through social media by 30 U.S. city police departments comprised crime reporting and news updates (Heverin & Zach, 2010). The findings from the current study seem to support the use of SNS by providing empirical evidence that media content can influence perceptions of police through changes in perceptions of crime. More specifically, positive police images presented through the media reduced fear of crime and this, then, increased confidence in the police. On the other hand, violent media exposure increased police legitimacy through increased collective efficacy. Considering the current findings, when police departments use social media to present agency efforts to maintain order and reduce crime, community members can develop higher perceptions of police legitimacy. Additionally, sharing information about the status of criminal cases would gauge community impression regarding police work.

**Rejuvenating Community Policing to Reduce Fear of Crime and to Increase Collective Efficacy**

The most important implication of the findings from the mediation models is that media exposure influence perceptions of police through perceptions of crime and community. In other words, reducing the fear of crime and improving collective efficacy are essential in promoting positive perceptions of police. These two key perceptions are directly related to one popular policing model, community policing (Trojanowicz & Bucqueroux, 1998). Community policing is premised on the assumption that police can contribute to a reduction in fear of crime by

establishing a close relationship with the community and improving the quality of community life (Wilson & Kelling, 1982).

Although there is no clear consensus on what defines community policing (Uchida, 2005), most community policing models share several core elements: service orientation, partnership, problem-solving, empowerment, and accountability (Fitch, 2014). Community policing requires developing close relationships with community members to identify and to address underlying causes that can be potentially developed into more significant problems. There have been various efforts to accomplish the goal of community policing. Some police departments increased foot and bicycle patrols to increase interactions between citizens and line officers. Other police departments increased order maintenance activities such as cleaning up graffiti and razing abandoned buildings. Many police departments also initiated programs that provide community members opportunities to engage in their neighborhood problems (e.g., neighborhood watch) (Marion & Oliver, 2012).

Historically speaking, community policing is by no means a new approach, but the popularity of police as social service agents gained momentum in the late 1990s (Marion & Oliver, 2012). This trend was connected with the recognition of the limitations in police professionalism (Pollock, 2017). Several findings were critical; empirical research indicated that random patrol, specialized detectives, and increased response to calls for service only have limited benefits (Uchida, 2005). Given that the current legitimacy crisis also does not stem from lack of investment in technological development or special units, police need to heed the lessons from the past.

While there is conflicting evidence as to whether community policing is effective as a deterrent to crime (Braga, Welsh, & Schnell, 2015; Cordner, 1998; Somerville, 2009), the

positive effect of community police on fear of crime seems unequivocal (Roh, Kwak, & Kim, 2013; Skogan, 1994; Zhao et al., 2002). For instance, Zhao et al. (2002) reviewed 50 studies on community policing and found that the majority of studies ($n = 31$) reported that community policing reduced the fear of crime. Similarly, Skogan (1994) evaluated six community policing programs implemented in the United States and confirmed a reduction in fear of crime across all communities after receiving changed police services.

Meanwhile, Wilson and Kelling (1982) reasoned that a close partnership between police and the community can enhance the quality of life in the community, and this can promote positive perceptions of their neighborhoods. Empirical research indicates that perceptions of police are critical in mobilizing residents to engage in social control (Gill, Weisburd, Telep, Vitter, & Bennett, 2014; Nix et al., 2015; Wells, Schafer, Varano, & Bynum, 2006). For instance, Wells et al. (2006), using survey data from 1,235 residents from 20 police patrol areas, discovered that residents with greater satisfaction with police are more likely to consider contacting a neighborhood organization or group and discussing local problems with neighbors. In a similar vein, Silver and Miller (2004) analyzed data from the Project on Human Development in Chicago Neighborhoods (PHDCN) and found that people with positive perceptions of police were more likely to act informally to improve social order in their neighborhood by engaging in social problems.

While some elements of community policing have been institutionalized (e.g., storefront locations and community meetings) (Skogan, 2006a), law enforcement agencies have experienced dramatic changes corresponding to the crime control model since 9/11 (Martin, 2017; Swanson & Taylor, 2015). Especially, after the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act (USA PATRIOT

Act) was signed into law (which was revised several times afterwards) and the Homeland Security Act of 2002 was enacted, community policing gave way to a policing model that regards law enforcement as soldiers in a war on terrorism.

The current findings ask for the need to return to more social service elements of policing by showing that fear of crime and collective efficacy are critical causal processes, and these are linked to exposure to portrayals of police. Currently, there is no evidence as to whether more intrusive policing models based on the USA PATRIOT Act and its subsequent revisions had any effect on the fear of crime (or at least fear of terrorism) or collective efficacy (Kappeler & Kraska, 2015; Kraska, 2007). The finding suggests that policymakers should shift their focus of policing from the crime control model to the public service model (or the guardian model). The success of the efforts to garner public support for police is largely dependent on how police officers view their mission (Pollock, 2017) and how missions are portrayed.

### Study Limitations

The findings from the current study should be read with some cautions due to several limitations. The first limitation involves the dosage (the amount of time exposed to media) and intensity (the level of seriousness) of media exposure. Initially, when this study was proposed, the media conditions planned to use were longer (about 8-10 minutes) and included more provocative images. During the IRB meeting, it was strongly suggested that the proposed video conditions be edited. The IRB committees recommend that the video condition be shorter and milder, editing out violent images regarding police use of force and crime. While their recommendations are reasonable considering the potential risk of psychological harms on research participants, the question remains as to whether more intense, more prolonged, and more realistic media exposure results in more extensive changes in perceptions of police.

Give that the current study draws on the social learning model proposed by Akers (2009), it is worth considering what he had to say about the impact of differential association through media exposure. Akers (2009) contended that four conditions matter regarding the strength of impact through differential association. Two of them were duration and intensity of differential association. According to Akers (2009), it can be inferred that if the media exposure were longer and more intense, the impact on perceptions of police could have been stronger. Clouse and Madensen (2018) showed several videos that were included in an online survey, and the videos contained much more provocative images than the conditions used in the current study. The results indicated that negative police images negatively impacted perceptions of police. While short durations of the video conditions may have led to the underestimation of media impacts, this limitation also can be viewed as a strength of the current study. One popular form of the media in recent years is SNS (Triantafillidou & Siomkos, 2018). Considering the video clips posted on SNS are often short and brief, the findings from the current study can be significant because the findings illustrate the impact of relatively short-term media exposures.

The second limitation of the current study is that it does not provide evidence regarding long-term effects of the media. Media researchers have identified differences between long-term effects and short-term effects of media exposure (Bushman & Huesmann, 2006; Gerbner & Gross, 1976; Morgan, 2011). The current study did not measure respondents' perceptions of police long after the experiment was conducted. Future studies should pursue whether the findings from the present study are tenable even long after media exposure has stopped or if the media exposure has an extended duration.

The third limitation is related to sample size. Although the sample size in the current study is not small compared to published articles using college students (Henson, Swartz, &

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Reyns, 2017; Lee et al., 2015; Mazerolle, Piquero, & Capowich, 2003; Tsoudis, 2000), when data were subdivided into several subgroups to examine the impact of direct effects of different media conditions and to estimate interaction effects between the media condition and individual characteristics, the number of participants available for analysis is much smaller. Since the sample size is closely related to statistical significance (Remler & Van Ryzin, 2015), future studies should replicate the findings from this study with samples large enough to have appropriate statistical power.

Fourth, while it was not the focus of the current study, the findings from this study may not have strong external validity since the sample was students for one university. Considering that exposure to the media is ubiquitous (Jamieson & Romer, 2014; Rideout et al., 2010), the impact of media exposure, especially in relation to perceptions of police, should be investigated with different types of populations. Replications and findings consistent with the current study will ensure external validity (Brewer & Hunter, 2006).

Finally, the impact of the media should be investigated using various approaches. Notably, a qualitative approach to understanding the impact of the media on perceptions of police could help confirm these findings (Boda & Szabó, 2011; Madriz, 1998). A qualitative approach has some benefits that a quantitative approach is difficult to accomplish. Quantitative research has limitations in that the findings are sensitive to the type of data, and the way researchers analyze data (Remler & Van Ryzin, 2015). On the other hand, qualitative research seeks the meaning and process of specific individuals in unique situations. Qualitative studies are helpful to develop the theory because they explain how one variable links to the different variables. Given that there is a lack of effort to clarify the causal linkage between media and

perceptions of police, findings from qualitative research provide the direction for empirical studies to elaborate pathways of the media impact.

**Conclusion**

The majority of previous studies have been conducted based on the assumption that people have objective understandings about the quality of police work, and that people know about police from direct encounters with them (Mastrofski, Jonathan-Zamir, Moyal, & Willis, 2016; Tyler, 1990; Tyler & Huo, 2002). This assumption is untenable considering that only a small portion of people have frequent interactions with police (Durose et al., 2007; Eith & Durose, 2011; Micucci & Gomme, 2005). Deterrence research has shown that changes in criminal sanctions do not guarantee changes in perceived risk of criminal sanction (Kleck et al., 2005; Piquero et al., 2011), and research on perceptions of police should be expanded to take into account vicarious experiences of police through the media (Augustyn, 2016; Johnson et al., 2017). Especially, the impact of popular media has been taken for granted (Skogan, 2012), but the actual empirical status of this has remained scarce (Maguire et al., 2017).

This void of research is critical considering that perceptions of police are instrumental in eliciting compliance and cooperation with police officers (Tyler, 2011a; Tyler & Jackson, 2014). The effectiveness of police is contingent mainly upon citizen's willingness to work with police (Skogan, 2005, 2006a). Besides, given that the fundamental goal of the police institution is to serve the community as indicated in the law enforcement code of ethics (Pollock, 2017) and if the police are instituted based on a social contract (Cohen & Feldberg, 1991), improving public perceptions of police is a normative duty.

If the causes of negative perceptions of police are not adequately assessed, how to improve the current animosity from the public toward police is also complicated. To better

understand the impact of the media on perceptions of police, a small but growing body of research has been conducted (Callanan & Rosenberger, 2011; Dirikx & Van den Bulck, 2014; Dowler, 2002, 2003; Dowler & Zawilski, 2007). These studies provided mixed conclusions regarding the impact of the media on perceptions of police, and some found a negative direction of the relationship between the media and perceptions of police (Lee & Gibbs, 2015; Lim, 2015; Weitzer & Tuch, 2005), while others found either null effects or positive effects of the media (Callanan, 2005; Chermak et al., 2006; Dowler, 2003). Part of the reason for these inconsistent findings stems from their research designs. Most of these studies were based on cross-sectional survey data (Dowler, 2002; Dowler & Zawilski, 2007), and their measures of the media have been inconsistent.

The current study provides evidence concerning media effects on perceptions of police with strong internal validity. The current findings indicate that media exposure can matter, mainly when it introduces negative images of police. Even when mixed images of police were presented, participants were more driven by negative images of police. This finding is consistent with an asymmetrical impact of negative encounters with police to positive encounters (Skogan, 2006b), supporting that "bad is stronger than good" (Baumeister et al., 2001). Additionally, there was an interesting interaction effect between respondents' majors and the mixed condition. When the media presented two contrasting images of police, while both CJ majors and non-CJ majors experienced a reduction in confidence in the police, this negative effect was more pronounced among non-CJ majors. This finding is critical given that many CJ majors want to work as criminal justice professionals. Lastly, statistical analyses revealed that perceptions of crime and community mediated some of the media effects on perceptions. This clarification of the causal linkages helps promote positive perceptions of police. Two critical implications were

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drawn. First, police should enact efforts to broaden communication effects by introducing the effective use of social media, including media clips. Second, the current finding strengthens the value of community policing in breeding collective efficacy and reducing the fear of crime.

Police misconduct, especially use of excessive force, has become a staple of news reports. While the media's role as a watchdog is essential to check and balance the power of police, the audience should never forget that a distorted representation of police in the media is limited in reflecting the complicated reality of police work. At the same time, considering that people react to negative news more sensitively, police departments should endeavor to reduce the amount of police misconduct by incorporating evidence-based programs into their organization; they range from screening out high-risk individuals to changing police subculture, to implementing tracking systems such as an early warning system, to providing training and education designed to promote procedural justice, and to rejuvenating community policing.

In conclusion, the current study contributes to understanding media effects on perceptions of police using a randomized experimental design. Based on Akers' (2009) social learning theory, the research answered if, when, and how media influence perceptions of police. First, the impact of media exposure differed according to video content. Participants who were assigned to watch the video clips that contained negative police images exhibited lower confidence in the police as opposed to those who were assigned to the video clip that contained positive police images. This study also explored the possibility of interaction effects between media exposure and participant characteristics and revealed that some characteristics could moderate the relationship between media exposure and perceptions of police. Lastly, empirical evidence of indirect effects of media exposure was found. With the knowledge regarding various roles of

media exposure, the current study directs future studies and policies to better understand the

sources of perceptions of the police.

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Appendix A

Access Letter to Professors

Dear Dr./Professors:

My name is Jaeyong, Choi, and I am a doctoral candidate in the Department of Criminology and Criminal Justice. As part of my dissertation, I am currently conducting experimental research regarding the influence of media, and I am hoping that you can provide some assistance in recruiting students. Your class _____ has been randomly selected from available courses offered during the spring 2018 semester at IUP. I am asking for your permission and assistance to use your class time for this experimental study. I would greatly appreciate your permission to conduct the survey due to the random nature of course selection.

The process, including establishing informed consent, conducting the experiment, and administering the questionnaire is expected to take about 15 – 20 minutes. The experiment and survey administration will be conducted in your class, and I want to thank you for considering my request.

The current research topic is focused on the relationship between media exposure and perceptions of crime and criminal justice. I believe that by participating in this study, students will develop a better understanding of the role of the media in shaping perceptions of crime and punishment. I am planning to employ a group-administered self-report survey. Students will respond to an online survey before and after watching a brief video segment by using their own

internet-connected computer devices (e.g., smartphone or laptop). The video material that they will be exposed to will be randomly assigned. The videos are each about 2 minutes long. While each video does not contain graphic images, they are intended to provoke emotional reactions from the respondents who view them. The videos are the descriptions of the five different types of videos that the students will be randomly assigned. A crime condition video includes portions of a news report broadcast on cable TV. A negative police condition includes an interview with an individual who had a family member victimized by police brutality. The positive police condition contains interviews with police officers who talk about their colleagues' sacrifice. A mixed condition is edited so that the video segment includes both positive police images and negative police images. The control condition is irrelevant to the topic of criminal justice, and it is related to effective presentation skills in Ted-talk. If you would like to review these video segments as part of your decision, the links are provided at the end of this email.

All materials, including survey instruments are approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (IRB). All participants will be informed of their rights and the voluntary characteristic of this research. Their personal information will be kept anonymous. Upon the completion of the experiment, students will be debriefed to understand the purpose of the study in more depth. If you have any questions, please let me know via this email, or you may contact me by cellphone: Jaeyong, Choi, 724-357-1367. I look forward to hearing from you, and I appreciate your assistance.


 Respectfully,

Project Director:

Choi, Jaeyong, Doctoral candidate

Department of Criminology and Criminal

Justice

Indiana University of Pennsylvania

106 Wilson Hall

Indiana, PA 15705

Phone:  724-357-1367

Email address: zpsv@iup.edu

Faculty Advisor:

Daniel Lee, Professor

Department of Criminology and Criminal

Justice

Indiana University of Pennsylvania

200 Wilson Hall

Indiana, PA 15705

Phone: (724) 357-2720

Email address: danlee@iup.edu

Crime condition

https://youtu.be/pGnfc2itdaA

Negative police condition

https://youtu.be/v1DuVr09lUM

Positive police condition

https://youtu.be/7yJxEXyh9QQ

Control condition

https://youtu.be/FvYy--3KRNg

Mixed condition

https://youtu.be/w_tVmdfvZDc

Appendix B

Informed Consent

You are invited to take part in this research study conducted by Choi, Jaeyong from Indiana

University of Pennsylvania (IUP). The following information is provided to help you understand

and to make an informed decision of participation. If you have any questions, please do not

hesitate to ask. If you are an undergraduate student at IUP and over the age of 18 years, you are

eligible to participate in the current study.

The purpose of this study is to examine if brief exposure to media can affect a person's

perceptions of crime and the criminal justice system. If you decide to participate in the

experiment, you will be watching a brief video segment that is about 2 minutes long. Some

participants will be viewing video content that includes segments from documentaries reporting

real conditions that could include discussion of violence and death. After watching the video,

you will be asked to respond to survey items measuring your perceptions about crime, criminal

justice and your personal experiences. Participation in this study will require about 15 – 20

minutes of your time. You can stop watching the videos at any time and close out your browser

to withdraw. The information collected from this study may enable us to better understand the

influence of the media, and the findings from the current study could be used to establish

effective media policies for lawmakers.

While you are participating in the study, it is possible that you could remember personal

experiences with crime or criminal justice agents, such as the police, that make you feel

uncomfortable. If this occurs and you believe that you need assistance, please contact the Center

for Health and Well-Being at 724-357-9355 for referral to appropriate services including the availability of counseling. If the center for Health and Well-Being is not available, please contact Armstrong-Indiana Crisis Hotline at 1-877-333-2470. Emergency services may also be received by calling 911 or visiting the Emergency Department at Indiana Regional Medical Center. Any personal information obtained in this study that might identify individual participants will be kept anonymous. Your responses will be considered only in combination with those from other participants, and no responses will be identified by the respondent's name. Once the research is conducted, your completed questionnaires will be stored in a password protected digital folder. Once the survey is completed, there is no opportunity to withdraw due to the anonymous nature of the survey.

Your participation in this study is voluntary. There are no direct benefits from participation. You can decide not to participate in this study or to withdraw from participation at any time. By clicking 'Next' below, you consent to participate in the experiment. If you wish to withdraw, you can simply close out of your browser. The coded data from the survey may be used for research purposes that could lead to published articles in academic journals or presented at academic meetings

You can receive more details about this study and your rights as a research participant by contacting Choi, Jaeyong at 724-357-1367.

| | |
|---|---|
| Project Director: | Faculty Advisor: |
| Choi, Jaeyong, Doctoral Student | Daniel Lee, Professor |
| Indiana University of Pennsylvania | Indiana University of Pennsylvania |
| 106 Wilson Hall | 200 Wilson Hall |
| Indiana, PA 15705 | Indiana, PA 15705 |
| Phone:  (724) 357-1367 | Phone: (724) 357-2720 |
| Email address: j.choi8@iup.edu | Email address: danlee@iup.edu |

THIS PROJECT HAS BEEN APPROVED BY THE INDIANA UNIVERSITY OF
PENNSYLVANIA INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF
HUMAN SUBJECTS (PHONE 724.357.7730).

Appendix C

Media & Perceptions of Police Online-Survey in *Qualtrics*

**Dissertation Final Survey - Jaeyong**

Q2 Which device are you using to participate in the current survey?

○ Smart phone  (1)

○ Computer tablet  (2)

○ Laptop computer  (3)

○ Other (please specify)  (4) _____

Q3 **SECTION I: Perceptions of Police**
 Instructions: The following questions will ask you about your general perceptions of police.

Q4 **Please indicate the extent to which you agree or disagree with the following statement.**

| | Strongly disagree | | Strongly agree | |
|---|---|---|---|---|
| | 1 | 3 | 6 | 7 |
| In general, you are satisfied with how  police officers serve your neighborhood () | | | | |

**Q5 Please indicate the extent to which you agree or disagree with the following statements.**

| | Strongly disagree | | Strongly agree | |
|---|---|---|---|---|
| | 1 | 3 | 6 | 7 |
| People's basic rights are well-protected by police officers in my community () | | | | |
| Police officers can be trusted to make decisions that are right for my community () | | | | |
| Most police officers in my community do their jobs well () | | | | |
| Police officers in my community are generally honest () | | | | |

**Q6 Please indicate the extent to which you agree or disagree with the following statements.**

| | Strongly disagree | | Strongly agree | |
|---|---|---|---|---|
| | 1 | 3 | 6 | 7 |
| People should accept police officers' decisions even if they think that the police are wrong () | | | | |
| When the police issue a formal order, people should do what the police say even if they disagree with it () | | | | |
| Generally speaking, people should do what the police tell them to do () | | | | |

**End of Block: Perceptions of Police T1**

**Start of Block: Block 17**

**Q7 YOU MAY VIEW VIDEO CONTENT REPORTING REAL CONDITIONS THAT INCLUDE DISCUSSION OF VIOLENCE AND DEATH. IF YOU WANT TO PARTICIPATE, PLEASE CLICK 'YES' BELOW. IF YOU DO NOT WANT TO PARTICIPATE OR IF YOU ARE UNDER**

**18 YEARS OLD, PLEASE CLICK 'NO'. STUDENTS WHO DO NOT PARTICIPATE IN THE STUDY WILL WATCH AN EDUCATIONAL VIDEO CLIP.**

○ YES  (1)

○ NO  (2)

Q8 **Please take time to watch the following video clip. It only takes 8-9 minutes to watch the video clip. Watching this video before responding to the next set of questions is critical in this study.**

Q9

Page Break

Q10 Which of the following topics best describes the video you watched?

○ Police misconduct  (1)

○ Police sacrifice  (2)

○ Violent crime  (3)

○ Public speaking  (4)

Q11 Timing
First Click  (1)
Last Click  (2)
Page Submit  (3)
Click Count  (4)

**Q12 Please take time to watch the following video clip. It only takes** about 2 minutes **to watch the video clip. Watching this video before responding to the next set of questions is critical in this study.**

Q13

Q14 Which of the following topics best describes the video you watched?

○ Police misconduct  (1)

○ Police sacrifice  (2)

○ Violent crime  (3)

○ Public speaking  (4)

Q15 Timing
First Click  (1)
Last Click  (2)
Page Submit  (3)
Click Count  (4)

**Q16 Please take time to watch the following video clip. It only takes about 2 minutes to watch the video clip. Watching this video before responding to the next set of questions is critical in this study.**

Q17

Q18 Which of the following topics best describes the video you watched?

○ Police misconduct  (1)

○ Police sacrifice  (2)

○ Violent crime  (3)

○ Public speaking  (4)

Q19 Timing
First Click  (1)
Last Click  (2)
Page Submit  (3)
Click Count  (4)

**End of Block: Video C**

**Start of Block: Video D**

Q20 **Please take time to watch the following video clip. It only takes about 2 minutes to watch the video clip. Watching this video before responding to the next set of questions is critical in this study.**

Q21

Q22 Which of the following topics best describes the video you watched?

○ Police misconduct  (1)

○ Police sacrifice  (2)

○ Violent crime  (3)

○ Public speaking  (4)

Q23 Timing
First Click  (1)
Last Click  (2)
Page Submit  (3)
Click Count  (4)

**End of Block: Video D**

**Start of Block: Video E**

Q24 **Please take time to watch the following video clip. It only takes about 2 minutes to watch the video clip. Watching this video before responding to the next set of questions is critical in this study.**

Q25

Page Break

Q26 The video you watched describes two topics. Which of the following topics best describe the video you watched? (Two answers)

☐ Police misconduct  (1)

☐ Police sacrifice  (2)

☐ Public speaking  (4)

Q27 Timing
First Click  (1)
Last Click  (2)
Page Submit  (3)
Click Count  (4)

**End of Block: Video E**

**Start of Block: Purposes for criminal penalties**

Q28 **SECTION II: Perceptions of Criminal Penalties**
 Instructions: The following questions will ask you about your general perceptions of criminal penalties.

Q29 There are four purposes for criminal penalties that we would like to ask you about. These include discouraging others from committing crimes [deterrence], to separate offenders from society [incapacitation], to train, educate, and counsel offenders [rehabilitation], and to give offenders the punishment they deserve [punishment]. Please tell me which of these four purposes you think should be the most important in sentencing adults?

○ To give offenders the punishment they deserve  (1)

○ To train educate and counsel offenders  (2)

○ To separate offenders from society  (3)

○ To discourage others from committing crimes  (4)

Q30 On a scale from 1 to 7, where 1 is being not at all supportive and 7 is being very supportive, tell me how much you support each of these proposals.

|  | Not at all supportive | | Very supportive | |
|---|---|---|---|---|
|  | 1 | 3 | 6 | 7 |
| making sentences more severe for all crimes () | | | | |
| executing more murderers () | | | | |
| making prisoners work on chain gangs () | | | | |
| taking away television and recreation privileges from prisoners () | | | | |
| using more mandatory minimum sentencing statues like ''3 strikes'' for repeat offenders () | | | | |

**End of Block: Purposes for criminal penalties**

**Start of Block: General Media Exposure**

Q31 **SECTION III: General Media Exposure**
 Instructions: The following questions will ask you about your general media exposure.

Q32 **How many hours do you usually watch television during each of four periods of a typical weekday?**

| 6 a.m. to noon (1) | ▼ 1 (1) ... 6 (10) |
|---|---|
| noon to 6 p.m. (2) | ▼ 1 (1) ... 6 (10) |
| 6 p.m. to midnight (3) | ▼ 1 (1) ... 6 (10) |
| midnight to 6 a.m. (4) | ▼ 1 (1) ... 6 (10) |

**Q33 How many hours do you usually watch television during a typical weekends?**

| | |
|---|---|
| Saturday (1) | ▼ 1 (1) ... 24 (24) |
| Sunday (2) | ▼ 1 (1) ... 24 (24) |

**Q34 Please indicate the extent to which you agree or disagree with the following statements.**

| | Strongly disagree | | Strongly agree | |
|---|---|---|---|---|
| | 1 | 3 | 6 | 7 |
| I often watch national evening news programs such as World News with David Muir or cable news programs like CNN () | | | | |
| I often watch local television news for information other than weather and sports () | | | | |
| I often read the news or editorial sections of a daily newspaper () | | | | |
| I often listen to radio shows that invite listeners to call in to discuss current events, public issues, and politics () | | | | |
| I often go online to get information on current events, public issues, and politics () | | | | |

**End of Block: General Media Exposure**

**Start of Block: Perceptions of Police T2**

**Q35 SECTION IV: Perceptions of Police**
Instructions: The following questions will ask you about your general perceptions of police.

**Q36 Please indicate the extent to which you agree or disagree with the following statement.**

| | Strongly disagree | | Strongly agree | |
|---|---|---|---|---|
| | 1 | 3 | 6 | 7 |

| In general, you are satisfied with how police officers serve your neighborhood () | |
|---|---|

**Q37 Please indicate the extent to which you agree or disagree with the following statements.**

|  | Strongly disagree | | Strongly agree | |
|---|---|---|---|---|
|  | 1 | 3 | 6 | 7 |
| People's basic rights are well-protected by police officers in my community () | | | | |
| Police officers can be trusted to make decisions that are right for my community () | | | | |
| Most police officers in my community do their jobs well () | | | | |
| Police officers in my community are generally honest () | | | | |

**Q38 Please indicate the extent to which you agree or disagree with the following statements.**

|  | Strongly disagree | | Strongly agree | |
|---|---|---|---|---|
|  | 1 | 3 | 6 | 7 |
| People should accept police officers' decisions even if they think that the police are wrong () | | | | |
| When the police issue a formal order, people should do what the police say even if they disagree with it () | | | | |
| Generally speaking, people should do what the police tell them to do () | | | | |

**End of Block: Perceptions of Police T2**

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Q39 **SECTION V: Perceptions of Procedural Justice and Distributive Justice**
 Instructions: The following questions will ask you about your perceptions regarding the way the police behave.

---

Q40 **Please indicate the extent to which you agree or disagree with the following statements.**

|  | Strongly disagree |  | Strongly agree |  |
| --- | --- | --- | --- | --- |
|  | 1 | 3 | 6 | 7 |
| Police officers in my community treat people with dignity and respect () | | | | |
| Police officers in my community treat people fairly () | | | | |
| Police officers in my community take time to listen to people () | | | | |

---

Q41 **Please indicate the extent to which you agree or disagree with the following statements.**

|  | Strongly disagree |  | Strongly agree |  |
| --- | --- | --- | --- | --- |
|  | 1 | 3 | 6 | 7 |
| Police officers in my community explain their decisions to people () | | | | |
| Police officers in my community make decisions based on legal facts and not on their own personal opinions () | | | | |
| Police officers in my community make decisions to handle problems fairly () | | | | |

---

Page Break

---

Q42 **Please indicate the extent to which you agree or disagree with the following statements.**

|  | Strongly disagree |  | Strongly agree |  |
| --- | --- | --- | --- | --- |
|  | 1 | 3 | 6 | 7 |

| | |
|---|---|
| Police officers in my community provide the same quality of service to all people () | |
| Police officers in my community give minorities less help because of their race () | |
| Police officers in my community provide better services to wealthier people () | |

Q43 **SECTION VI: Fear of Crime and Perceived Risk**
 Instructions: The following questions will ask you about your levels of fear of crime and perceived risk of victimization.

Q44 **Please indicate the extent to which you agree or disagree with the following statements.**

| | Strongly disagree | | Strongly agree | |
|---|---|---|---|---|
| | 1 | 3 | 6 | 7 |
| I am afraid of having my money or my property stolen (e.g., pick-pocketing) () | | | | |
| I am afraid of getting robbed (threat by force or threat of force) () | | | | |
| I am afraid of being beaten or hurt () | | | | |
| I am afraid of being scammed () | | | | |
| I am afraid of being sexually harassed () | | | | |
| I am afraid of having my property damaged () | | | | |
| I am afraid someone will break into my house () | | | | |
| I am afraid someone will follow me and pick on me persistently () | | | | |

Page Break

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**Q45 Please indicate the extent to which you agree or disagree with the following statements.**

|  | Strongly disagree | | Strongly agree | |
|---|:---:|:---:|:---:|:---:|
|  | 1 | 3 | 6 | 7 |
| I will be beaten-up and assaulted by someone () | | | | |
| I will be raped () | | | | |
| I will experience a 'property' crime (such as burglary or theft () | | | | |

**Q46 SECTION VII: Collective Efficacy and Perceived Disorder**
 Instructions: The following questions will ask you about your levels of perceptions regarding the neighborhood of your permanent home address (e.g., your family home).

**Q47 Please indicate the extent to which you agree or disagree with the following statements. Please base answers on your permanent residential address.**

|  | Strongly disagree | | Strongly agree | |
|---|:---:|:---:|:---:|:---:|
|  | 1 | 3 | 6 | 7 |
| My neighbors are willing to help each other () | | | | |
| My neighborhood is close-knit () | | | | |
| People in this neighborhood can be trusted () | | | | |
| People in this neighborhood generally don't get along with each other () | | | | |
| People in this neighborhood do not share the same values () | | | | |

**Q48 Please indicate how likely you are to intervene in each of the following situations. Intervention includes direct intervention or calling the police to stop the situation from continuing.**

| | Very unlikely | | Very likely | |
|---|---|---|---|---|
| | 1 | 3 | 6 | 7 |
| Children were skipping school and hanging out on a street corner () | | | | |
| Children were spray-painting graffiti on a local building () | | | | |
| Children were showing disrespect to an adult () | | | | |
| A fight broke out in front of their house () | | | | |
| The fire station closest to their home was threatened with budget cuts () | | | | |
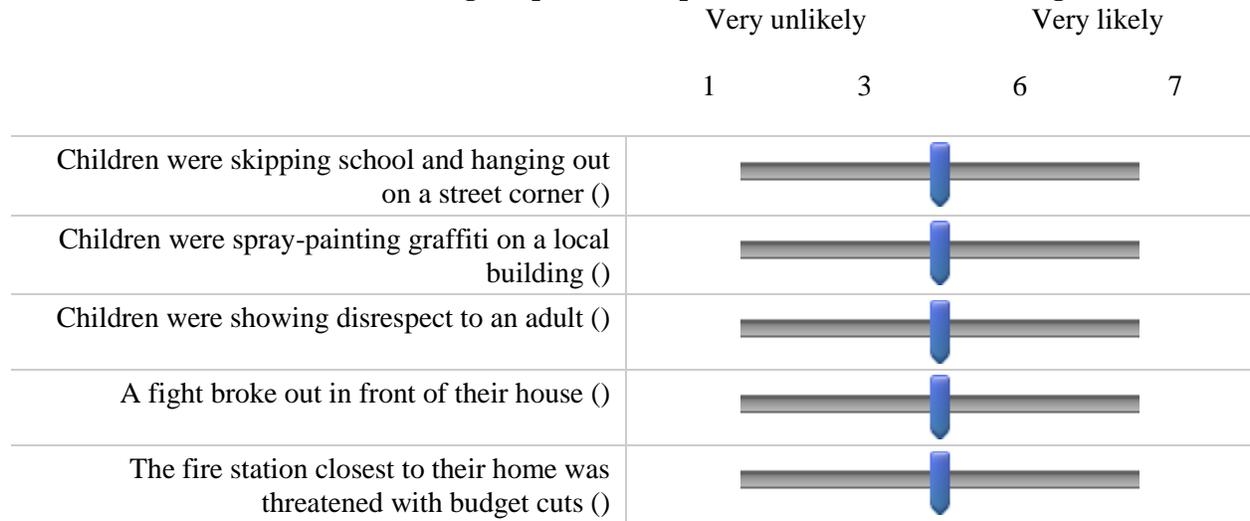
**Q49 Please indicate to what extent do you consider each of the following items to be a problem.**
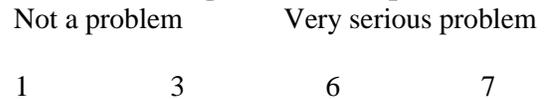
| | Not a problem | | Very serious problem | |
|---|---|---|---|---|
| | 1 | 3 | 6 | 7 |

| | |
|---|---|
| Trash and litter lying around your neighborhood () | |
| Neighborhood dogs running loose () | |
| Inconsiderate or disruptive neighbors () | |
| Vacant houses and unkept lots () | |
| Unsupervised youth () | |
| Too much noise () | |
| People drunk or high on drugs in public () | |
| Abandoned cars or car parts lying around () | |

Q50 **SECTION VIII: Direct Experience with Crime and Police** Instructions: The following questions will ask you about your direct experience with crime and the police.

**Q51 If you have experienced following crimes in the last year, please select *Yes*; if you have not experienced these crimes during the last year, please select *No*.**

| | No (1) | Yes (2) |
|---|---|---|
| Having my money or my property stolen (e.g., pick-pocketing) (1) | ○ | ○ |
| Getting robbed (threat by force or threat of force) (2) | ○ | ○ |
| Being beaten or hurt (3) | ○ | ○ |
| Being scammed (4) | ○ | ○ |
| Being sexually harassed (5) | ○ | ○ |
| Having my property damaged (6) | ○ | ○ |
| Someone broke into my house (7) | ○ | ○ |
| Someone followed and picked on me persistently (8) | ○ | ○ |
| Other (9) | ○ | ○ |

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**Q52 If you have experienced any of the following incidents with the police in the last year, please select *Yes*, if you have not experienced any of these during the last year, please select *No*.**

| | No (1) | Yes (2) |
|---|:---:|:---:|
| Unreasonable stop (1) | ○ | ○ |
| Insulting language (2) | ○ | ○ |
| Physical force (3) | ○ | ○ |

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**Q53 Have you had voluntary contact with the police (e.g., called police for any reason) in the last year, please select *Yes*, if you have not experienced this during the last year, please select *No*.**

○ No  (1)

○ Yes  (2)

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**Q54 Please indicate the extent to which you agree or disagree with the following statement.**

| | Strongly disagree | | Strongly agree | |
|---|:---:|:---:|:---:|:---:|
| | 1 | 3 | 6 | 7 |
| I was satisfied with the voluntary contact with the police () | | | ▮ | |

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**Q55 Have you had involuntary contact with the police (e.g., been stopped for any reason) in the last year, please select *Yes*, if you have not experienced this during the last year, please select *No*.**

○ No  (1)

○ Yes  (2)

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**Q56 Please indicate the extent to which you agree or disagree with the following statement.**

|  | Strongly disagree | | Strongly agree | |
| --- | --- | --- | --- | --- |
|  | 1 | 3 | 6 | 7 |
| I was satisfied with the involuntary contact with the police () | | | | |

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**Q57 For each of the following statements, select *Yes* if the statement is true. Otherwise, select *No*.**

|  | No (1) | Yes (2) |
| --- | --- | --- |
| I have at least one police officer among my family members (1) | ○ | ○ |
| I have at least one police officer among my close friends (2) | ○ | ○ |
| I personally know at least one police officer in my neighborhood who is neither my family member nor my close friend (3) | ○ | ○ |

End of Block: Personal Experiences

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Start of Block: Demographic info

**Q58 SECTION IX: Personal Demographics Instructions: Please answer the following questions about yourself.**

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**Q59 Are you Hispanic or Latino?**

◯ Yes  (1)

◯ No  (2)

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**Q60 What is your race? You may give more than one answer.**

☐ White  (1)

☐ Black or African American  (2)

☐ American Indian or Native American  (3)

☐ Asian  (4)

☐ Native Hawaiian or Pacific Islander  (5)

☐ Other  (6) _____

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**Q61 Are you a student with a major or minor concentration in Criminology/Criminal Justice?**

◯ Yes  (1)

◯ No  (2)

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Q62 **In general, how do most people see you? Please answer on both scales below.**

|  | Not at all (1) | 1 (2) | 2 (3) | 3 (4) | 4 (5) | 5 (6) | Very (7) |
|---|---|---|---|---|---|---|---|
| Feminine (4) | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Masculine (5) | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Q63 **What sex were you assigned at birth? (For example, on your birth certificate.)**

○ Female  (1)

○ Male  (2)

Q64 **THANK YOU FOR TAKING THE TIME TO COMPLETE THIS SURVEY!** While you are participating in the study, it is possible that you could remember personal experiences with crime or criminal justice agents such as the police that make you feel uncomfortable. If this occurs and you believe that you need assistance, **please contact the Center for Health and Well-Being at 724-357-9355** for referral to appropriate services including the availability of counseling. If the center for Health and Well-Being is not available, **please contact Armstrong-Indiana Crisis Hotline at 1-877-333-2470.** Emergency services may also be received by **calling 911 or visiting the Emergency Department at Indiana Regional Medical Center.**
  *If you have any additional comments, please write them in the space below.*

_____

_____

_____

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Q65 **If you choose not to participate in the study or if you are under 18 years old, please take time to watch the following video clip. It only takes about 10 minutes to watch the video clip.**

Q66