Victim, Perpetrator and Bystander Perspectives: Variations in Language Usage, Empathy and Violence Sensitivity

Grisel M. García-Ramírez
University of Rhode Island, grisel_garcia@my.uri.edu

Follow this and additional works at: https://digitalcommons.uri.edu/oa_diss

Recommended Citation
https://digitalcommons.uri.edu/oa_diss/489
VICTIM, PERPETRATOR AND BYSTANDER PERSPECTIVES: VARIATIONS
IN LANGUAGE USAGE, EMPATHY AND VIOLENCE SENSITIVITY

BY

GRISEL M. GARCÍA-ROMÍREZ

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
IN
PSYCHOLOGY

UNIVERSITY OF RHODE ISLAND

2016
DOCTOR OF PHILOSOPHY DISSERTATION

OF

GRISEL M. GARCÍA-RAMÍREZ

APPROVED:

Dissertation Committee:

Major Professor Charles Collyer

Paul Bueno de Mesquita

Judy Van Wyk

Nasser H. Zawia
DEAN OF THE GRADUATE SCHOOL

UNIVERSITY OF RHODE ISLAND
2016
ABSTRACT

The aim of the current research is to understand how different perspectives in a violent event can affect empathy, violence sensitivity, and word usage. Participants (N=289 University of Rhode Island undergraduate students) were randomly assigned to the perspective (victim, bystander, and perpetrator) and media by which they learned about a violent event (watching a video or reading a news article), and were asked to answer a few open-ended questions about the event, followed by a short survey. Results showed that for the words in the categories of negative emotion, anger, first person pronoun, and affective process, participants assigned to the perpetrator and victim perspectives used the words at a similar rate, and participants in the bystander perspective used the words of these categories less. Participants who watched the video used more words in the personal pronoun (first, second, and third person pronoun), first person pronoun (e.g., I, me), and negative emotion categories. Results did not show differences between the groups for the subscales of empathy, and for the categories of violence sensitivity. Separate ANCOVAs suggested group differences based on perspective in violence severity for physical violent behaviors, and group differences based on media in violence severity for nonphysical violent behaviors. There were also main effects for perspective and media on violence sensitivity total. Participants assigned to the bystander perspective who watched the video clip were less violence sensitive. Finally, there was a significant correlation between empathy total and violence sensitivity total. Overall, results suggest that bystanders perceive events differently than perpetrators and victims, and participants who read are more
violence sensitive and empathetic. The results of this study could be applied in the
development of bystander intervention and violence prevention programs.
ACKNOWLEDGEMENTS

This process has been an enriching challenge from beginning to end, and I would not have been able to do this on my own. There are many people I am grateful to that in different ways have helped me to achieve this goal.

First of all, I would like to express my most sincere thanks to my advisor, Charlie Collyer. Not only did he introduce me to the research by Pennebaker that inspired this research study, but has been a great mentor. I am grateful that I had the opportunity to learn from him not only about research methods, but the importance to focus on the positive things, to not get discouraged when things do not go my way, and for always having faith in me.

My sincere gratitude goes to Dr. Paul Bueno de Mesquita, for his support and feedback for this study. I also am grateful for the feedback Dr. Jay Wang provided. Most heartfelt thank you goes to Dr. Judy Van Wyk, for all the help, support, and understanding through the years. To Dr. John Stevenson, thank you for all the support and the advice. A special thank you to Dr. Alan Rothman, for allowing me to use RedCap to collect online data, and for his help and support using this program.

I would also like to thank my friends, Gisselle, Nelly, Ingrid, Cheryl, Ricky, Jose Luis, and Francis for their moral support, for always having a listening ear, for their encouragement, and for inspiring me to be a better person. I am grateful for the advice provided by my fellow doctoral students in the psychology department. A very special thanks goes to Leslie and Brittney who became my support away from home.

Last, but certainly not least to my family. I am extremely grateful to my
parents for their unconditional love, guidance, support, and their trust in me. I am also grateful for the support, encouragement and surprisingly wise words from my brothers, Pedro Luis, and Pedro Jose.
TABLE OF CONTENTS

ABSTRACT.............................................................................................................ii
ACKNOWLEDGMENTS.........................................................................................iv
TABLE OF CONTENTS.........................................................................................vi
LIST OF TABLES...................................................................................................ix
LIST OF FIGURES.................................................................................................x

CHAPTER 1: INTRODUCTION.............................................................................1
  Victims, Perpetrators and their Differing Perspectives.................................2
  Cognitive Dissonance.......................................................................................6
  Bystanders.......................................................................................................8
  Human Aggression ............................................................................................12
  Violence Sensitivity.........................................................................................15
  Empathy..........................................................................................................17
  Use of Words ..................................................................................................20
  Research Questions.........................................................................................23

CHAPTER 2: METHODOLOGY............................................................................25
  Design.............................................................................................................25
  Participants.....................................................................................................25
  Procedure.......................................................................................................25
  Materials.........................................................................................................27

CHAPTER 3: RESULTS.........................................................................................29
CHAPTER 4: DISCUSSION

Summary of the Results

Limitations
LIST OF TABLES

Table 1. Means and Standard Deviations for the Scores of IRI Subscales.............46
Table 2. Component Correlation Matrix with Five-Components: IRI.......................48
Table 3. Component Correlation Matrix with Four-Components: IRI.......................48
Table 4. ANCOVA Results for IRI.................................................................51
Table 5. Means, Standard Deviations and Standard Errors for IRI Subscales.........54
Table 6. Means and Standard Deviations for the Scores of Violence Sensitivity
Subscales by Gender...............................................................56
Table 7. Means, Standard Deviations and Standard Errors for Violence Sensitivity
by Groups...............................................................63
Table 8. Correlations Between Empathy Total and Violence Sensitivity Total........64
Table 9. Correlations between IRI Subscales and Violence Sensitivity Categories
Per Group, Adjusted for Sex and Social Desirability.................................70
Table 1A. Patterns of Structure Matrix for PCA with Oblimin Rotation of
Five-Factor Solutions of Empathy (IRI) Items.......................................93
Table 2A. Patterns of Structure Matrix for PCA with Oblimin Rotation of
Four-Factor Solutions of Empathy (IRI) Items.......................................95
LIST OF FIGURES

Figure 1. Mean Scores for Perspective Taking..................................................51
Figure 2. Mean Scores for Fantasy.................................................................52
Figure 3. Mean Scores for Empathetic Concern.............................................52
Figure 4. Mean Scores for Personal Distress..................................................53
Figure 5. Mean Scores for V1..................................................................59
Figure 6. Mean Scores for V2..................................................................60
Figure 7. Mean Scores for V3..................................................................60
Figure 8. Mean Scores for V4..................................................................61
Figure 9. Mean Scores for Violence Sensitivity Total.................................62
Figure 10. Scatterplot Overall Correlation Between Empathy and Violence Sensitivity..............................................................65
Figure 11. Scatterplot Correlation Between Empathy and Violence Sensitivity for Perpetrator and Video Group.............................................65
Figure 12. Scatterplot Correlation Between Empathy and Violence Sensitivity for Perpetrator and Read Article Group.................................66
Figure 13. Scatterplot Correlation Between Empathy and Violence Sensitivity for Bystander and Video Group.............................................66
Figure 14. Scatterplot Correlation Between Empathy and Violence Sensitivity for Bystander and Read Article Group.............................................67
Figure 15. Scatterplot Correlation Between Empathy and Violence Sensitivity

x
for Victim and Video Group.................................................................67

Figure 16. Scatterplot Correlation Between Empathy and Violence Sensitivity
For Victim and Read Article Group.......................................................68

Figure 1A. Screeplot of the IRI PCA.......................................................92
CHAPTER 1

INTRODUCTION

Much of the recent news is about violence and different forms of violence: mass shootings, terrorist attacks, domestic and sexual violence, bullying and cyber-bullying, and the list continues. Some of the violence might even be socially acceptable such as what is seen in different sports, including boxing, hockey, football, or rugby. Some of these news stories affect and captivate our attention more than others. A possible reason for why some news affects us strongly is that someone we know or ourselves is being directly affected by this type of violence. The way people can be involved and affected by a violent event can vary. A person can be the perpetrator, that is, the person inflicting harm on purpose, the victim, the person who is being harmed, or the bystander, a person who is witnessing harm being done to someone else.

Each of these roles in a conflict has a unique perspective, which may be influenced in a variety of ways. How people interpret an act of violence, how sensitive they are, how likely they are to intervene, whether they condemn the behavior, and how they would react if they were ever in a similar position may depend on their roles in the conflict and how it affects them in the moment.

This particular research study aims to determine how different views of a same violent event can vary depending on the perspective a person has on the event, as well
as how the person learns about the event. Of interest are not only how differently the perspectives perceive the violence, but also the variations in violence sensitivity, empathy, and the words used to retell the story that may be characteristic of each perspective.

**Victims, Perpetrators and their differing perspectives**

As you listen to the stories of people retelling a conflict, one of the things that might be noticed is that stories of the same event can vary from person to person. The story can vary depending on the role a person played, that is, whether he or she was the victim, the perpetrator or the bystander. There are several ways a story may vary. Baumeister and colleagues have done research in order to determine the differences in perspectives of the victim and perpetrator roles. In his book *Evil*, Baumeister (1996) uses the term *magnitude gap* to refer to “the discrepancy between the importance of the act to the perpetrator and to the victim” (p. 18). In other words, the victim might feel the event is really important in the way that it has affected him or her, whereas the perpetrator might underestimate its importance.

In the study by Baumeister, Stillwell, and Wotman (1990), the researchers asked participants to write two autobiographical stories, one about when they were in the position of the victim, and another story where they were in the position of the perpetrator. Results suggested that participants interpreted the events differently based on the perspective from which they were retelling the story. One difference between the two perspectives was in the way participants described or referred to the time frame of the event. Victims provided a background to the story (Baumeister, Stillwell,
& Wotman, 1990); not only did they look at the past and possible consequences of the events, but also mentioned the consequences of the event, and the impact on the present. Thus, victims have a more comprehensive outlook; they look at the past, present and future. For the victims, the consequences of the event stay with them longer, so the time span used to describe the event is longer (Baumeister, 1996). As for emotions, victims can also feel anger for a longer period of time (Baumeister, Stillwell, & Wotman, 1990).

In contrast, perpetrators saw the situation as a closed event; it had a beginning and it had an end or closure. Participants retelling a story from a perpetrator perspective did not provide a background story to the event, and were less likely to provide accounts of the consequences (in contrast to those in a victim position). The authors suggested that victims recall a series of events before they express anger toward the perpetrator; however, the perpetrators do not see it the same way. Rather, perpetrators only recall the event when the victim draws his or her attention to it, and might think that the victims are over-reacting (Baumeister, Stillwell, & Wotman, 1990).

The magnitude gap, according to Baumeister (1996) also “involves intangible factors such as the victim’s suffering compared to the perpetrator’s pleasure” (p. 110). Baumeister refers to the consequences of an event, as these are usually bigger and more negative for the victims than for the perpetrator. If the event is considered in terms of who gains and loses the most, victims are the ones that will lose the most, while the gain of perpetrators would be minimal. Because the loss of victims is
greater, it will affect them more, and might make them continually think about the losses and consequences; this could be considered as a continuation of the event (Baumeister, Stillwell, & Wotman, 1990). The consequences are a continuous reminder of what happened, making it difficult to forget the event. The perpetrator, however, whose loss is smaller, is able to put an end to the event and does not generally continue to think about the consequences. He or she will also tend to minimize the consequences, limiting rather than extending the psychological duration of the “event” itself (Baumeister, Stillwell, & Wotman, 1990). Thus the time frame of the event for the perpetrator is shorter than it is for the victim.

Another difference between victims and perpetrators is in the way they understand why the event happened. The victims perceive the action as something unexpected that did not have any reason for happening (Baumeister, 1996.) However, perpetrators do not think the same way, they believe there is a reason for the action. Perpetrators do not believe it was random, though they can acknowledge that it might have been impulsive (Baumeister, Stillwell, & Wotman, 1990). They are also likely to place the blame on external causes, including the victim; this eases their sense of guilt. Perpetrators of intentional violence often believe that their actions were just, and that the victim deserved what happened to him or her.

Stillwell and Baumeister (1997) researched the differences in perspective between victims and perpetrators. In this study the authors asked participants to retell a story from the perspective of the victim or the perpetrator. Results showed that perpetrators emphasized details that would make them look better and avoided details
that would make them look bad, even if the details were relevant. However, victims were more likely to change a story to enhance their suffering, and would make the perpetrator look more responsible for the event. Both roles changed the stories for the storyteller’s own benefit. Perpetrators would change the story in a way that would reduce the blame, including the suffering of the victim, and the victim would avoid mentioning possible justifications for the perpetrator’s behavior, and any other positive information about the perpetrator.

Jones and Nisbett (1972) also discuss the differences between different perspectives, but in terms of observers (bystanders), and actors (perpetrators). The authors discussed how these two perspectives explain the same event or information differently. Jones and Nisbett suggest the actor is unlikely to focus attention onto him or herself, and instead focuses his or her attention on the circumstances. However, the observer tends to focus more on the actors and their personal characteristics than the circumstances of the event. As Jones and Nisbett stated “there is a pervasive tendency for actors to attribute their actions to the situational requirements, whereas observers tend to attribute the same actions to stable personal dispositions” (p. 80.) This helps explain how a person makes dispositional attributions for someone else’s actions when the actions affect him or her, possibly ignoring the situation the person was in. Or vice versa, the actor might only make situational attributions to avoid the responsibility for his or her actions, and ignore dispositional attributions.

The reasons behind the actions, whether it is a person’s own actions or someone else’s, are understood and expressed by attributions. Attribution, according
to Fisk and Taylor (2013), “fundamentally concerns how people infer causal explanations for other people’s actions and mental states” (p. 149.) According to Heider (1958) there are two main categories of understanding why a person acts a certain way. A person can place the responsibility of a behavior on the person (dispositional attributions), outside of the person (situational attributions), or a combination of both. Dispositional attributions focus on stable personality characteristics (within the person). Situational attributions focus on the situation and specific circumstances (outside the person). Thus, someone’s behaviors can be explained by his personality, at other times the person’s behavior is attributed to the circumstances, and at other times to a combination of both.

**Cognitive Dissonance**

As individuals retell the story of what happened - regardless of the perspective - they might still be in the process of understanding the event and the reasons why it happened. As they do this, they can experience cognitive dissonance. Cognitive dissonance refers to the psychological discomfort people feel when they are unable to easily reconcile their beliefs and actions (Festinger, 1957.) In response to cognitive dissonance, the person adjusts his or her attitude and appraisals toward greater comfort in their interpretation of events to be consistent with the observed behaviors.

Both perpetrators and victims can experience cognitive dissonance. Perpetrators might try to rationalize their actions, or change their attitudes, since they cannot deny or undo their behaviors. To do this, people can place less importance on the event than it actually deserves, as suggested by Baumeister, Stillwell, and Wotman
Perpetrators can also assume less responsibility and place the blame on other people, including the victim. This way, perpetrators can reduce the psychological discomfort of cognitive dissonance. Besides placing the blame on the victim, perpetrators are likely to blame the circumstances, thus avoiding responsibility for their actions.

Victims can also experience cognitive dissonance. It might be difficult for them to comprehend and make sense of why they are in a situation where they are experiencing suffering or injustice. It might be difficult for them to understand and come to terms with the reasons that lead another person, whether it is a stranger or not, to hurt them. This might be especially true if the victims have a belief in a just world (BJW). People who believe in a just world, believe that if they do good, good things will be reciprocated, and good will come back to them, rather than bad things such as suffering (Lerner & Miller, 1978). Based on the BJW, people believe that those who suffer are the ones that have harmed others or have done bad things to others. If victims have not acted in an unjust way towards another person, they might experience cognitive dissonance. Research by Dalbert (1999) suggests it is important to differentiate between personal BJW and general BJW. Dalbert suggests that personal BJW explains good well-being and healthy self-esteem. For people who believe in a just world and have behaved unjustly, their self-esteem is affected in a negative way. For people who believe in a just world, out of good actions come good things, including a positive view of the self, and self-worth. If perpetrators have a BJW and act in an unjust way towards others or in a way that is contradictory to their views,
then they could experience guilt and shame; thus their self-worth might be affected in a negative way. If perpetrators experience these negative effects, then they might try to reduce the discomfort caused by cognitive dissonance.

**Bystanders**

So far the discussion has emphasized the variations in the perspective of victims and perpetrators, but little has been said about the bystander perspective. A bystander is a person who witnesses an event and can choose to intervene or not. In order for the bystander to intervene in a situation, Latané & Darley (1968) suggest that three things need to happen: “the bystander needs to notice the event and interpret it as an emergency, and he must decide that it is his personal responsibility to act” (p. 220.) If one of these three things does not happen, the bystander will not intervene and will remain a passive bystander.

There is an exhaustive body of research regarding the likelihood of bystanders to intervene in the event of a conflict (see Darley & Latané, 1968; Latané & Darley, 1968; Darley, Teger, & Lewis, 1973). Previous research has aimed to understand why a bystander does not interfere in a conflict. One of the reasons has been termed the **diffusion of responsibility** (Latané & Darley, 1968) and it refers to the individual’s sense of personal responsibility based on how many people he or she knows that are aware of the situation. If there are many people around them, bystanders do not feel obligated or fully responsible to intervene because they shift some responsibility to the other people that are also present or know about the situation. However, if a bystander believes they are the only one present and aware of the emergency situation, then they
are more likely to respond (Darley & Latané, 1968; Latané & Darley, 1968). Thus, the more bystanders witnessing a situation, the less likely a bystander is to intervene and an intervention will be delayed.

Another reason bystanders might not intervene in a situation is because of pluralistic ignorance (Darley, Teger, & Lewis, 1973; Latané & Darley, 1968). This could happen based on the number of people a bystander knows are aware of the situation. A person might think that if no other bystander interferes, that must mean the event must not be serious and the situation is not perceived as an emergency because no one else is interfering or doing anything to stop what is happening (Latané & Darley, 1968).

Not only does the perception of a bystander in regard to a specific circumstance vary per individual and the circumstance for the bystander to decide whether to intervene, but the perception of a bystander can also vary with respect to the reasons such an event might have happened. The bystander tends to understand the actions of the perpetrator by emphasizing his or her personality characteristics (i.e. the bystander makes dispositional attributions), and underestimates the impact of circumstances (situational attributions) (Jones & Nisbett, 1972). Bystanders not only try to understand reasons for the perpetrator to act a certain way, but they will try to understand if the victim deserved such a bad thing to happen to them or not. Victim blaming is not uncommon, especially in sexual violence situations, where a person tries to understand such an event based on already accepted rape myths, or the characteristics of a victim, including gender, sexuality, the relationship between victim...
and perpetrators, etc. (van der Bruggen & Grubb, 2014).

In the book *Getting at Peace* (1999), William Ury refers to bystanders as ‘thirdsiders.’ He believes that as thirdsiders people can have an influence in the prevention, resolution and containment of violence. As he sees it, “the third side is people – from the community - using a certain kind of power – the power of peers – from a certain perspective - of common ground – supporting a certain process - of dialogue and nonviolence – and aiming for a certain product – a “triple win” (p. 14.) The goal of the thirdsider is to help people who are in conflict resolve differences with dialogue and avoiding violence (Ury, 1999.)

In order to prevent violence, Ury believes thirdsiders have three roles: providers, teachers, and bridge-builders. The role of the provider is to help prevent violence and conflict when the needs of a person are not being met. Ury suggests there are four needs that have to be met in a person: food, safety, identity and freedom. He suggests that the role of the provider is to make sure these needs are met. The role of a teacher is to help prevent conflict by teaching others the necessary skills to help them avoid conflict: “By helping people learn new values, perspectives and skills, we can show them a better way to deal with differences” (p. 125.) There are three main things Ury feels need to be taught: (1) that violence does not solve problems (2) the importance of tolerance, not to agree but to respect “the essential humanity in every person” (p. 127) and (3) skills for problem solving. The final role to prevent violence is the bridge-builder. A way of being a bridge builder is by encouraging dialogue that will help increase the understanding of the perspective of another person, and increase
the trust among conflicting parties as well. The purpose of the prevention role is to reduce already existing conflict, and avoid it becoming an overt conflict.

To resolve violence, thirdsiders can have the roles of mediator, arbiter, equalizer, and healer. As Ury clearly describes it, mediators “can help reconcile the parties’ interest. As Arbiters, we can determine rights. As Equalizers, we can help balance the power between the parties. And as Healers, we can help repair injured relationships” (p. 142.) In trying to reconcile the parties, the mediator tries to get to the root of the problem establishing good communication between the parties, and solve it by meeting the needs of both parties, ignoring whether someone is at fault. The end goal of a mediator is to help the parties reach an agreement where they are satisfied.

The role of an Arbiter can be used when mediations fails. An Arbiter can help decide on a solution. Ury also suggests that this role could help “repair the harm to victims and to the community, and to reintegrate the offender as a constructive member of society” (p. 150.) The role of the Equalizer can help restore the power balance that might result in injustice. Finally, the role of the Healer can help to finally resolve a conflict and prevent it from reoccurring.

Finally to contain violence thirdsiders may play the potential role of witness, referee and peacekeeper. Ury explains that once a situation escalates, the challenge for the third side is to “contain the power struggle so that the parties may be brought back to the negotiation table.” (p. 169.) Ury explains the escalation of an event based on the Chinese philosopher Mo Tzu, in that violence escalates into overt behavior when “no one is paying attention to the conflict or, even if someone is, because no one sets
limits on the fighting, or, lastly, because no one intervenes to provide protection.” (p. 170.) A witness can be aware of early signs that something might get out of control, but can also call for help if needed. The referee can help by setting fair rules if there is a fight already. And finally, the peacekeeper can help make sure that peace ensues, and avoid violence before it starts.

As suggested by Ury, thirdsiders (or bystanders) have many different ways to act constructively. Ury believes people can play a variety of active roles, and there are many things they can do. Often people may see overt situations of violence, so the only thing to do is to contain such violence. Other times, as with our friends, family, and co-workers people can sense some of the tension brewing, and it would be possible to prevent such tension from escalating and becoming overt. In many situations, there is something that could be done to reduce and avoid conflict and people as thirdsiders have that power.

**Human Aggression**

Aggression has been defined as the “behavior directed toward another individual that is carried out with the proximate (immediate) intent to cause harm” (Anderson & Bushman, 2002, p. 28.) It has been emphasized that in order for a behavior to be considered aggression the action of the perpetrator has to have as a goal harming the other person, and for the person who the behavior is aimed towards, to want to avoid it (Anderson & Bushman, 2002; Bushman & Anderson, 2001). There are also different forms by which people can express aggression such as physical, verbal or relational ways (Bushman & Bartholow, 2009). All of these forms include
the desire to harm another person. Physical aggression includes harming others “with body parts or weapons,” and verbal aggression includes harming others with words (Bushman & Bartholow, 2009.) Relational aggression is somewhat different, the harm is done is by negatively changing the relationship with others (e.g. Crick & Grotpeter, 1995.)

Aggression has been dichotomized by its function between hostile aggression and instrumental aggression. Hostile aggression (or reactive aggression) is mostly “impulsive, thoughtless, driven by anger… and occurring as a reaction of a provocation” (Anderson & Bushman, 2002, p. 29.) Instrumental aggression (or proactive aggression), refers to aggression that has been “premeditated [as a] means of obtaining some goal other than harming the victim, and being proactive rather than being reactive” (Anderson & Bushman, 2002, p. 29.) However, Bushman and Anderson (2001) disagree with the dichotomy between hostile and instrumental aggression, and suggest instead that there are two major problems with this dichotomy. One of the problems is that hostile and instrumental aggressions are not mutually exclusive; some of the motives of aggression can include both hostile and instrumental aggression.

Another important dichotomy in aggression is the situational vs. personological causes of aggression (Anderson & Bushman, 2002; Anderson & Huesmann, 2003.) Situational versus personal (dispositional) attributions have been previously mentioned in this discussion, as ways by which bystanders try to understand the aggressive behaviors of others. It is important to note that the
situational and personological dichotomy can help explain why people act in aggressive ways. Anderson and Huesmann (2003) suggest that personological causes include “attitude, beliefs, and behavioral tendencies” (p. 299.) Situational causes however, are specific for every particular situation, and these situational causes can increase or decrease aggression. These factors might include “insult[s], uncomfortable temperatures, presence of a weapon, or presence of one’s religious leader…” (p. 299.) Behaviors result from the combination of personological and situational factors; whereas situational factors can increase or decrease aggressive behaviors, personological factors include the readiness of a person to aggress. When these two combine it can inhibit or increase aggressive behaviors (Anderson & Huesmann, 2003.)

Over the years researchers have developed several theories of aggression, including Cognitive Neoassociation Theory, Social Learning Theory, Script Theory, Excitation Transfer Theory, Social Interaction Theory, Frustration-Aggression Theory, etc. Anderson and colleagues (e.g. Anderson & Bushman, 2002) integrated several of these theories and developed a framework called the General Aggression Model (GAM). One of the key features of the GAM is what is labeled as inputs, or what influences and causes aggressive behaviors. Inputs are divided into two categories, person factors (traits, sex, beliefs, attitudes, values, long-term goals, and scripts) and situational factors (aggressive cues, provocation, frustrations, pain and discomfort, drugs, and incentives). As Anderson and Bushman (2002) mention the “input variables influence the final outcome through the present internal state that they create” (p. 38.)
The internal states consist of cognition (hostile thoughts, scripts), affect (mood and emotion, and expressive motor responses), and arousal. These internal states function as filters that influence the outcomes of an event.

Anderson and Bushman (2002) also explain that outcomes, including both thoughtful actions and impulsive actions have an influence “as part of the input” on future events. Impulsive actions (these actions may or may not be aggressive in nature) may occur when a person does not have the appropriate resources such as time and cognitive capacity to understand a situation. With the appropriate resources a person can reappraise the situation, and act in a thoughtful way (thoughtful action), that can be aggressive or not.

**Violence Sensitivity**

As an actor or observer, when a person learns of an aggressive behavior, he or she can interpret its severity differently than another person, whether they are in a similar position or not. Violence sensitivity is a measure of the perceived severity of violent behavior. Using Likert ratings of the severity of many behaviors (e.g. murder, stabbing, bullying) two scales can be derived. One is a scale of severity, ranging approximately from murder to gossip. Principal factor analyses has suggested four categories within this range: V1 – more severe physical violence, V2 – less severe physical, V3 – more severe nonphysical, V4 – less severe nonphysical (Collyer, Gallo, Corey, Waters, & Boney-McCoy, 2007). The second scale is violence sensitivity, which measures individual differences in responsiveness to violence. Cluster analysis has suggested violence-sensitive (VS) and violence tolerant (VT) groups as a way to
describe these differences, but it is more realistic to think of sensitivity as a continuum.

More sensitive individuals are those with higher average ratings of violence severity across many behaviors. At least this was true for V2, V3, and V4 behaviors; however, the groups did not vary as much in their evaluations of V1 (see also Collyer, Brell, Moster, & Furey, 2011) because almost all of the severity ratings for V1 behaviors were very high. Later studies by Collyer and Melisi (2008), and Egan (2010) have shown that the apparent similarity of the two groups in rating V1 behaviors was a ceiling effect caused by the use of closed-ended Likert scales in the original study. When open-ended magnitude estimation methods are used, the expected difference between violence sensitive and violence tolerant individuals is still seen.

A subsequent study by Collyer et al. (2011) aimed to fully describe individual differences in sensitivity to violence. Results showed a gender difference with women scoring higher in violence sensitivity than men. Participants had the opportunity to classify themselves as violent-sensitive or violent-tolerant, and results showed that their self-descriptions correlated with their classification using severity ratings. This suggests some degree of self-awareness regarding violence sensitivity or tolerance. In the study, the authors suggested that violence sensitive individuals seem to have a more inclusive understanding of what violence includes, embracing such things as verbal abuse and inaction.

A study by Collyer, Johnson, de Mesquita, and Palazzo (2010) addressed the
question of whether people who are violence-tolerant continue to be so after nonviolence training, or if they can become violence-sensitive. The results suggest that participants exposed to nonviolence training that learn about nonviolence problem-solving rated violent behaviors higher than before their exposure, and so become more sensitive to violence than participants who are not exposed to nonviolence education.

**Empathy**

Empathy refers to the “reactions of one individual to the observed experiences of another” (Davis, 1983, p.113), and the degree to which individuals can put themselves in the position of others. Hoffman (1990), similarly to Davis, refers to empathetic affect as the “affective response more appropriate to the other’s situation than to one’s own” (p. 157.)

Many times people are empathetic toward others because the other person is going through a difficult time, and sometimes people might believe the suffering is unjust. Hoffman (1990) suggests that empathetic affect can lead to “moral development, and just behavior” (p. 151) especially when it comes to empathic distress. Empathetic distress, as explained by Hoffman, refers to the negative feelings caused by another person’s distress.

Hoffman (1990) proposes a series of related affects that result from empathetic affect. One of them is *sympathetic distress*, this occurs when it is known that the victim is suffering, and the suffering is out of his or her control. *Empathic anger* focuses on the perpetrator and not the victim. This anger might shift to the victim if the bystander learns that somehow the victim did something or instigated the
perpetrator and so deserves the suffering, or if the victim has maintained the status as a victim for a while, and has not done anything to change it. Thus, the anger might increase toward the victim, and decrease toward the perpetrator, and the empathy might increase towards the perpetrator. *Guilt feelings* occur when the bystander or the observer is the person responsible for the suffering of the other person; the perpetrator can experience self-blame, as well as both empathic and sympathetic distress. Someone might experience *empathetic feelings of injustice* when there is inconsistency between the victim’s suffering and his or her behaviors. This could reflect a BJW, previously discussed. As expressed by Hoffman, “empathic distress may be transformed by the lack of reciprocity between character and outcomes into a feeling of injustice” (p. 160.) In other words, if it is believed that the victim is a good person who does not deserve suffering, the empathic distress might increase, whereas if it is believed that the victim is not a good person and deserves the suffering; the observer might not feel empathy towards the victim. This lack of consistency that leads to empathic distress can change into *empathetic feelings of injustice*. It is important to note that there is no need for a victim to be physically present in order for a person to experience empathy; a person can learn about the victim in some other ways “because humans have the capacity for representation and represented events can evoke empathic affect” (Hoffman, 1990, p. 169.)

As suggested by Hoffman, there is a relationship between empathy and justice/injustice. A recent study by Decety and Yoder (2016) analyzed the relationship between the different components of empathy (affective, motivational, and cognitive)
and sensitivity to injustice. The results showed that people who are more empathically concerned with others, and are less coldhearted (based on the psychopathy scale) are more sensitive to injustices other people might experience. Results also suggested that justice sensitivity for others can be predicted when people are more cognitively empathetic, or can put themselves in the position of others.

Actor vs. agent duality (McAdams, 2013; Frimer, Schaefer, & Oakes, 2014) refers to the same person being both the actor and the agent. The actor is the “watched self” while the agent is the “executor of action.” The actors reflect on the morality, mostly because they are being watched and want to appear as a good person. On the other hand, the executor of an action might give himself or herself permission to act in a more selfish way, especially if he or she believes that they are not being watched. In light of what has been discussed so far, a connection can be made to the actor vs. agent duality, specifically to the victim and perpetrator perspectives, as well as that of the bystander. In the case of the bystander, a person could intervene or not depending on how he or she sees himself or herself in that moment, as an actor (someone who is being watched), who feels the need to act in a moral way, or an agent (someone who can act in a more selfish manner). From the victim’s perspective, they might recall themselves as more morally inclined, since perhaps they think they are being watched, that someone else at least knows about the injustices committed against them. If this is so, then the victim might be more empathetic towards others. The perpetrator could be similar to the agent – the “executor of the action” - someone who behaves more selfishly and (clearly) less morally. A person can allow himself or herself to not act in
a moral way, especially if they do not care or believe that there is a bystander observing those behaviors.

People can be empathetic towards others when they see someone, or read about a situation another person experiences. This includes reading literary fiction (Mar & Oatley, 2008). Individuals who create imagery when reading are more empathetic toward the characters in the story, and are more likely to help, thus showing an increase in prosocial behaviors (Johnson, Cushman, Borden, & McCune, 2013). Even though the literature is inconclusive, it points to people being empathetic toward others in a variety of ways, not only by seeing it, but by reading about it, and visualizing the scenario.

**Use of Words**

In addition to analyses of the stories participants have shared, either from previous experiences in their lives from different perspectives, or because they were asked to retell a story from a specific perspective, either victim or perpetrator (Baumeister, Stillwell, & Wotman, 1990; Stillwell & Baumeister, 1997), analyses of the linguistic styles associated with each perspective can help determine additional differences (Pennebaker & King, 1999), some of which may extend the characterizations of victim and perpetrator. Research by Pennebaker and King suggests that people are consistent “across time and situation” (p. 1308) in the way they express themselves in writing. Pennebaker and King analyzed the words written by participants from different populations who wrote about different topics in different contexts.
A main benefit of writing is its promotion of better health (Pennebaker, Mayne, & Francis, 1997). The authors suggest that writing promotes better physical health because of the use of cognitive processing. Cognitive processing refers to (a) a self-reflective thinking or use of insight, and (b) causal thinking. Word choice offers clues to this processing; words that refer to insight include realize, see, understand, and words that refer to causation include because, why, thus.

Pennebaker, Mayne, and Francis (1997) proposed that the way people think, and the words chosen to express and talk about situations or events can help improve their health when writing positive emotions. Results showed that the use of “more negative emotion words and fewer positive emotion words was linked with more negative outcomes in the month after writing” (p. 866.)

In his book, The Secret Life of Pronouns, Pennebaker (2011) suggests how the use of some words can vary depending on the person. For example, individuals in higher positions or in positions of power and those in lower positions use different words. Pronouns associated with status, power, self-confidence, arrogance, and leadership include the pronouns I, we, and you (Pennebaker, 2011.) The tense of the verbs can also change based on the emotions a person experiences (Pennebaker, 2011.) A person who feels angry is more likely to use you, he, and they at a higher rate, verbs in present tense, and more cognitive words. People who feel happy use we more often, and concrete nouns. Individuals who feel sad use more I- words, future and past verbs and more cognitive words. By I- words Pennebaker refers to first person singular pronouns such as I, me, my.
A study by Kowalski (2000) researched the perspectives of victims and perpetrators regarding teasing. In this study participants were asked to tell two different stories that they had experienced (similar to Baumeister, Stillwell, and Wotman, 1990), one where they where teased (victim perspective), and another were they teased someone else (perpetrator perspective). To analyze the stories Kowalski used a linguistic analysis tool, the Linguistic Inquiry and Word Count (LIWC) computer program. Results showed that negative emotion words, such as angry, ashamed, and worthless were mostly used in stories that were narrated from a perpetrators’ perspective rather than a victim’s perspective. Results also suggested that victims felt “more negatively” than perpetrators about the experience, and that victims believed perpetrators do not feel strongly negative about the event. Results also showed that victims felt more annoyed by the experience than perpetrators, and that perpetrators felt the experience was more humorous and also felt more guilt about it than the victims.

Writing about their experiences from a victim’s perspective, participants used “more self-references” and “more words” (p. 235) than perpetrators (Kowalski, 2000). However, when writing about their experiences from the perpetrators perspective participants referred more to others. Kowalski suggests that the low use of self-references by perpetrators in their narratives and the report of guilt of the experiences “may reflect attempts to distance themselves from their personal involvement in the teasing incident” (p. 239.)
Research Questions

The current study examined the words used by participants as a function of the perspectives to which they were assigned. The present study also examined the relationship of violence sensitivity and empathy based on the different perspectives assigned. Below are the research questions addressed in the study.

1. *Words consistent with higher-status positions.* Participants assigned to the perpetrator perspective will use more third person pronouns, and words in the present and future focus, than participants assigned to the victim and bystander perspective. It is expected that there will be significant differences between the groups, and participants assigned to the perpetrator perspective will use more words on the categories representative of people in higher status.

2. *Words consistent with lower-status positions.* Participants assigned to the victim perspective will use more first person pronouns, and words in the past focus, than participants assigned to the bystander and perpetrator perspective. It is expected that there will be significant differences between the groups, and participants assigned to the victim perspective will use more words on the categories representative of people in lower status.

3. *Group differences in Empathy.* The differences in empathy based on the different perspectives (victim, perpetrator and bystander), and the media in which it was presented were examined. Participants assigned to the victim perspective were expected to score higher in the empathy subscales than participants assigned to the perpetrator and bystander perspectives.
4. *Group differences in Violence Severity.* The differences in violence severity based on the different perspectives (victim, perpetrator and bystander), and the media in which it was presented were examined. Participants assigned to the victim perspective were expected to score higher in violence sensitivity than participants assigned to the perpetrator and bystander perspective.

5. *Group differences in Empathy and Violence Sensitivity.* The correlation between violence sensitivity and empathy was analyzed. A positive strong correlation between violence sensitivity and empathy was expected. This relationship was expected to change based on the perspective assigned and the media in which it was presented to participants.
CHAPTER 2

METHODOLOGY

Design

The current study was a between-subject experimental design in which participants were randomly assigned to one of six groups. The 6 groups represent a 2 X 3 two-way factorial design in which the first factor was the media used to present the scenario: news video clip or a news article (See Appendix A for the news article and the link to the video.) The second factor was the perspective participants were assigned to: victim, perpetrator or bystander.

Participants

Undergraduate students from the University of Rhode Island were recruited to participate, mostly from undergraduate psychology courses. Participants needed to be 18 years old or older. Participants were mostly females, \( n = 210, N = 289 \) whose age ranged from 18 to 63 \( (M = 20.26, SD = 3.41) \). The participants were Caucasian (83.6%), Latino (4.9%), and African American (4.5%). Most of the participants were Catholic (32.5%), Christian (20.1%), or did not identify with any religion (23.9%). Participation was voluntary and confidential, and in exchange for their participation, participants received extra credit for the course from which they were recruited.

Procedure

In order to participate, interested participants went to the link provided to complete the survey located in REDCap (Harris et al., 2009.) Once participants went
to the REDCap website, they downloaded the Consent Form and agreed to the terms before continuing. Participants completed a series of demographic items (See Appendix B) and then were randomly assigned to one of the six groups. Here they were instructed to either read a news article of the event, or watch a video clip of the same event and imagine themselves to be in the position of, or in the shoes of Zinedine Zidane, Marco Materazzi, or the person filming the video. The article participants read and the video clip they watched was from the France vs. Italy 2006 World Cup Championship Game. In the final minutes (110th minute) of the 2006 World Cup Championship Game Zidane and Materazzi started exchanging words back and forth, and the argument culminated when Zidane from the French team “rammed his head into the chest” (Moore, 2006) of the Italian player, Materazzi. Participants who were asked to put themselves in the position of Zidane were the ones in the perpetrator perspective; participants who were asked to put themselves in the shoes of Materazzi were in the victim perspective; and the participants who were asked to put themselves in the position of the person filming the video were in the position of the bystander.

Participants completed a series of open-ended questions about the event they learned. These questions varied regarding the perspective assigned to them (see Appendix B for the full list of questions). Participants were asked to describe the events that led to the fight, to mention what the other player had said or done that was hurtful to them (in the case of the victims and perpetrators) or what did both players do that was hurtful (for the bystander). After participants answered the open-ended questions, a short survey regarding empathy, perspective taking, violence sensitivity,
and social desirability followed.

**Materials**

**Empathy** Participants answered the Interpersonal Reactivity Index (IRI) (Davis, 1980) by answering how much they agreed with each statement using a Likert rating from 1 (not at all) to 5 (very strongly). This scale consisted of 4 subscales of 7 items each. The four subscales included: Fantasy, Perspective-Taking, Empathetic Concern, and Personal Distress. Davis (1983) analyzed reliability of the subscales by gender, because of the known differences in empathy between males and females (Mehrabian & Epstein, 1972; Hoffman, 1977). Test-retest reliabilities were high for all four subscales for genders, males (.61-.79), and females (.62-.81.)

**Perspective Taking** Participants were asked three questions regarding how easy or challenging it was for them to adopt the instructed perspective. These items were measured with a Likert rating from 1 (not at all) to 5 (very strongly.)

**Violence Sensitivity** Participants also completed the Violence Sensitivity Scale (Collyer et al, 2007) that estimates how sensitive participants were to violence. This scale is also a Likert rating from 1 (not at all violent) to 7 (extremely violent). This scale consists of 16 items consisting of violent behavior words. To this list of violent behaviors, one more behavior was added, the behavior the participants learned about, head-butting. Participants were asked to rate this behavior as part of the Violence Sensitivity Scale. These lists of behaviors include four types of violence: less severe physical, more severe physical, less severe nonphysical, and more severe nonphysical (Collyer et al., 2007). The analyses by Collyer et al., suggested two
groups based on the severity ratings: a violence sensitive group (VS), and a violence
tolerant group (VT), as well as four types of violence V1 – more severe physical, V2 –
less severe physical, V3 – more severe nonphysical, V3 – less severe nonphysical.

**Social Desirability** Finally, participants completed the shorter version of the
Marlowe-Crowne Social Desirability Scale (Reynolds, 1982). This shorter version
consists of 13 out of the 33 original items. In the original version participants
answered in a binary format (true-false) and it showed good reliability (.76) as well as
good validity ($r = .93$, $r^2 = .86$) (Reynolds, 1982.) For this study participants were
asked to rate how much they agreed with the statements in a Likert-type scale from
1(not at all) to 5 (very strongly).
CHAPTER 3

RESULTS

Once the data were gathered, a Microsoft Excel spreadsheet with the data was downloaded from REDCap, and uploaded into an SPSS version 23 file. Before analyzing the open-ended question data with LIWC, the answers to the open-ended questions were screened for a more accurate analysis. The corrections done to answers of the open-ended questions included eliminating abbreviations of word and apostrophe use, and correcting grammatical errors. Participants were excluded from the sample if they did not answer the questions, “Please describe your thoughts and feelings just prior to the event,” “Please describe your thoughts and feelings at the moment of the event,” and “Please describe your thoughts and feelings after the event,” and did not follow instructions, answered the questions using a different perspective other than the perspective assigned (i.e., participants who were assigned to the victim or perpetrator perspective and answered from a bystanders perspective, or their personal perspective), and participants who answered the questions with only one word or were extremely vague in their answers. The manipulation check items for adopting the perspective assigned of the participants who were not excluded from the sample showed the participants did not experience difficulty adopting the randomly assigned perspective ($M = 3.43, SD = .77$).

Once corrections to the open ended questions were finalized, the answers were
analyzed using the LIWC program (Pennebaker, Booth, Boyd, & Francis, 2015.) The output of this program provides around 90 different variables, and includes a word count of the segment provided by each participant, as well as some general descriptors or categories that include the percentage of words in a category used per sentence, words captured by their dictionary, and words that are longer than six letters (Pennebaker et al., 2015). The outcome also provides 21 standard linguistic dimensions; the ones used for this study were pronouns (personal, first person singular, third person singular). Categories also included 41 psychological constructs from which affect (negative emotion: anger and anxiety), cognitive process (insight and causation), and time orientation (past, present and future focus) were used for this study. Finally, the LIWC outcome provides personal concern categories, informal language markers, and punctuation categories, though none of these categories were relevant for the purpose of this study.

The words of the answers used for the open-ended questions “Please describe your thoughts and feelings just prior to the event,” “Please describe your thoughts and feelings at the moment of the event,” and “Please describe your thoughts and feelings after the event” were analyzed to determine if participants used words at different rates based on the assigned perspective and media by which the scenario was presented. Even though these were three separate questions, these were analyzed as one question or segment in LIWC. This provided a more comprehensive account of how participants would have felt if they were in the randomly assigned position of perpetrator, victim or bystander. Before conducting the inferential analyses, the
dependent variables of interest obtained from LIWC were tested for the normality assumption by the independent variable of perspective groups (perpetrator, victim, and bystander). Few of the dependent variables abided by this assumption.

Not all the word categories provided by LIWC for the different perspectives reflected a normal distribution. The category of past focus was normally distributed for two of three groups. Bystander had a skewness of .055 (SE = .211) and kurtosis of .039 (SE = .419), and the victim group with a skewness of .303 (SE = .291) and kurtosis of .031 (SE = .575), however the perpetrator group was not normally distributed as assessed by the Shapiro-Wilk test (p < .05). Personal pronouns were normally distributed for the perpetrator group, with a skewness of -.322 (SE = .255) and kurtosis of .636 (SE = .506), and victim groups with a skewness of .562 (SE = .291) and kurtosis of .459 (SE = .574), but not for the bystander group as assessed by Shapiro-Wilk test (p = .030). The category of cognitive process was normally distributed for the perpetrator group with a skewness of .436 (SE = .255) and kurtosis of .383 (SE = .506), however it was not normally distributed for the bystander and victim groups, as assessed by the Shapiro-Wilk test (p < .05). The category of negative emotion was only normally distributed for the victim group with a skewness of .426 (SE = .291), and kurtosis of -.223, SE = .574, but not for the other two group perspectives (perpetrator and victim). For the category of affect, the perpetrator group was normally distributed, with a skewness of .340 (SE = .255) and kurtosis of .144 (SE = .506), and victim groups with a skewness of .042 (SE = .291) and kurtosis of -.739 (SE = .574), but not for the bystander group as assessed by the Shapiro-Wilk test.
(p < .05). The assumption of normality was not met for the other categories: word count, first person singular pronoun, third person singular pronouns, insight, anger, cause, present focus, and future focus based on the Shapiro-Wilk test (p < .05).

**Word use based on perspective**

Before analyzing all the variables, a Kruskal-Wallis test was conducted to determine if there were differences within the word count between the perspective groups levels: "perpetrator" (n = 89), "bystander" (n = 132), and "victim" (n = 68) groups. Distributions of word count were similar for all groups, as assessed by visual inspection of a boxplot. Word count was significantly different between the different levels of perspective group, χ²(2) = 8.963, p = .011. Subsequently, pairwise comparisons were performed using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons. Post hoc analysis revealed statistically significant differences in word count between the bystander (Mdn = 136) and perpetrator (Mdn = 110) groups (p = .015). There was no significant difference between the perpetrator and victims (Mdn = 117.50) groups (p = 1.00), and between victim and bystander (p = .135). This suggests that the only difference between the perspective groups for word count was between perpetrator and bystander perspective.

**Words consistent with higher-status positions.**

As proposed in the hypothesis, words associated with higher-status position include higher use of third person pronouns and words with a present and future focus. This study aimed to determine if the words used by participants assigned to the perpetrator perspective were similar to those in a higher-status position. Because most
of the dependent variables failed to meet the normality assumptions required for an analysis of variance (ANOVA) test, a series of nonparametric Kruskal-Wallis tests were performed.

**Personal Pronouns**

For the dependent variable personal pronouns (i.e. I, them, her) median scores were significantly different between the levels of perspective group, $\chi^2(2) = 91.854, p < .001$. Pairwise comparisons were performed using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons, and the adjusted $p$-values are presented. Post hoc analysis revealed statistically significant differences in personal pronouns scores for all group comparisons, between bystander ($Mdn = 8.32$) and perpetrator ($Mdn = 15.85$) ($p < .001$), between bystander and victim ($Mdn = 12.84$) ($p < .001$), and between the victim and perpetrator perspective groups ($p = .027$).

To determine the differences in the third person singular pronouns category (she, her, him) between perspective group levels: "perpetrator" ($n = 89$), "bystander" ($n = 132$), and "victim" ($n = 68$) groups, a Kruskal-Wallis test was conducted. Distributions of third person singular pronoun scores were similar for all groups, as assessed by visual inspection of a boxplot. The medians of third person singular pronoun scores increased from bystander ($Mdn = 1.81$), to victim ($Mdn = 2.08$), to perpetrator ($Mdn = 2.27$), but these differences were not significantly different between the levels of perspective group, $\chi^2(2) = .855, p = .652$. Even though results suggest that the median in regards the use of third person singular pronouns is higher among participants in the perpetrator groups, there was not enough evidence to make a
significant difference between the different perspectives of the groups.

**Present and Future Focus**

A Kruskal-Wallis test was conducted to determine differences between the perspectives in regard to present and future focus words. Distributions of present and future focus scores were similar for all groups, as assessed by visual inspection of a boxplot. Median present focus (i.e., today, is, now) scores were not significantly different between the different levels of perspective group, \( \chi^2(2) = 3.567, p = .168 \). Nevertheless, the median scores increased by groups: perpetrator (\( \text{Mdn} = 5 \)), victim (\( \text{Mdn} = 5.41 \)), and bystander (\( \text{Mdn} = 6.23 \)). Even though results were not significant, the pattern in the means suggest that contrary to hypothesis, participants in the perpetrator groups did not use words in a present focus more than participants in the victim and bystander groups. On the contrary, the median suggests that perpetrators used words on present focus less than participants assigned to the victim and bystander perspectives.

For the dependent variable future focus (i.e., may, will, soon), median scores were significantly different between the levels of perspective group, \( \chi^2(2) = 7.574, p = .023 \). Pairwise comparisons were performed using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons, and adjusted p-values are presented. Post hoc analysis revealed no significant differences in future focus scores for the group comparisons, between perpetrator (\( \text{Mdn} = 0 \)) and bystander (\( \text{Mdn} = .93 \)), \( p = .093 \), between victim (\( \text{Mdn} = 0 \)) and bystander, \( p = .051 \), and between the victim and perpetrator perspective groups (\( p = 1.00 \)). Results suggest an extremely low use of
future focus words for all three groups. Results show a trend for a difference between the groups. However, based on the medians participants in the bystander group seemed to use the words with a focus on future at a higher rate, and the perpetrators and victims at a lower rate.

Negative Emotion and Anger

A Kruskal-Wallis test was conducted to determine if there were differences in the categories of negative emotion and anger between groups that differed in the perspective level. Distributions of negative emotion, and anger scores were similar for all groups, as assessed by visual inspection of a boxplot. For the negative emotion (i.e., hurt, ugly, nasty) category, median negative emotion scores were significantly different between the different levels of perspective group, $\chi^2(2) = 27.871, p < .001$. Subsequently, pairwise comparisons were performed using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons. Adjusted p-values are presented. This post hoc analysis revealed statistically significant differences in negative emotion scores for the group comparisons, between bystander ($Mdn = 3.67$) and victim ($Mdn = 5.77$), $p < .001$, and between bystander and perpetrator ($Mdn = 5.97$), $p < .001$, but not significantly different between the victim and perpetrator perspective groups, $p = 1.00$. Similarly to the results of affective processes, there was a difference between participants who were assigned to the victim and bystander perspectives, and perpetrators and bystander perspective, but no difference between participants in the victim and perpetrator perspective for negative emotions. The medians suggest the victims and perpetrators use negative emotion words at similar
For the dependent variable of anger (i.e., hurt, kill, annoyed) median personal pronoun scores were significantly different between the different perspective groups, $\chi^2(2) = 41.432, p < .001$. Subsequently, pairwise comparisons were performed using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons. Adjusted p-values are presented. This post hoc analysis revealed statistically significant differences in anger scores for the group comparisons, between bystander ($Mdn = 1.23$) and victim ($Mdn = 2.43$), $p = .003$, and between bystander and perpetrator ($Mdn = 3.39$), $p < .001$, but no significant difference between victim and perpetrator perspective groups, $p = .055$. Similar to the results of affect process, and negative emotion, there were significant differences between bystander and victim, and bystander and perpetrator, but no significant differences between the victim and perpetrator perspective. Based on the median scores it is suggested that contrary to hypothesis, participants assigned to the perpetrator perspective used more anger words than victims, and participants in the bystander perspective used anger words at a lower rate.

**Words consistent with lower-status positions**

This study also aimed to determine if words used by participants who were randomly assigned to the victim perspective resembled the words used by people in a lower-status position. More specifically, it aimed to determine if participants assigned to the victim perspective group used a higher count of first person singular pronouns, words with a past focus, words associated with affect, and cognitive words including
insight and causation words than the perpetrator and bystander perspective groups.

First Person Singular Pronoun

A Kruskal-Wallis test was conducted to determine if there were differences in the first person singular pronouns (i.e., I, me, mine) category between groups that differed in perspective: the "perpetrator" ($n = 89$), "bystander" ($n = 132$), and "victim" ($n = 68$). Distributions of first person singular pronouns were similar in distribution for all groups, as assessed by visual inspection of a boxplot. Median first person singular pronouns scores were significantly different between the different levels of perspective group, $\chi^2(2) = 107.202$, $p < .001$. Subsequently, pairwise comparisons were performed using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons. Adjusted p-values are presented. The post hoc analysis revealed a statistically significant difference in first person singular pronouns scores for all group comparisons, between bystander ($Mdn = 5.42$) and victim ($Mdn = 9.70$), $p < .001$, bystander and perpetrator ($Mdn = 12.28$), $p < .001$ perspective groups, as well as between the victim and perpetrator perspective groups, $p = .005$. Even though the results suggest a difference between the combinations of all groups, the differences were not as expected in how much the first person singular pronouns were used by the different groups. Based on the medians of the groups, participants assigned to the perpetrator perspective used first person pronouns at a higher rate than participants in the victim and bystander groups, and participants in the bystander group used first singular personal pronouns at a lower rate than the other two groups. It was hypothesized that the participants in the victim perspective would use these words at a
higher rate, but results suggested perpetrators use these words more.

**Past Focus**

A Kruskal-Wallis test was conducted to determine if there were differences in the past focus category (i.e., ago, did, talked) between the groups that differed in perspective. Distributions of past focus scores were similar for all groups, as assessed by visual inspection of a boxplot. Median past focus scores were not significantly different between the different levels of perspective group, $\chi^2(2) = 1.696, p = .428$. Nevertheless, the median increased by groups, victim ($Mdn = 10.63$), perpetrator ($Mdn = 10.64$), and bystander ($Mdn = 11.48$). Even though results were not significant, the pattern of median scores suggests the opposite of the proposed hypothesis that participants assigned to the victim perspective would use past focus words at lower rates than the other two perspectives.

**Affective Process**

A Kruskal-Wallis test was conducted to determine if there were differences in the affective process category between groups that differed in the perspective level. Distributions of affective process were similar for all groups, as assessed by visual inspection of a boxplot. Median affective process (i.e., happy, cried) scores were significantly different between the different perspective groups, $\chi^2(2) = 39.735, p < .001$. Subsequently, pairwise comparisons were performed using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons. Adjusted p-values are presented. This post hoc analysis revealed statistically significant differences in affective process scores for group comparisons between bystander ($Mdn = 6.09$) and
victim (\(Mdn = 9.04\), \(p < .001\), and bystander and perpetrator (\(Mdn = 9.09\), \(p < .001\) perspective groups, but there was not a significant difference between the victim and perpetrator perspective groups, \(p = 1.00\). There was a difference between participants assigned to the bystander perspective and the other two groups, victim and perpetrator, but not between victim and perpetrator. Thus, victim and perpetrator used more words in the category of affective process than bystanders did, and they seemed to use it at very similar rates. Results do not fully support the proposed hypothesis; participants in the victim perspective do not use affective process words at a higher rate than participants in the perpetrator perspective, but participants in the victim perspective do so more than participants in the bystander perspective.

**Cognitive Process, Insight and Causation**

A Kruskal-Wallis test was conducted to determine if there were differences in the cognitive process category, insight and causation, between groups that differed in perspective. Distributions of cognitive process scores (i.e., cause, know, ought) were similar for all groups, as assessed by visual inspection of a boxplot. Median cognitive process scores were significantly different between the different levels of perspective group, \(\chi^2(2) = 13.289, p = .001\). Subsequently, pairwise comparisons were performed using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons. Adjusted p-values are presented. This post hoc analysis revealed statistically significant differences in cognitive process scores for the group comparisons, between perpetrator (\(Mdn = 13.16\) and bystander (\(Mdn = 15.37\), \(p = .004\), and between victim (\(Mdn = 12.25\) and bystander, \(p = .017\), but not a significant difference between victim
and perpetrator perspectives, \( p = 1.00 \). Results suggest that participants assigned to the bystander perspective use more words in the cognitive process category than participants in the perpetrator and victim perspective, as suggested by the medians. And though not statistically significant, perpetrators used more cognitive process words than victims. The hypothesis suggested is partly supported: there is a difference between the groups’ use of cognitive process words. However, participants in the victims group do not use more cognitive process words compared to the other two groups, instead participants in the bystander groups mostly used these words.

For the variables insight (i.e., think, know), and causation (i.e., because, effect) the median scores were not significantly different between the different levels of perspective group, \( \chi^2(2) = 4.895, p = .086 \), for insight, and \( \chi^2(2) = 1.436, p = .488 \), for cause. Nevertheless the median increased by groups for insight (perpetrator (\( Mdn = 3.03 \)), victim (\( Mdn = 3.145 \)) and bystander (\( Mdn = 3.70 \))) and for causation (perpetrator (\( Mdn = 1.43 \)), victim (\( Mdn = 1.525 \)) and bystander (\( Mdn = 1.64 \))). Thus results suggest that participants in all perspective groups seem to use insight and causation words at a very similar rate, but it is still seen based on the median scores that participants in the bystander perspective use insight and causation words at a higher rate, and participants in the perpetrator perspective use these words at a lower rate.

**Word use based on media**

This study also aimed to understand the differences between the two ways of learning about the head-butting event (watched a video or read a news article), in the
categories of the words previously discussed. Similarly to the previous set of analyses, not all the word categories provided by LIWC for media used reflected a normal distribution. Past focus and regular verbs were the only categories that were normally distributed for both groups. For the past focus dependent variable, the group that watched a video had a skewness of .050 (SE = .187) and kurtosis of -.393 (SE = .371), and the groups who read the article had a skewness of -.032 (SE = .221) and kurtosis of -.242 (SE = .438), as assessed by the Shapiro Wilk test (p > .05).

The category of cognitive process was also normally distributed for the groups who watched the video with a skewness of .227 (SE = .187) and kurtosis of -.218 (SE = .371), but not for the groups who read the article, as assessed by the Shapiro Wilk test, p < .05. This assumption of normality was not met for the other categories: personal pronoun, first person singular pronoun, third person singular pronouns, affective words, negative emotions, anger, insight, causation, focus present, and focus future based on the Shapiro Wilk test (p < .05). For the variables, Mann-Whitney U tests were performed given that the dependent variables did not meet the assumption of normality.

First, a Mann-Whitney U test was run to determine if there were differences in the word count between the media assigned to participants (video watched, n = 169, and article read, n = 120). Distributions of the use of personal pronouns were similar as assessed by visual inspection. Word count was not significantly different between participants who watched the video (Mdn = 120) than for participants who read the article (Mdn = 127.5), U = 10679, z = .770, p = .441. This suggested that participants
used a similar number of words regardless of how they learned about the scenario.

**Personal Pronouns**

A Mann-Whitney U test was performed to determine if there were differences in the use of personal pronouns, and first person singular pronouns between the media assigned to participants (video watched and article read). Distributions of the use of personal pronouns, and first person singular pronouns were similar as assessed by visual inspection. Personal pronoun use was significantly higher for participants who watched the video ($Mdn = 11.41$) than for participants who read the article ($Mdn = 9.81$), $U = 8079$, $z = -2.944$, $p = .003$. First person singular pronoun use was also significantly higher for participants who watched the video ($Mdn = 8.75$) than for participants who read the article ($Mdn = 6.71$), $U = 8229$, $z = -2.73$, $p = .006$, suggesting a higher use of personal pronouns and first person singular pronouns in participants who watched the video.

To determine if there were differences in the third person singular pronouns category (she, her, him), a Mann-Whitney U test was run. Distributions of third person singular pronoun scores were similar for both groups, as assessed by visual inspection. The medians of third person singular pronoun scores increased from participants who read an article ($Mdn = 1.81$) to those who watched a video ($Mdn = 2.08$), but this difference was not significantly different $U = 9298$, $z = -1.226$, $p = .220$.

**Past, Present and Future Focus**

To determine group differences in past, present and future focus, a Mann-Whitney U test was run to determine if there were differences between the two media
groups. Distributions of past, present and future focus scores were similar for all groups as assessed by visual inspection. Present focus (i.e., today, is, now) use was not significantly different between participants who watched the video ($Mdn = 5.77$) than for participants who read the article ($Mdn = 5.84$), $U = 10487.5$, $z = .496$, $p = .620$. Similarly, future focus (i.e., may, will, soon) word use was not significantly different between participants who watched the video ($Mdn = 0$) than for participants who read the article ($Mdn = 0$), $U = 9745$, $z = -.612$, $p = .540$. Finally, past focus was not significantly different between participants who watched the video ($Mdn = 11.30$) and participants who read the article ($Mdn = 10.90$), $U = 9204$, $z = -1.337$, $p = .181$. Thus results suggest the participants use words of the past, present and future focus at the same rate regardless of the media by which the learned about the scenario.

**Affective Process, Negative Emotion, and Anger**

A Mann-Whitney U test was run to determine if there were differences for the affective process words, negative emotion and anger word use between the media assigned to participants. Distributions of the use of the affective process words were similar as assessed by visual inspection. Affective process word use, and anger word use were not significantly different between participants who watched the video than for participants who read the article ($U = 9084$, $z = -1.508$, $p = .131$; $U = 9564$, $z = -.828$, $p = .407$ respectively.) In the same pattern of previous results, the median use of affective words for participants who watched the video was higher ($Mdn = 8.05$), than for participants assigned to read the article ($Mdn = 7.64$). Participants who watched the video also had higher medians for anger words ($Mdn = 2.04$), than participants
who read the article ($Mdn = 1.82$) However, negative emotion words were significantly higher in the video ($Mdn = 5.00$), than the article ($Mdn = 4.19$), $U = 8691.5, z = -2.069, p = .039$.

**Cognitive Process, Insight and Causation**

A Mann-Whitney U test was conducted to determine if there were differences in the cognitive process category, insight and causation, between the two media groups. Distributions of cognitive process scores (i.e., cause, know, ought), insight (i.e., think, know), and causation (i.e., because, effect) were similar for all groups, as assessed by visual inspection. Cognitive process words were not significantly different between video ($Mdn = 14.63$) and article ($Mdn = 13.75$), $U = 9598, z = -.774, p = .439$. Causation words were not significantly different between video ($Mdn = 1.53$) and article ($Mdn = 1.64$), $U = 10553.5, z = .599, p = .549$. Finally, insight words were not significantly different between video ($Mdn = 3.65$) and article ($Mdn = 2.93$), $U = 9244.5, z = -1.280, p = .201$.

Even though the use of words was not significantly different for all categories based on media groups, there is a pattern that shows that for the most part participants who watched the video used more of these words for all categories, but used a similar total word count. This is reflected in the word count category where it was significant that participants who watched the video used more words than participants who read the article. This seems to indicate that participants who watched the video can describe what happened in more detail and more words. Participants experienced it differently based on the media assigned and it was reflected in the use of personal pronouns, first
person pronouns, and negative emotions.

**Group differences in Empathy and Violence Sensitivity**

Another purpose of this study is to determine if the different groups defined by the factors perspective and media differed on the empathy and violence sensitivity of participants. The following analyses are directed to understand these differences between the groups.

**Group differences in Empathy**

Given that participants were mostly female (female \( n = 210 \); male \( n = 77 \)), a one-way multivariate analysis of variance (MANOVA) was run to determine the effect of participant’s sex on their scores in the IRI. The four subscales of IRI were assessed: Empathetic Concern, Fantasy, Perspective Taking, and Personal Distress. The differences between the sexes on the combined dependent variables was significant, \( F(4, 267) = 8.031, p < .001 \); Wilks' \( \Lambda = .893 \); partial \( \eta^2 = .998 \). Follow-up univariate ANOVAs showed that Empathic Concern, \( F(1, 270) = 21.496, p < .001 \); partial \( \eta^2 = .074 \), Fantasy \( F(1, 270) = 10.465, p = .001 \); partial \( \eta^2 = .037 \), and Personal Distress \( F(1, 270) = 12.662, p < .001 \); partial \( \eta^2 = .045 \), were significantly different between male and female of participants, using a Bonferroni adjusted \( \alpha \) level of \( p < .0125 \). However, Perspective Taking \( F(1, 270) = 1.31, p = .253 \); partial \( \eta^2 = .005 \) was not significantly different. Female participants scored higher in all subscales of empathy than male participants (See Table 1).
Table 1

Means and Standard Deviations for the Scores of IRI

<table>
<thead>
<tr>
<th>Empathy Subscales</th>
<th>Sex</th>
<th>Mean</th>
<th>SD</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empathetic Concern</td>
<td>Female</td>
<td>3.88</td>
<td>0.52</td>
<td>199</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>3.55</td>
<td>0.50</td>
<td>73</td>
</tr>
<tr>
<td>Fantasy</td>
<td>Female</td>
<td>3.65</td>
<td>0.64</td>
<td>199</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>3.37</td>
<td>0.59</td>
<td>73</td>
</tr>
<tr>
<td>Perspective Taking</td>
<td>Female</td>
<td>3.64</td>
<td>0.59</td>
<td>199</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>3.55</td>
<td>0.59</td>
<td>73</td>
</tr>
<tr>
<td>Personal Distress</td>
<td>Female</td>
<td>2.95</td>
<td>0.66</td>
<td>199</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>2.64</td>
<td>0.62</td>
<td>73</td>
</tr>
</tbody>
</table>

Before examining the differences in empathy between the different perspectives (victim, perpetrator and bystander), and the media used for presentation (read or watch), a Principal Factor Analysis was performed to determine if the 28 items of the IRI loaded on the original subgroups (empathetic concern, fantasy, personal distress, and perspective taking) using SPSS version 23. The PCA with the sample of our participants showed five different components (instead of the original four) with eigenvalues exceeding 1, which explained 19.45%, 12.44%, 8.18%, 7.25%, and 4.83% of the variance respectively. The scree test (Catell, 1966) also suggests five components (see Figure 1A in Appendix C), and was further supported by the Parallel Analysis. The parallel analysis showed five components whose eigenvalues were higher than the eigenvalues provided by the PCA.

The five-component solution explained 54.76% of the variance; each component explained 19.46%, 13.52%, 9.05%, 7.59%, and 5.14% of the variance respectively. An oblimin rotation was performed to help interpret the components. All components had strong loadings, however not all variables loaded specifically into a
component, as shown in Table 1A in Appendix C. This interpretation of the five components was not consistent with the model suggested by Davis (1980, 1983), where four components are suggested. The correlations between the five factors are small (Table 2). These results do not fully support the use of the items in the original subscales as proposed by Davis (1980, 1983).

A Factor Analysis establishing four components was also performed. The four-component solution explained 49.62% of the variance; each component explained 19.46%, 13.52%, 9.05%, and 7.59% of the variance respectively. Once again, the items for perspective taking, fantasy, and personal distress, for the most part loaded together for each factor. For the subscale of empathetic concern, most of the items loaded on its own factor, with the other items loading mostly with the perspective taking subscale items (see Table 2A in the Appendix). Not all variables loaded specifically into the predicted component. This interpretation of the four components was also not consistent with the model suggested by Davis (1980, 1983). Not all the items loaded in the expected subscales. The correlations between the four factors are small (Table 3). These results do not fully support the use of the items in the original subscales as proposed by Davis (1980, 1983).

Before proceeding with the analysis to determine the difference between groups for empathy, normality tests were performed for the four subscales of the IRI. All of the four subscales were within the normal limits. The normality tests for the dependent variables were done taking into account the two independent variables of media and perspective. For the most part the subscales complied with the normality
assumptions. The subscale of Empathetic Concern complied with the normality tests, except for the bystander perspective group. For the rest of the subscales, Fantasy, Perspective Taking, and Personal Distress showed normality for all six groups, assessed by the Shapiro-Wilk test ($p < .05$).

Table 2

*Component Correlation Matrix With Five-Components: IRI*

<table>
<thead>
<tr>
<th>Component Correlation Matrix</th>
<th>Component 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 -0.039</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 0.163</td>
<td>-0.034</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 -0.158</td>
<td>-0.126</td>
<td>-0.125</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 -0.149</td>
<td>-0.194</td>
<td>0.033</td>
<td>0.168</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

Table 3

*Component Correlation Matrix With Four-Components: IRI*

<table>
<thead>
<tr>
<th>Component Correlation Matrix</th>
<th>Component 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 0.064</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 0.128</td>
<td>-0.057</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 -0.188</td>
<td>-0.181</td>
<td>-0.112</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

A 3 x 2 between groups multivariate analysis of covariance (MANCOVA) was performed as suggested by Tabachnick and Fidell (2007) to determine if there were differences in variables associated with empathy (empathetic concern, fantasy,
personal distress and perspective taking). Two independent variables were used: perspective (perpetrator, victim, and bystander), and media (read news article and watched video clip.) Adjustment was made for two covariates: sex and social desirability. Total N = 289 was reduced to 271 with the deletion of 19 cases that were missing data. Some of the assumptions for MANCOVA, including the presence of outliers, were violated.

With the use of Wilk’s criterion, the combined DV’s were significantly related to the combined covariates, approximate $F(8, 520) = 14.20, p < .001$, Wilks’ $\Lambda = .67352$. There was a medium effect size ($\eta^2 = .18$, and CI 95% (.113, .226)) between DV’s and the covariates. Results suggested no interaction between the independent variables perspective and media $F(8, 520) = 1.26 p = .263$, Wilks’ $\Lambda = .96240$ in the different empathy subscales. Results also showed no significant main effects for both independent variables: perspective ($F(8, 520) = .71808 p = .676$, Wilks’ $\Lambda = .97827$) and media ($F(4, 260) = 1.62 p = .168$, Wilks’ $\Lambda = .97561$). Effect size for the non-significant main effect of perspective was, partial $\eta^2 = .01$, and CI 95% (.000, .017), for media, partial $\eta^2 = .02$, and CI 95% (.000, .058), and for the interaction between perspective and media, partial $\eta^2 = .01$, and CI 95% (.000, .024). Results suggest no significant differences between the different groups. Participants scored similarly in the four empathy subscales regardless of the perspective they were randomly assigned to, and regardless of the media by which they learned about the event.

To have a clearer understanding of how each subscale of the IRI was influenced by the independent variables, adjusting for sex and social desirability, a series of
ANCOVAS were performed. Results suggested that for the scales of Empathetic Concern, Fantasy, and Perspective taking there were no interaction effects or main effects for either of the independent variables (media and perspective) (See Table 4.) The Personal Distress subscale only showed a significant effect for media ($F(1, 274) = 5.641, p = .018$, with a partial $\eta^2 = .020$.) These results suggest that participants scored higher in personal distress when they read the scenario ($M = 2.97, SE = .055$) than when they watched a video ($M = 2.79, SE = .052$).

Results showed some patterns even though they were not significant. The first pattern shown is that participants in the perpetrator perspective scored higher for all the empathy subscales, thus suggesting participants in the perpetrator perspective are more empathetic than participants in the bystander and victim perspective. The other pattern that can be seen in the results is that participants who learned about the scenario by reading the article scored higher in all empathy subscales than participants who watched the video clip of the scenario (See Figures 1-4, and Table 5).
Table 4

*ANCOVA Results for IRI*

<table>
<thead>
<tr>
<th>Empathy Subscales</th>
<th>df</th>
<th>F</th>
<th>Sig.</th>
<th>partial η²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personal Distress</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td>2/274</td>
<td>2.274</td>
<td>0.105</td>
<td>0.016</td>
</tr>
<tr>
<td>Media</td>
<td>1/274</td>
<td>5.641</td>
<td>0.018</td>
<td>0.020</td>
</tr>
<tr>
<td>Perspective</td>
<td>2/274</td>
<td>0.540</td>
<td>0.583</td>
<td>0.004</td>
</tr>
<tr>
<td><strong>Empathetic Concern</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td>2/270</td>
<td>0.255</td>
<td>0.775</td>
<td>0.002</td>
</tr>
<tr>
<td>Media</td>
<td>1/270</td>
<td>1.586</td>
<td>0.208</td>
<td>0.006</td>
</tr>
<tr>
<td>Perspective</td>
<td>2/270</td>
<td>0.931</td>
<td>0.395</td>
<td>0.007</td>
</tr>
<tr>
<td><strong>Fantasy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td>2/274</td>
<td>1.218</td>
<td>0.297</td>
<td>0.009</td>
</tr>
<tr>
<td>Media</td>
<td>1/274</td>
<td>1.196</td>
<td>0.275</td>
<td>0.004</td>
</tr>
<tr>
<td>Perspective</td>
<td>2/274</td>
<td>0.320</td>
<td>0.727</td>
<td>0.002</td>
</tr>
<tr>
<td><strong>Perspective Taking</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td>2/271</td>
<td>0.775</td>
<td>0.462</td>
<td>0.006</td>
</tr>
<tr>
<td>Media</td>
<td>1/271</td>
<td>0.446</td>
<td>0.495</td>
<td>0.002</td>
</tr>
<tr>
<td>Perspective</td>
<td>2/271</td>
<td>0.581</td>
<td>0.560</td>
<td>0.004</td>
</tr>
</tbody>
</table>

*Figure 1.* Mean scores for perspective taking.
Figure 2. Mean scores for fantasy.

Figure 3. Mean scores for empathetic concern
Figure 4. Mean scores for personal distress.
Table 5

Means, Standard Deviations and Standard Errors for IRI Subscales

<table>
<thead>
<tr>
<th></th>
<th>Empathetic Concern</th>
<th></th>
<th>Fantasy</th>
<th></th>
<th>Perspective Taking</th>
<th></th>
<th>Personal Distress</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M (SD)</td>
<td>M (SE)</td>
<td>M (SD)</td>
<td>M (SE)</td>
<td>M (SD)</td>
<td>M (SE)</td>
<td>M (SD)</td>
<td>M (SE)</td>
</tr>
<tr>
<td>Perpetrator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watched Video</td>
<td>3.79 (.49)</td>
<td>3.77 (.07)</td>
<td>3.50 (.61)</td>
<td>3.50 (.09)</td>
<td>3.72 (.62)</td>
<td>3.67 (.08)</td>
<td>2.70 (.72)</td>
<td>2.75 (.09)</td>
</tr>
<tr>
<td>Read Article</td>
<td>3.93 (.50)</td>
<td>3.89 (.08)</td>
<td>3.73 (.59)</td>
<td>3.69 (.10)</td>
<td>3.71 (.56)</td>
<td>3.67 (.09)</td>
<td>3.13 (.61)</td>
<td>3.12 (.10)</td>
</tr>
<tr>
<td>Victim</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watched Video</td>
<td>3.67 (.53)</td>
<td>3.70 (.08)</td>
<td>3.51 (.68)</td>
<td>3.52 (.10)</td>
<td>3.60 (.48)</td>
<td>3.63 (.09)</td>
<td>2.79 (.58)</td>
<td>2.78 (.10)</td>
</tr>
<tr>
<td>Read Article</td>
<td>3.70 (.50)</td>
<td>3.71 (.10)</td>
<td>3.64 (.52)</td>
<td>3.66 (.12)</td>
<td>3.63 (.53)</td>
<td>3.61 (.11)</td>
<td>2.90 (.67)</td>
<td>2.95 (.11)</td>
</tr>
<tr>
<td>Bystander</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watched Video</td>
<td>3.71 (.60)</td>
<td>3.73 (.07)</td>
<td>3.57 (.67)</td>
<td>3.57 (.09)</td>
<td>3.45 (.67)</td>
<td>3.50 (.08)</td>
<td>2.89 (.63)</td>
<td>2.84 (.09)</td>
</tr>
<tr>
<td>Read Article</td>
<td>3.85 (.56)</td>
<td>3.87 (.06)</td>
<td>3.49 (.69)</td>
<td>3.50 (.07)</td>
<td>3.65 (.60)</td>
<td>3.66 (.06)</td>
<td>2.84 (.67)</td>
<td>2.85 (.07)</td>
</tr>
</tbody>
</table>
**Group differences in Violence Sensitivity**

The present study also examined the differences in violence sensitivity based on the different perspectives (victim, perpetrator and bystander), and the media in which the scenario was presented (read or watched). First, a Factor Analysis was performed to see if the items of the Violence Sensitivity Scale would load on the four categories established by Collyer, et al. (2007). The items in the Factor Analysis with the sample loaded correctly in the four categories. One additional item was added to this scale, head-butt. This item was added because it was the event the participants learned about when they read the article or watched the video clip. This item loaded in the category expected, V2 (less severe physical).

Given the difference between the sexes of participants in the sample, a multivariate analysis of variance (MANOVA) was performed to investigate sex differences for the dependent variables related to violence sensitivity to determine if the following statistical analyses should be controlled for sex. The four subscales of violence sensitivity were assessed: V1, V2, V3, V4. Female participants scored higher for all four violence sensitivity categories than male participants (see Table 6). The differences between males and females for the combined dependent variables were statistically significant, \( F(4, 277) = 3.316, p = .011; \) Wilks’ \( \Lambda = .954; \) partial \( \eta^2 = .046. \) Follow-up univariate ANOVAs showed that the categories with less severe violent behaviors physical (V2) \( (F(1, 280) = 4.785, p = .030; \) partial \( \eta^2 = .017) \) and non-physical (V4) \( (F(1, 280) = 9.823, p = .002; \) partial \( \eta^2 = .034) \) were significantly different. The more severe violence sensitivity categories, more severe physical violence (V1) \( (F(1, 280) = 2.376, p = .124; \) partial \( \eta^2 = .008) \), and more severe non-
physical violence (V3) \(F(1, 280) = 1.640, p = .201; \text{partial } \eta^2 = .006\), were not significantly different. Females scored higher for less severe violent behaviors than males.

Table 6.

*Means and Standard Deviations For The Scores of Violence Sensitivity Subscales by Gender*

<table>
<thead>
<tr>
<th>Violence Sensitivity</th>
<th>Sex</th>
<th>Mean</th>
<th>SD</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1</td>
<td>Female</td>
<td>6.82</td>
<td>0.30</td>
<td>206</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>6.75</td>
<td>0.35</td>
<td>76</td>
</tr>
<tr>
<td>V2</td>
<td>Female</td>
<td>4.88</td>
<td>0.91</td>
<td>206</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>4.61</td>
<td>0.99</td>
<td>76</td>
</tr>
<tr>
<td>V3</td>
<td>Female</td>
<td>4.33</td>
<td>1.28</td>
<td>206</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>4.11</td>
<td>1.32</td>
<td>76</td>
</tr>
<tr>
<td>V4</td>
<td>Female</td>
<td>3.37</td>
<td>1.28</td>
<td>206</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>2.81</td>
<td>1.47</td>
<td>76</td>
</tr>
</tbody>
</table>

Before conducting a MANCOVA, the normality of the dependent variables was assessed. The category of Violence Sensitivity, V1, was not normally distributed, instead it was negatively skewed for all groups assessed by the Shapiro-Wilk's test \(p > .05\). This was somewhat expected given the extreme behaviors in this category. The assumption of normality for V2 was satisfied for the all group combination of perspective and media, as assessed by Shapiro-Wilk's test \(p > .05\), except for the group that read from a bystander perspective, as assessed by Shapiro-Wilk's test \(p = .009\). The assumption of normality for V3 scores was satisfied for all group combinations of perspective and media level, as assessed by Shapiro-Wilk's test \(p > .05\). For V4, similarly to V2, the normality assumptions was satisfied for all groups as assessed by Shapiro-Wilk's test \(p > .05\), except for the group that read from a bystander perspective, as assessed by Shapiro-Wilk's test \(p = .001\).
A 3 x 2 between subjects multivariate analysis of covariance (MANCOVA), as suggested by Tabachnick and Fidell (2007) was performed to determine if there were differences in the violence sensitivity categories based on the perspectives assigned and the media by which participants learned about the event. Two independent variables were used: perspective (perpetrator, victim, and bystander), and media (read news article and watched video clip.) The four categories in the Violence Sensitivity scale (V1, V2, V3, V4) were the dependent variables. Adjustment was made for two covariates: sex of participants, and social desirability scores.

SPSS MANOVA was used for the analysis with the sequential adjustment for nonorthogonality. Order of entry of the independent variables was perspective followed by media. Total N = 289 was reduced to n = 280 with the deletion of a 9 missing data. Covariates were judged to be adequately reliable for covariate analysis.

With the use of Wilk’s criterion, the combined DV’s were significantly related to the combined covariates, approximate $F(8, 538) = 2.16, p = .029$, Wilks’ $\Lambda = .939$. There was a small effect size ($\eta^2 = .03$, and CI 95% (.0, .050) between DV’s and the covariates. However, there were no significant differences for the interaction between perspective and media $F(8, 538) = .49 p = .861$, Wilks’ $\Lambda = .995$. The main effects of both independent variables were not significant: perspective ($F(8, 538) = 1.77 p = .081$, Wilks’ $\Lambda = .950$), and media ($F(4, 269) = 2.14 p = .076$, Wilks’ $\Lambda = .969$). The effect size for the interaction between perspective and media was of a partial $\eta^2 = .01$, and CI 95% (.000, .009). Effect sizes for the non-significant main effect of perspective were partial $\eta^2 = .03$, and CI 95% (.000, .042), and for the main effect of media, partial $\eta^2 = .03$, and CI 95% (.000, .068).
To further understand the effect of the independent variables in the different categories of violence sensitivity, a series of ANCOVAs were performed. Results suggested a main effect for the perspective variable for both categories of violence sensitivity for physical behaviors. For V1 \( (F(2, 275) = 4.383, p = .013, \text{partial } \eta^2 = .031) \), and V2 \( (F(2, 273) = 4.797, p = .009, \text{partial } \eta^2 = .034) \). For these two categories there was not a significant interaction between perspective and media, and no statistically significant main effect for media. The covariate sex was statistically significant for V2 \( (p = .044, \text{partial } \eta^2 = .015) \) but not for V1 \( (p = .169, \text{partial } \eta^2 = .007) \). However, the social desirability covariate was not statistically significant for V1 \( (p = .146, \text{partial } \eta^2 = .008) \) and V2 \( (p = .425, \text{partial } \eta^2 = .002) \).

Results suggested a significant main effect for the media assigned for non-physical behaviors: V3 \( (F(1, 276) = 8.867, p = .003, \text{partial } \eta^2 = .031) \), and V4 \( (F(1, 276) = 6.744, p = .010, \text{partial } \eta^2 = .024) \). For these two categories there was no significant interaction between perspective and media, and no significant main effect for perspective. The covariate sex was not statistically significant for V3 \( (p = .274, \text{partial } \eta^2 = .005) \), but statistically significant for V4 \( (p = .002, \text{partial } \eta^2 = .033) \). However, the social desirability covariate was significant for V3 \( (p = .012, \text{partial } \eta^2 = .012) \), but not significant for V4 \( (p = .311, \text{partial } \eta^2 = .004) \). For both categories, V3 and V4, participants who read the article were more sensitive to nonphysical violence than participants who watched the clip of the scenario.

Thus, these results suggest that both independent variables have different effects in different categories of violence sensitivity, especially in their physical and nonphysical distinction. The independent variable perspective showed an effect in V1.
and V2. This indicates a difference in violence sensitivity depending on the perspectives participants were randomly assigned to, but only for physical violence. However the independent variable media had an effect in non-physical behaviors, V3 and V4 (more severe non-physical, and less severe non-physical). This indicates that participants are more sensitive to non-physical violent behaviors when they read the article instead of watching the video clip.

There were similar patterns in the means of the four categories of violence sensitivity, although not significant. One of the patterns is that participants in the bystander perspective scored lower for all four violence sensitivity categories, and participants in the victim perspective scored higher in all four violence sensitivity categories regardless of the media by which they learned about the scenario. Another pattern, similar to the IRI was that participants who learned about the scenario by reading scored higher in the four categories of violence sensitivity (Table 7, and Figures 5-8).

![Figure 5. Mean Scores for V1.](image)
Figure 6. Mean scores for V2.

Figure 7. Mean scores for V3.
A total score for the Violence Sensitivity scale was obtained by averaging across the 4 categories. A 3 x 2 between groups analysis of covariance (ANCOVA) was performed to determine if there was a difference in violence sensitivity total based on the perspective and media assigned to the groups. The independent variables were the perspective into which the participants were asked to “put themselves” (perpetrator, bystander and victim), and the media by which they learned about the event (read news article, or watched video clip). The dependent variable was the overall violence sensitivity score, and social desirability and sex were the covariates.

After adjusting for social desirability and the sex of participants, results showed no significant interaction effect between perspective and media ($F(2, 272) = .509, p = .602, \text{partial } \eta^2 = .004$). However, results showed significant main effects for both, perspective ($F(2, 272) = 4.286, p = .015, \text{partial } \eta^2 = .031$) and media ($F(1, 272) = 8.373, p = .004, \text{partial } \eta^2 = .030$). Participants who read the news article were more violence sensitive, rating the behaviors as more violent than participants who watched
the video. Results also suggest there is a difference in how severe participants rated violent behaviors based on the perspective assigned. Participants in the bystanders’ perspective rated violent behaviors lower than participants in the victim and perpetrator perspectives. Interestingly, the biggest difference, as seen in Figure 9 is between the victim perspective, with participants reading the article rating the violent behaviors as more violent ($M = 5.18, SE = .15$) and participants who watched the video clip ($M = 4.88, SE = .13$.) Similarly to the previous analysis of the violence severity categories participants who read the article scored higher in violence sensitivity.

![Violence Total](image)

*Figure 9. Mean score for violence sensitivity total.*
Table 7

Means, Standard Deviations and Standard Errors for Violence Sensitivity by Groups

<table>
<thead>
<tr>
<th></th>
<th>V1 (M, SD)</th>
<th>V2 (M, SE)</th>
<th>V3 (M, SD)</th>
<th>V4 (M, SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perpetrators</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watched Video</td>
<td>6.87 (.19)</td>
<td>6.86 (.004)</td>
<td>4.83 (.88)</td>
<td>4.23 (1.26)</td>
</tr>
<tr>
<td>Read Article</td>
<td>6.86 (.20)</td>
<td>6.86 (.20)</td>
<td>5.01 (.93)</td>
<td>4.59 (1.13)</td>
</tr>
<tr>
<td><strong>Victim</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watched Video</td>
<td>6.80 (.29)</td>
<td>6.81 (.500)</td>
<td>4.89 (.79)</td>
<td>4.04 (1.52)</td>
</tr>
<tr>
<td>Read Article</td>
<td>6.88 (.27)</td>
<td>6.89 (.058)</td>
<td>5.11 (.99)</td>
<td>4.79 (1.30)</td>
</tr>
<tr>
<td><strong>Bystander</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watched Video</td>
<td>6.71 (.40)</td>
<td>6.72 (.043)</td>
<td>4.49 (.87)</td>
<td>3.91 (1.08)</td>
</tr>
<tr>
<td>Read Article</td>
<td>6.76 (.36)</td>
<td>6.77 (.035)</td>
<td>4.71 (.95)</td>
<td>4.29 (1.33)</td>
</tr>
</tbody>
</table>
Relationship between Empathy and Violence Sensitivity

Finally, this research study aimed to understand the relationship between the subscales of empathy and violence sensitivity, and whether this relationship changed depending on the independent variables. It was hypothesized that a positive correlation would exist between empathy and violence sensitivity. In other words, the higher participants scored in the IRI, the higher they would score in the violence sensitivity scale; the more empathetic people are, the more sensitive to violence they would be.

A Pearson's product-moment correlation was run to assess the relationship between empathy and violence sensitivity. Preliminary analyses showed the relationship to be linear with both variables normally distributed, as assessed by Shapiro-Wilk's test ($p > .05$), and there were no outliers. There was a significant Pearson correlation between the Total Empathy and Violence Sensitivity Total ($r = .198$, $p = .001$), but there were no significant correlations between Total Empathy and Violence Sensitivity Total per groups (see Table 8, and Figures10-16)

Table 8

<table>
<thead>
<tr>
<th>Groups</th>
<th>$r$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>0.198</td>
<td>0.001</td>
</tr>
<tr>
<td>Perpetrator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watched Video</td>
<td>0.132</td>
<td>0.373</td>
</tr>
<tr>
<td>Read Article</td>
<td>0.180</td>
<td>0.286</td>
</tr>
<tr>
<td>Victim</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watched Video</td>
<td>0.306</td>
<td>0.187</td>
</tr>
<tr>
<td>Read Article</td>
<td>0.207</td>
<td>0.286</td>
</tr>
<tr>
<td>Bystander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watched Video</td>
<td>0.196</td>
<td>0.055</td>
</tr>
<tr>
<td>Read Article</td>
<td>0.128</td>
<td>0.309</td>
</tr>
</tbody>
</table>
Figure 10. Scatterplot overall correlation between empathy and violence sensitivity.

Figure 11. Scatterplot correlation between empathy and violence sensitivity for perpetrator and video group.
Figure 12. Scatterplot correlation between empathy and violence sensitivity for perpetrator and read article group.

Figure 13. Scatterplot correlation between empathy and violence sensitivity for bystander and video group.
Figure 14. Scatterplot correlation between empathy and violence sensitivity for bystander and read article group.

Figure 15. Scatterplot correlation between empathy and violence sensitivity for victim and video group.
There were only two significant correlations within the categories of empathy and violence sensitivity. The only group who showed significant correlation was the group of participants who were in victim perspective and read the article about the scenario. There was a moderate positive correlation between Empathetic Concern and V4, \( r(22) = .419, p = .033 \), with scores of empathetic concern explaining 18% of the variation in violence sensitivity for less severe nonphysical violent behaviors. There also was a moderate positive correlation between Perspective Taking and V3, \( r(23) = .384, p = .048 \), with scores of Perspective Taking explaining 15% of the variation in violence sensitivity for less severe physical violent behaviors. However, after adjusting for sex and social desirability these correlations were no longer statistically significant \( (r(20) = .356, p = .088; r(21) = .296, p = .151 \), respectively.)

Partial correlations were performed controlling for sex and social desirability. All assumptions were met to perform a Pearson’s correlation. As can be seen in Table

---

*Figure 16. Scatterplot Correlation Between Empathy and Violence Sensitivity for Victim and Read Article Group.*
9, there were no significant correlations between the empathy subscales (Empathetic Concern, Fantasy, Personal Distress, and Perspective taking) and the Violence Sensitivity categories (V1, V2, V3, V4, and VS Total) for any of the six groups based on the two independent variables (Perspective and Media: Perpetrator-Read, Perpetrator-Watched, Bystander- Read, Bystander-Watched, Victim-Read, Victim-Watched). Results showed that after adjusting for sex and social desirability, the correlations between empathy and violence sensitivity remained not significantly different based on the perspective and media assigned to the participants.
Table 9

*Correlations Between IRI Subscales and Violence Sensitivity Categories Per Group, Adjusted for Sex and Social Desirability*

<table>
<thead>
<tr>
<th>Perpetrator</th>
<th>Empathetic Concern</th>
<th>Fantasy</th>
<th>Perspective Taking</th>
<th>Personal Distress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watched Video</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V1</td>
<td>0.102</td>
<td>0.107</td>
<td>0.069</td>
<td>0.029</td>
</tr>
<tr>
<td>V2</td>
<td>0.146</td>
<td>-0.184</td>
<td>-0.062</td>
<td>0.191</td>
</tr>
<tr>
<td>V3</td>
<td>0.020</td>
<td>-0.083</td>
<td>-0.011</td>
<td>0.112</td>
</tr>
<tr>
<td>V4</td>
<td>0.159</td>
<td>-0.079</td>
<td>-0.053</td>
<td>0.212</td>
</tr>
<tr>
<td>VT</td>
<td>0.124</td>
<td>-0.118</td>
<td>-0.040</td>
<td>0.194</td>
</tr>
<tr>
<td>Read Article</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V1</td>
<td>0.262</td>
<td>-0.265</td>
<td>0.241</td>
<td>0.126</td>
</tr>
<tr>
<td>V2</td>
<td>0.032</td>
<td>-0.066</td>
<td>-0.095</td>
<td>0.120</td>
</tr>
<tr>
<td>V3</td>
<td>0.089</td>
<td>0.038</td>
<td>0.123</td>
<td>0.249</td>
</tr>
<tr>
<td>V4</td>
<td>0.141</td>
<td>-0.003</td>
<td>0.118</td>
<td>0.113</td>
</tr>
<tr>
<td>VT</td>
<td>0.127</td>
<td>-0.018</td>
<td>0.091</td>
<td>0.194</td>
</tr>
<tr>
<td>Bystander</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watched Video</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V1</td>
<td>0.237</td>
<td>0.148</td>
<td>0.083</td>
<td>0.021</td>
</tr>
<tr>
<td>V2</td>
<td>-0.014</td>
<td>-0.137</td>
<td>0.117</td>
<td>0.178</td>
</tr>
<tr>
<td>V3</td>
<td>0.110</td>
<td>0.176</td>
<td>-0.093</td>
<td>-0.008</td>
</tr>
<tr>
<td>V4</td>
<td>0.193</td>
<td>0.132</td>
<td>0.148</td>
<td>0.042</td>
</tr>
<tr>
<td>VT</td>
<td>0.124</td>
<td>0.094</td>
<td>0.123</td>
<td>-0.011</td>
</tr>
<tr>
<td>Read Article</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V1</td>
<td>-0.058</td>
<td>-0.037</td>
<td>-0.082</td>
<td>0.116</td>
</tr>
<tr>
<td>V2</td>
<td>-0.168</td>
<td>-0.049</td>
<td>0.033</td>
<td>0.207</td>
</tr>
<tr>
<td>V3</td>
<td>0.059</td>
<td>-0.032</td>
<td>0.034</td>
<td>0.182</td>
</tr>
<tr>
<td>V4</td>
<td>0.046</td>
<td>0.000</td>
<td>0.089</td>
<td>0.177</td>
</tr>
<tr>
<td>VT</td>
<td>-0.014</td>
<td>-0.032</td>
<td>0.049</td>
<td>0.217</td>
</tr>
<tr>
<td>Victim</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watched Video</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V1</td>
<td>-0.063</td>
<td>0.131</td>
<td>-0.145</td>
<td>0.021</td>
</tr>
<tr>
<td>V2</td>
<td>0.216</td>
<td>0.151</td>
<td>0.053</td>
<td>0.116</td>
</tr>
<tr>
<td>V3</td>
<td>0.173</td>
<td>0.182</td>
<td>-0.019</td>
<td>0.227</td>
</tr>
<tr>
<td>V4</td>
<td>0.186</td>
<td>0.283</td>
<td>0.166</td>
<td>0.221</td>
</tr>
<tr>
<td>VT</td>
<td>0.193</td>
<td>0.239</td>
<td>0.061</td>
<td>0.214</td>
</tr>
<tr>
<td>Read Article</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V1</td>
<td>-0.212</td>
<td>0.211</td>
<td>-0.005</td>
<td>0.177</td>
</tr>
<tr>
<td>V2</td>
<td>0.241</td>
<td>0.232</td>
<td>0.296</td>
<td>0.188</td>
</tr>
<tr>
<td>V3</td>
<td>0.073</td>
<td>-0.030</td>
<td>-0.094</td>
<td>0.372</td>
</tr>
<tr>
<td>V4</td>
<td>0.356</td>
<td>0.212</td>
<td>0.293</td>
<td>0.197</td>
</tr>
<tr>
<td>VT</td>
<td>0.231</td>
<td>0.164</td>
<td>0.179</td>
<td>0.273</td>
</tr>
</tbody>
</table>
CHAPTER 4

DISCUSSION

To gain a better understanding of different perspectives in the interpretation of a violent event was one of the purposes of the current research. Previous research has been done to understand the differences between the roles of the actors (Baumeister, 1996; Baumeister, Stillwell, & Wotman, 1990; Kowalski, 2000; Stillwell & Baumeister, 1997), but not as much for the role of the observers (Jones & Nisbett, 1972; Nadelhoffer & Feltz, 2008). Two different media methods were used to present information about the event, so that differences in word usage, empathy, and violence sensitivity could be analyzed, based on the difference in presentation, and perspectives.

Previous research has suggested the importance of writing to promote better health (Pennebaker, 1993; Pennebaker, Mayne, & Francis, 1997), as well as the differences between words used by people of higher and lower status (Pennebaker, 2011). People of different statuses and different perspectives use different words, specifically when it comes to their own experiences (Kowalski, 2000). Having a better and more complete understanding of the differences between the perspectives and the variations in the way the event is interpreted and understood could help reduce and prevent conflict. Though there is a basic understanding of the differences between victim and perpetrator word usage, there is a lack of research on the words bystanders use and how their word usage compares to the words used by actors (victims and
perpetrators). Having a better understanding of the words bystanders use could help understand how bystanders perceive conflict. This information can help shed light on bystander intervention programs.

The final focus of this research was to better understand the traits of empathy and violence sensitivity and how these traits reflect the perspectives and media to which participants were randomly assigned. In sum, the purpose of the present study was to learn more about the specific differences in interpretation and perception of the same event based on the perspective provided, and the media through which the event was presented.

**Summary of Results**

In the current research, it was hypothesized that participants would use certain categories of words based on the perspective to which they were assigned. Participants randomly assigned to the perpetrator perspective were expected to use words similar to those used by people in higher statuses, but results suggested that was not always the case. The categories analyzed included negative emotion, anger, and personal pronouns. Participants in the victim and perpetrator perspectives used words of negative emotion, and anger at similar rates, and participants in the bystander perspective used these word categories at lower rates. For the personal pronoun category, each group was significantly different from the other; bystanders used these words at a lower rate, followed by the victim perspective, and the perpetrator perspective used these words at the highest rates.

The words used by the participants assigned to the victim perspective were expected to be consistent with words used by people in a lower-status position, as
suggested by Pennebaker (2011). The categories analyzed were first person singular pronouns, past focus, affective process, cognitive process, insight and causation. The category of first person pronouns did not reflect the anticipated results; instead participants in the perpetrator perspective used these words more than participants in the victim perspective, and bystanders used these words less than the other two perspectives.

For the category of cognitive process, participants in the bystander perspective used these words at a higher rate than participants in the victim and perpetrator perspectives, with these two perspectives using them at a similar rate, and participants in the victim perspective using them at a lower rate (although not significantly). For the category of affective process, participants in the victim category used these words at higher rates than bystanders, however participants in the victim category used these words at a similar rate to participants in the perpetrator perspective. Results suggest that for affective process and cognitive process participants assigned to the bystander perspective used these words at different rates than participants in the victim and perpetrator perspective. Participants in the victim and perpetrator perspective used these word categories at similar rates.

In the scenario presented to the participants, both perspectives learned about the same violent event. The victim got head-butted and as a result, the perpetrator got ejected from the soccer match. This might explain why there are not clear differences in the use of words between the victim and perpetrator perspective, and why for the most part these two perspectives used these words at similar rates. The perpetrators faced ejection from the match after his action, and the victim was physically hurt; both
perspectives had a negative experience in their own way. The assigned victim perspective might believe he is the “victim”, but the perpetrator perspective could feel that he is also the “victim” in this scenario. He might believe that he was provoked, and that being ejected from the game was an overreaction on the referee’s part.

Another possible explanation for the lack of difference between participants in the victim and perpetrator perspectives could be because both perspectives experienced something negative, thus placing them on equal grounds.

A pattern in the results showed that participants in the bystander perspective used words for the categories affective process, negative emotion and anger less than the other two perspectives. Participants in the bystander perspective used the words in the cognitive process word category more often than the other two perspectives. Because bystanders were retelling a story where they were the observers and not the actors, it is logical they would use first person pronouns, negative emotion and anger words less, as they were not in the position of experiencing something negative.

This study also aimed to understand the participants’ responses and the words used based on the media by which the scenario was presented. The same categories were analyzed and there were no differences between the two groups for most of the word categories (third person singular, past, present, future focus, affective process, anger, cognitive process, insight, and causation), suggesting that regardless of the way in which the scenario was presented to participants, words were used at similar rates. However, results showed that word categories of all person pronouns, first person pronouns, and negative emotion were used at different rates. Participants who watched
the video used more words in all of these categories, than participants who read the article.

With regard to empathy and violence sensitivity, hypotheses were not fully supported. The MANCOVA model that tested the outcome of empathy and controlled for social desirability and sex of the participants, did not suggest an interaction or main effect for media and perspective. Regardless of the perspective and the media, there was no difference in the scores of the participants on all four subscales of empathy. The MANCOVA model that tested the outcome of violence sensitivity did not suggest an interaction between media and perspective, or main effect for media and perspective either. Despite participant perspective and provided media, there was no difference in scores across all four categories of violence sensitivity. However, when separate ANCOVAS were performed controlling for the sex and social desirability, results suggested significant main effects for media and perspective.

ANCOVAS were performed for each individual independent variable to better understand the four subscales of empathy. Results suggested that participants who read the news article scored higher in personal distress than participants who watched the video clip. Thus, participants who read the story felt more distress than participants who watched the video. Although results were not statistically significant, participants who read the news article scored higher in the other IRI subscales as well. This pattern shows that participants in this study might get more emotionally invested when they read, and perhaps are recreating the event in their minds. This result aligns with Johnson, Cushman, Borden, and McCune (2013), who suggest that individuals who
read create imagery, are more empathetic toward characters in the story, and are more likely to help, thus showing an increase in prosocial behaviors.

The results of the ANCOVA analyzing violence sensitivity showed differences between perspectives for V1 and V2 (the physical violence categories). Participants assigned to the bystander perspective were less violence sensitive for V1 and V2, than the perpetrators and victims. However, for V3 and V4 (non-physical violence) there were significant differences for the media. Participants who read about the scenario were more violence sensitive to nonphysical behaviors.

Results also showed a pattern, though a non-significant one, that participants assigned to the victim perspective were more violence sensitive than participants assigned to the bystander and perpetrator perspective. These results were similar for three of the four categories of violence severity (V2 - less severe physical, V3 - more severe nonphysical and V4 - less severe non-physical). There was no difference between the victim and perpetrator perspectives assigned for the V1 category (more severe physical); however participants in the bystander perspective were less violence sensitive to V1. This could be due to the severity of behaviors in this category. To further analyze violence sensitivity, the violence sensitivity total score was obtained. Similarly to previous results, participants who read the news article rated the violent behaviors as more severe than participants who watched the video, and participants in the bystander perspective rated the behaviors as less severe than participants in the other perspectives.

Finally, the correlation between empathy and violence sensitivity was analyzed (controlling for social desirability and sex of participants). It was expected that a
positive correlation would exist between empathy and violence sensitivity. This hypothesis was supported upon finding a significant positive correlation between the empathy total and the violence sensitivity total. However, there were no significant correlations between the empathy total and the violence sensitivity total for any of the six groups. There were also no significant correlations between any of the IRI empathy subscales and violence sensitivity categories for any of the groups. A possible reason why results did not show differences between groups could be because of the small n size.

Limitations

The results obtained in this study were not as anticipated, nevertheless there were some unexpected significant results. However, these findings must be interpreted with the understanding of some specific limitations. One limitation of the study could have been the measures used, in particular the IRI (Davis, 1980) The factor analysis performed for the IRI, showed items that did not load as anticipated; for these analyses, the model by Davis (1980, 1983) was followed. The lack of a good fit in the model could also have had an effect on the results. The measures, specifically the Davis (1980) IRI, might not have been the most appropriate.

Another possible limitation to this study could have been the story presented to the participants. Even though it was a violent event, it was not an exceedingly violent event. Participants who are used to seeing violence on TV shows are likely to have seen far worse violence than what was presented in this study. It is possible that participants are desensitized to this more mild type of violence. As mentioned before, the perpetrator in the scenario experienced a negative consequence for his actions, the
ejection from the game. This could have led some participants to perceive this as if they were the victims because they experienced some kind of injustice or suffering in the event. These participants may have seen themselves as equal to those in the victim perspective. The lack of a controlled environment for participants also served as a limitation. Because participants completed the survey at their convenience, they could have been primed to be less empathetic and less violence sensitive if for example, they were watching a violent TV show at the same time that they were completing the survey. Another limitation is the homogeneity of the participants. For the most part participants were female, Caucasian, Catholic and/or Christian. This does not allow much generalization to other populations.

**Future Directions**

When analyzing the perspectives of victim and perpetrator, Kowalski (2000), Baumeister, Stillwell, and Wotman (1990), and Stillwell and Baumeister (1997) had the participants retell their own stories of their experiences when they were in the positions of victim and perpetrator. Future studies that analyze violence sensitivity and empathy could benefit from having the participants recall their own experiences for all three perspectives. A similar study could also be done in a laboratory setting; that way the environment of the participants could be more uniform. The lack of fit of the IRI could suggest that a revision of the Davis (1980) scale should be performed in the future, so that items could become more relevant to contemporary issues.

An exploratory analysis was performed to determine if the words used by bystanders were consistent with higher-status positions or lower-status positions. There is not much research on the words used by bystanders. Future studies could
emphasize researching the words that bystanders use, and research whether the words bystanders use could be indicative of action and intervention on their part. For example, are bystanders more likely to intervene in a conflict if they use words related to higher status? The bystander perspective could be expanded to further study bystander intervention. Having a better understanding of the bystander perspective could help with the development of interventions and conflict resolution programs.

Conclusions

By learning how different perspectives perceive a conflict, violence could potentially be reduced by limiting its escalation, by creating awareness in a situation and knowing how the other person in a conflict thinks and could act. In the case of the bystander, this person could intervene in a manner that is safe and be that ‘thirsdider’ that Ury (1999) referred. Here is when the understanding of the situation, and of the other person comes into play. In the case of an actor, to know how your opponent is possibly thinking can help in finding common ground, where both sides can reach a resolution.

The results of this study did not suggest that the bystanders were more empathetic or violence sensitive than the actors (victims and perpetrators). This can be a future focus for interventions, to create more empathy and more understanding. Possibly, more empathy towards the actors and knowledge on how to safely intervene, would lead bystanders to help more. For the most part, victims and perpetrators were similarly empathetic and violence sensitive. Empathy could potentially help to avoid violence through understanding the perspective of the other person and trying to find a middle ground. Even though the results were not as expected, this research provides a
further understanding of the differences between perspectives, and the relationship between violence sensitivity and empathy. This knowledge can be applied to violence prevention efforts.
APPENDIX A

News Article

At the 2006 World Cup Championship Game, Zinedine Zidane, the attacking midfielder of the French team, “rammed his head into the chest” (Moore, 2006) of the opposing Italian player, Marco Materazzi, in the final minutes of the World Cup championship game (Moore, 2006).

The game was broadcast on television, and it showed the incident. It all began when Materazzi a player from the Italian team, pulled Zidane’s jersey. After Materazzi lets go of Zidane’s jersey, both players exchanged some words. Zidane runs past Materazzi a few meters, while they keep exchanging words, and then runs back towards him and rams his head on his chest; making the Italian player, Materazzi, fall to the ground. Following the incident, the referee gave Zidane a red card, which got him sent off the match in the 110th minute of his last game before he retired (Moore, 2006; Pugmire, 2006).

“Zidane had no compliments for Materazzi. "I know that my act is unforgivable," Zidane said in an interview. "I'm just saying that the real culprit should be punished. And the culprit is the one who provokes" (Moore, 2006).

Video Clip

Video Internet Link: https://www.youtube.com/watch?v=zAjWi663kXc
APPENDIX B

Instructions

Instructions for the News Article:

Perpetrator Perspective

In order to complete study we ask that you separate a time block of thirty minutes to complete the study.

Please take a moment to read the news article below, and imagine you are in the position or in the shoes of Zinedine Zidane.

Please take a moment to recall and visualize the story you just read, and try to identify with Zinedine Zidane, before reading it once more.

Finally, please take a moment to recall and visualize the story you just read before answering the following questions. While you recall the story you just read try to imagine how would you think and feel if you were in the position of Zinedine Zidane. Try to recall as many details as possible of the information presented; visualize how you would think, and feel, if you stood in the shoes of that person.

Victim Perspective

In order to complete study we ask that you separate a time block of thirty minutes to complete the study.

Please take a moment to read the news article below, and imagine you are in the position or in the shoes of Marco Materazzi.
Please take a moment to recall and visualize the story you just read, and try to identify with Marco Materazzi before reading it once more.

Finally, please take a moment to recall and visualize the story you just read before answering the following questions. While you recall the story you just read try to imagine how would you think and feel if you were in the position of Marco Materazzi. Try to recall as many details as possible of the information presented; visualize how you would think, and feel, if you stood in the shoes of that person.

Bystander Perspective

In order to complete study we ask that you separate a time block of thirty minutes to complete the study.

Please take a moment to read the news article below, and imagine you are in the position or in the shoes of the person filming the video.

Please take a moment to recall and visualize the story you just read, and try to identify with the person filming the video, before reading it once more.

Finally, please take a moment to recall and visualize the story you just read before answering the following questions. While you recall the story you just read try to imagine how would you think and feel if you were in the position of the person filming the video. Try to recall as many details as possible of the information presented; visualize how you would think, and feel, if you stood in the shoes of that person.

Instructions for the Video Clip:

Perpetrator Perspective
In order to complete study we ask that you separate a time block of thirty minutes to complete the study.

Please take a moment to watch the following video clip, and imagine you are in the position or in the shoes of the Zinedine Zidane (the player from the French team wearing the white jersey with the number 10).

Please take a moment to recall and visualize the clip you just watched, and try to identify with Zinedine Zidane (the player from the French team wearing the white jersey with the number 10) before reading it once more.

Finally, please take a moment to recall and visualize the clip you just watched before answering the following questions. While you recall the clip you just watched, try to imagine how would you think and feel if you were in the position of Zinedine Zidane (the player from the French team wearing the white jersey with the number 10). Try to recall as many details as possible of the information presented; visualize how you would think, and feel, if you stood in the shoes of that person.

Victim Perspective

In order to complete study we ask that you separate a time block of thirty minutes to complete the study.

Please take a moment to watch the following video clip, and imagine you are in the position or in the shoes of Marco Materazzi (the player from the Italian team wearing the blue jersey with the number 23).

Please take a moment to recall and visualize the clip you just watched, and try to identify with Marco Materazzi (the player from the Italian team wearing the blue jersey with the number 23) before reading it once more.
Finally, please take a moment to recall and visualize the clip you just watched before answering the following questions. While you recall the clip you just watched, try to imagine how would you think and feel if you were in the position of Marco Materazzi (the player from the Italian team wearing the blue jersey with the number 23). Try to recall as many details as possible of the information presented; visualize how you would think, and feel, if you stood in the shoes of that person.

Bystander Perspective

In order to complete study we ask that you separate a time block of thirty minutes to complete the study.

Please take a moment to watch the following video clip, and imagine you are in the position or in the shoes of the person filming the video.

Please take a moment to recall and visualize the clip you just watched, and try to identify with the person filming the video before reading it once more.

Finally, please take a moment to recall and visualize the clip you just watched before answering the following questions. While you recall the clip you just watched, try to imagine how would you think and feel if you were in the position of the person filming the video. Try to recall as many details as possible of the information presented; visualize how you would think, and feel, if you stood in the shoes of that person.

Instruments/ Questionnaire

I. Demographics
   1. Age
   2. Gender
3. Race
4. Major
5. Religion
6. Do you play contact/competitive sports (i.e., football, soccer, basketball, rugby, lacrosse, boxing, hockey, etc.)?
7. Political Affiliation

II. Questions about the video watched/news article read:

1. What events led to the fight? (All Perspectives)
2. What did the other player said or did that was hurtful to you? (Victim and Perpetrator Perspectives)
3. What did Zinedine Zidane (the French player who headbutted the other player) say or do that was hurtful? (Bystander Perspective)
4. What did Marco Materazzi (the Italian player who was headbutted) say or do that was hurtful? (Bystander Perspective)
5. Please describe your thoughts and feelings just prior to the event. (Please be as thorough as possible and use complete sentences.) (All Perspectives)
6. Please describe your thoughts and feelings at the moment of the event. (Please be as thorough as possible and use complete sentences.) (All Perspectives)
7. Please describe your thoughts and feelings after the event. (Please be as thorough as possible and use complete sentences.) (All Perspectives)
8. Do you expect any disciplinary actions to take place for the person you were in the "shoes of"? (Victim and Perpetrator Perspectives)
   a. What are some of the consequences you expect will take place?
b. Please explain why not.

9. Do you expect any disciplinary action to take place for the other person involved in the incident? *(Victim and Perpetrator Perspectives)*
   a. What are some of the consequences you expect will take place?
   b. Please explain why not.

10. Do you expect any disciplinary action to take place for Zinedine Zidane (the French player who headbutted the other player)? *(Bystander Perspective)*
    a. What are some of the consequences you expect will take place?
    b. Please explain why not.

11. Do you expect any disciplinary action to take place for Marco Materazzi (the Italian player who was headbutted)? *(Bystander Perspective)*
    a. What are some of the consequences you expect will take place?
    b. Please explain why not.

III. Interpersonal Reactivity Index (IRI) (Davis, 1980)

On a scale from 1 (does not describe me) to 5 (describes me), please rate the following statements

1. I daydream and fantasize, with some regularity, about things that might happen to me.

2. I often have tender, concerned feelings for people less fortunate than me.

3. I sometimes find it difficult to see things from the “other guy’s” point of view.

4. Sometimes I don’t feel sorry for other people when they are having problems.

5. I really get involved with the feelings of the characters in a novel.

6. In emergency situations, I feel apprehensive and ill-at-ease.
7. I am usually objective when I watch a movie or play, and I don’t often get completely caught up in it.

8. I try to look at everybody’s side of a disagreement before I make a decision.

9. When I see someone being taken advantage of, I feel kind of protective toward them.

10. I sometimes feel helpless when I am in the middle of a very emotional situation.

11. I sometimes try to understand my friends better by imagining how things look from their perspective.

12. Becoming extremely involved in a good book or movie is somewhat rare for me.

13. When I see someone get hurt, I tend to remain calm.

14. Other people’s misfortunes do not usually disturb me a great deal.

15. If I’m sure I’m right about something, I don’t waste much time listening to other people’s arguments.

16. After seeing a play or movie, I have felt as though I were one of the characters.

17. Being in a tense emotional situation scares me.

18. When I see someone being treated unfairly, I sometimes don’t feel very much pity for them.

19. I am usually pretty effective in dealing with emergency.

20. I am often quite touched by things that I see happen.

21. I believe that there are two sides to every question and try to look at them both.

22. I would describe myself as a pretty soft-hearted person.
23. When I watch a good movie, I can very easily put myself in the place of a leading character.

24. I tend to lose control during emergencies.

25. When I’m upset at someone, I usually try to “put myself in his shoes” for a while.

26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.

27. When I see someone who badly needs help in an emergency, I go to pieces.

28. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

IV. Adopting perspectives

On a scale from 1(strongly disagree) to 5 (strongly agree), please rate the following statements as they apply to you.

1. It was very difficult for me to adopt the instructed perspective.

2. I did not have any difficulty adopting the instructed perspective.

3. It was very easy for me to adopt the instructed perspective.

V. Violence Sensitivity Scale (Collyer et al., 2007)

On a scale from 1(not violent at all) to 7 (extremely violent), please rate the following behaviors.

1. The incident you just learnt about.

2. Pushing

3. Murder
4. Shooting
5. Stealing
6. Slapping
7. Cursing
8. Kidnapping
9. Vandalism
10. Sabotage
11. Stabbing
12. Gossip
13. Rudeness
14. Manipulation
15. Fighting
16. Hitting
17. Screaming

VI. Marlowe-Crowne Social Desirability Scale (Reynolds, 1982)

On a scale from 1 (strongly disagree) to 5 (strongly agree), please rate the following statements as they apply to you:

1. It is sometimes hard for me to go on with my work if I am not encouraged.
2. I often times feel resentful when I don’t get my way.
3. On a few occasions, I have given up doing something because I though too little of my ability.
4. There have been times when I felt like rebelling against people in authority even though I knew they were right.
5. No matter who I’m talking to, I’m always a good listener.

6. There have been occasions when I took advantage of someone.

7. I’m always willing to admit when I make a mistake.

8. I sometimes try to get even rather than forgive and forget.

9. I am always courteous, even to people who are disagreeable.

10. I have never been irked when people expressed ideas very different from my own.

11. There have been times when I was quite jealous of the good fortune of others.

12. I am sometimes irritated by people who ask favors of me.

13. I have never deliberately said something that hurt someone’s feelings.
Figure 1A. PCA Screeplot of the IRI
Table 1A

Patterns of Structure Matrix for PCA with Oblimin Rotation of Five-Factor Solutions of Empathy (IRI) Item

<table>
<thead>
<tr>
<th>Item #</th>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
<th>Component 4</th>
<th>Component 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>0.767</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>0.721</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>0.684</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>0.682</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>0.639</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0.439</td>
<td>0.386</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>0.391</td>
<td>0.304</td>
<td></td>
<td></td>
<td>0.305</td>
</tr>
<tr>
<td>24</td>
<td></td>
<td>0.792</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td></td>
<td>0.763</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>0.707</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td></td>
<td>0.701</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>0.606</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td>0.743</td>
<td></td>
<td>-0.366</td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
<td>0.702</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td>0.387</td>
<td>0.605</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td>0.509</td>
<td>-0.506</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td>0.486</td>
<td>-0.471</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0.356</td>
<td></td>
<td>0.479</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td></td>
<td>0.302</td>
<td></td>
<td>0.355</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td>-0.815</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>-0.75</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td></td>
<td></td>
<td></td>
<td>-0.736</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td>-0.731</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.626</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.615</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td>0.309</td>
<td></td>
<td>-0.544</td>
</tr>
<tr>
<td>2</td>
<td>0.325</td>
<td>0.367</td>
<td></td>
<td></td>
<td>-0.480</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.302</td>
</tr>
</tbody>
</table>
Table 1A

*Patterns of Structure Matrix for PCA with Oblimin Rotation of Five-Factor Solutions of Empathy (IRI) Item (Continuation)*

<table>
<thead>
<tr>
<th>Item #</th>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
<th>Component 4</th>
<th>Component 5</th>
<th>Communalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>0.733</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.599</td>
</tr>
<tr>
<td>28</td>
<td>0.725</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.548</td>
</tr>
<tr>
<td>8</td>
<td>0.685</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.498</td>
</tr>
<tr>
<td>21</td>
<td>0.725</td>
<td></td>
<td></td>
<td>-0.340</td>
<td>0.563</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>0.688</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.546</td>
</tr>
<tr>
<td>3</td>
<td>0.450</td>
<td>0.448</td>
<td></td>
<td></td>
<td></td>
<td>0.470</td>
</tr>
<tr>
<td>15</td>
<td>0.405</td>
<td>0.385</td>
<td></td>
<td></td>
<td></td>
<td>0.358</td>
</tr>
<tr>
<td>24</td>
<td>0.805</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.674</td>
</tr>
<tr>
<td>19</td>
<td>0.700</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.624</td>
</tr>
<tr>
<td>6</td>
<td>0.735</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.566</td>
</tr>
<tr>
<td>27</td>
<td>0.716</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.570</td>
</tr>
<tr>
<td>17</td>
<td>0.678</td>
<td></td>
<td></td>
<td>-0.463</td>
<td>0.589</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td>0.753</td>
<td></td>
<td>0.574</td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td>0.694</td>
<td></td>
<td>0.576</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td>0.390</td>
<td>0.535</td>
<td></td>
<td>0.531</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td>0.571</td>
<td>-0.485</td>
<td></td>
<td>0.635</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td>0.517</td>
<td>-0.458</td>
<td></td>
<td>0.518</td>
</tr>
<tr>
<td>4</td>
<td>0.385</td>
<td></td>
<td></td>
<td>0.528</td>
<td></td>
<td>0.430</td>
</tr>
<tr>
<td>22</td>
<td>0.387</td>
<td>0.325</td>
<td>0.413</td>
<td>-0.339</td>
<td></td>
<td>0.451</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td>-0.796</td>
<td></td>
<td>0.672</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>-0.761</td>
<td></td>
<td>0.582</td>
</tr>
<tr>
<td>23</td>
<td></td>
<td></td>
<td></td>
<td>-0.768</td>
<td></td>
<td>0.617</td>
</tr>
<tr>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td>-0.761</td>
<td></td>
<td>0.605</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>-0.675</td>
<td></td>
<td>0.484</td>
</tr>
<tr>
<td>9</td>
<td>0.326</td>
<td></td>
<td></td>
<td>-0.615</td>
<td></td>
<td>0.479</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>0.426</td>
<td></td>
<td>-0.600</td>
<td></td>
<td>0.473</td>
</tr>
<tr>
<td>2</td>
<td>0.468</td>
<td>0.413</td>
<td></td>
<td>-0.520</td>
<td></td>
<td>0.568</td>
</tr>
<tr>
<td>20</td>
<td>0.416</td>
<td>0.361</td>
<td>-0.452</td>
<td>-0.458</td>
<td></td>
<td>0.534</td>
</tr>
<tr>
<td>Item #</td>
<td>Pattern Coefficient</td>
<td>Structure Coefficient</td>
<td>Communalities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>---------------------</td>
<td>-----------------------</td>
<td>---------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Component 1</td>
<td>Component 2</td>
<td>Component 3</td>
<td>Component 4</td>
<td>Component 1</td>
<td>Component 2</td>
</tr>
<tr>
<td>28</td>
<td>0.731</td>
<td>0.726</td>
<td>0.530</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0.697</td>
<td>0.690</td>
<td>0.485</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>0.696</td>
<td>0.724</td>
<td>0.544</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>0.694</td>
<td>0.677</td>
<td>0.485</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>0.693</td>
<td>0.707</td>
<td>0.558</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.498</td>
<td>0.335</td>
<td>0.571</td>
<td>0.402</td>
<td>0.769</td>
<td>0.620</td>
</tr>
<tr>
<td>9</td>
<td>0.456</td>
<td>0.489</td>
<td>0.504</td>
<td>0.349</td>
<td>-0.469</td>
<td>0.507</td>
</tr>
<tr>
<td>20</td>
<td>0.395</td>
<td>-0.326</td>
<td>0.504</td>
<td>0.349</td>
<td>-0.469</td>
<td>0.507</td>
</tr>
<tr>
<td>24</td>
<td>0.761</td>
<td>0.530</td>
<td>0.351</td>
<td>0.314</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>0.750</td>
<td>0.753</td>
<td>0.568</td>
<td>0.134</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>0.728</td>
<td>0.737</td>
<td>0.550</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>0.656</td>
<td>0.684</td>
<td>0.502</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>0.650</td>
<td>0.598</td>
<td>0.485</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>0.530</td>
<td>0.564</td>
<td>0.351</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0.328</td>
<td>0.334</td>
<td>0.364</td>
<td>0.394</td>
<td>0.748</td>
<td>0.567</td>
</tr>
<tr>
<td>14</td>
<td>0.491</td>
<td>0.558</td>
<td>0.430</td>
<td>0.492</td>
<td>0.748</td>
<td>0.567</td>
</tr>
<tr>
<td>13</td>
<td>0.549</td>
<td>0.541</td>
<td>-0.493</td>
<td>0.583</td>
<td>-0.466</td>
<td>0.614</td>
</tr>
<tr>
<td>4</td>
<td>0.485</td>
<td>0.465</td>
<td>-0.478</td>
<td>0.509</td>
<td>-0.455</td>
<td>0.517</td>
</tr>
<tr>
<td>12</td>
<td>0.316</td>
<td>0.393</td>
<td>0.321</td>
<td>0.496</td>
<td>0.434</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>0.329</td>
<td>0.374</td>
<td>0.395</td>
<td>0.358</td>
<td>0.412</td>
<td>0.446</td>
</tr>
<tr>
<td>15</td>
<td>0.374</td>
<td>0.393</td>
<td>0.395</td>
<td>0.358</td>
<td>0.412</td>
<td>0.446</td>
</tr>
<tr>
<td>22</td>
<td>-0.799</td>
<td>-0.797</td>
<td>0.395</td>
<td>0.358</td>
<td>-0.331</td>
<td>0.446</td>
</tr>
<tr>
<td>16</td>
<td>-0.749</td>
<td>-0.749</td>
<td>0.395</td>
<td>0.358</td>
<td>-0.331</td>
<td>0.446</td>
</tr>
<tr>
<td>5</td>
<td>-0.749</td>
<td>-0.749</td>
<td>0.395</td>
<td>0.358</td>
<td>-0.331</td>
<td>0.446</td>
</tr>
<tr>
<td>23</td>
<td>-0.734</td>
<td>-0.734</td>
<td>0.395</td>
<td>0.358</td>
<td>-0.331</td>
<td>0.446</td>
</tr>
<tr>
<td>26</td>
<td>-0.733</td>
<td>-0.733</td>
<td>0.395</td>
<td>0.358</td>
<td>-0.331</td>
<td>0.446</td>
</tr>
</tbody>
</table>


Psychological Bulletin, 84, 712-722.


Perspectives on Psychological Science, 8, 272–295.
doi:10.1177/1745691612464657


