Paradigm Shift: The Power of Empathy in Shaping Public Opinions on Restorative Justice

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Abstract

The current study examined whether empathy, more specifically empathy towards an offender, would make the public more supportive of restorative justice. Restorative justice is a useful justice system that focuses on the rehabilitation of offenders and reconciliation of communities, contrasting the popular retributive justice method of punishing offenders. Restorative justice success and satisfaction rates prove to be high. However, the initial reaction to crime still seems to be rather punitive. Within this context, empathy was assumed to be an influential factor in changing opinions. Levels of offender empathy were expected to increase with the use of personal information from an offender, while people with retributive views were expected to experience lower levels of offender empathy. Moreover, it was hypothesized that general empathy levels would affect restorative justice support. The online experiment used a between-subject experimental research design with two conditions: confession of offender on crime vs control with just confession. Fifty-seven participants took part in the study and filled in questionnaires about general opinions and empathy levels before reading one of the stories. After that questionnaires measured offender empathy and restorative justice support. Results showed that with the use of a personal story, participants felt higher levels of offender empathy. However, against expectations, other hypotheses on the connection between empathy and restorative justice support yielded no significance. These findings indicate that offender empathy is a realistic concept, however, there is not enough evidence to say that this or general empathy could influence restorative or retributive justice orientations.

Keywords: Restorative justice, empathy, offender empathy, opinions, retributive justice

Introduction

The origins of retributive justice date back at least 4,000 years, with the law code of Ur-Nammu being the oldest on record (Encyclopedia Britannica, 2023). This principle aims to punish offenders in a proportional amount to the severity of the crime committed (Roberts & Stalans, 2004). Since the 18th century, retributive justice has been used to provide discipline towards offenders and safety to those who have been wronged (Longley, 2022). In a retributive justice system crime is viewed as something done to the state, which leads to the prosecution of an offender through state processes (Umbreit, 1998). Because of this, the victim can often feel ignored or victimized through the traumatic process of taking legal action (Umbreit, 1998). Moreover, the needs of both the victims and offender are neglected as no ultimate solution is found and their psychological wellbeing is not prioritized (Cullen et al., 2000). Consequently, the offender often recidivates (Cullen et al., 2000). However, since the 1970s, a different system started to be implemented, which is restorative justice (Van Gelder et al., 2015). Restorative justice is the practice of addressing the ways in which a crime has damaged people and relationships, and determining what can be done to repair that damage, while also addressing the responsibility of those who caused the crime (Umbreit, 1998).

These two systems vary largely because of the divergent values they focus on. Restorative justice focuses on victim reparation, community reconciliation and rehabilitation of offenders through work and communication with victims and local communities (Roberts & Stalans, 2004). The two forms of justice are separate concepts that are not trying to replace the other. Restorative justice aims to help offenders through struggles instead of making them suffer, and this form of justice seems to be successful with levels of reoffending as low as 18%, instead of 27% with retributive systems (Umbreit, 1998). However, the number of people that know about restorative justice remains low, with studies in the UK reporting that only 28% of the public recognized it (Restorative Justice Council, 2023). In the Netherlands, for example, the population shows dissatisfaction with the justice system and keeps demanding harsher punishments by saying that current punishments are not severe enough (Van Gelder et al., 2015). Hence, people's initial reaction is to punish the offender. This might create a nuance for the implication of restorative methods, as often judicial officers feel pressure from the public, since people have opinions about crime and what they want matters. Therefore, judicial officers tend to follow what the majority wants (Van Gelder et al., 2015). However, it seems the public is not

aware of the way restorative justice fixes the gap that traditional justice creates plus the way solutions could benefit society in the long run.

Research in this field might help governments understand what explains people's opinion towards the justice system. Therefore, the question is, what are the elements that would change the initial reaction of the public to restorative justice. In a study by Mae Boag and Wilson (2013), a group of students was brought to a jail to spend a day with some prisoners, measures revealed that after the tour the students showed more empathy and levels of prejudice decreased. Empathy is a concept that has not been researched previously in regards to restorative justice. According to Krzesni (2015), empathy can be very important in the formation of behaviours, however, more research is needed in understanding if empathy can affect the formation of opinions. Hence, the current study aims to explore the role empathy may play in the support towards restorative justice. The central question to this study is, *does empathizing with an offender make the public more open-hearted towards restorative justice?*

Theoretical Framework

Restorative justice

Although restorative justice practices started in the 90's in the Netherlands, it was only in 2012 that the Dutch government included an article in the Dutch Code of Criminal Procedures that stated that offenders and victims should be informed about retributive justice methods (Wolthuis et al., 2019). Instead, in other Western countries this approach appeared before, such as in the UK where around the 90s restorative justice was getting incorporated in various judicial aspects (Davey, 2005). In comparison to contemporary retributive justice systems, restorative methods are important to incorporate in society as participation in restorative justice practices results in higher satisfaction rates of victims and offenders (Umbreit, 1998). This happens because restorative justice utilizes methods such as victim-offender mediation, community service and educational programs in order to rebuild torn relationships (Umbreit, 1998).

The victim-offender mediation methodoffers victims who are interested, the chance to meet their offender in a secure and well-organized environment, where they can have a mediated conversation about the crime. The victim and offender together try to come to an agreement on how the harm should be restored. Although many people are still unaware of this method and their initial reaction keeps centering punishing, an interesting pattern is that when people are asked to think about different justice goals, they also tend to come up with restorative and

rehabilitative measures (Gromet & Darley, 2009). The question to explore then is how come this happens and how the public feels about such measures.

Public views on restorative justice

Public views on restorative justice vary on a multitude of factors, including knowledge, political views and offender views. Unraveling all aspects of public opinions are key to exploratory studies that try to understand how the public feels and why, in this case understanding what support for restorative justice can be defined as. Often, the public expresses the want to punish offenders instead of giving 'easy fixes', as people are made to feel that equal suffering is the only way to provide justice (Van Gelder et al., 2015). Cullen et al., 2000 explored how many people in the public regard any other type of punishment besides retributive justice as 'walking free', when in reality these methods offer as much restitution and penalty is happening through these methods. Moreover, Van Gelder et al. (2015) suggest the public, even if unformed on the topic, could still have enough impact on judges to make them consider forms of punishment during sentencing (Van Gelder et al., 2015).

Previous literature showed that when informed about offenders and other sentencing options, the public became less punitive (Cullen et al., 2000). Instead, with minimal information, public opinions tended to be rather harsh towards offenders (van Gelder et al., 2015). For example, in a study where participants were asked whether they supported the idea of community works or restitution instead of incarceration, 92% of participants replied positively with support towards this method (Roberts & Stalans, 2004). This happens as information helps people understand the broader perspective on how restorative justice helps shape an offender through rehabilitation (Roberts & Stalans, 2004). Currently, no sufficient evidence exists for restorative justice support, however, studies on the similar concepts of suspended sentences have shown that people with increased knowledge believe in its effectiveness, while at the same time believing it to be disciplinary enough for offenders (Van Gelder et al., 2015).

However, it is important to note that high support for restorative justice seems to have a threshold, where it only happens when potential crimes committed by the offender are less severe. In line with this, the same study where 92% of participants were in support of restorative methods, when asked to consider more severe crimes, such as rape, support for restorative justice dropped down to 5% (Roberts & Stalans, 2004). Moreover, the public believes that restorative justice methods are more effective when used on juvenile offenders (Roberts & Stalans, 2004).

People have the belief that once an offender is older, then their behaviour will be harder to change. On top of that, they believe that a teenager likely committed the crime as a form of young rebellion or peer pressure (Roberts & Stalans, 2004). Similarly, if an offender has had troubles with the law before, public opinions on restorative methods efficiency lower (Roberts & Stalans, 2004). This can be seen in a study by Roberts & Stalans (2004) where if juvenile offenders had committed a crime a third time then the public supported incarceration 36% more.

As of 2019, in almost 300 cities around the Netherlands people are being informed and offered mediation (Wolthuis et al., 2019). This number is increasing every year, however the taboo around restorative justice still remains. Because public opinions on restorative justice vary greatly (van Gelder et al., 2015), it is important to define what support towards restorative justice means. For the purpose of this study, support towards restorative justice will be defined as preferring restorative methods such as victim-offender mediation over regular retributive justice where incarceration is the main form of justice. When it comes to restorative justice, researchers theorize that empathy is what drives support for restorative methods (Roberts & Stalans, 2004). This is because empathy towards the victims makes the public more open to participating in community services and assisting victims (Roberts & Stalans, 2004). Hence, empathy represents a potential influential factor that may impact support for restorative justice.

Defining empathy

Empathy is a concept of various functions which is one of the most important traits that makes us humans. It is theorized that empathy emerged from the evolution of mammals, where parents cared for their young offspring instead of typical reptile behaviour of leaving eggs once made (Krzesni, 2015). The basic idea of empathy is understanding another's emotions, but so many definitions have been created that the term can get lost or overlap with other ideas. Often empathy is confused with sympathy, however they are separate concepts. Where empathy is feeling the same emotion as someone else and sympathy is feeling for a person (Cuff et al., 2016).

Empathy is divided into two subtypes: Cognitive empathy, which is about understanding someone's feelings and thoughts, and affective empathy, which is about resonating with someone else's emotions even without direct stimuli to the self (Cuff et al., 2016). An example of cognitive empathy would be feeling disappointment when someone failed at a task. Whereas with affective empathy, you feel a similar emotional response as the receiver. Individuals can

vary in their ability to show empathy, which is determined by three factors: the extent to which one can cognitively comprehend the emotional state of others, the extent to which one can emotionally relate to others, and the extent to which they differentiate between themselves and others (Cuff et al., 2016). This skill becomes very important in criminal justice as the ability to feel empathy towards victims or offenders can dictate future courses of action, in ways such as sentencing types and severity. Interestingly, victim empathy has been defined as the extent to which a person can identify, take perspective and empathize with victims of a crime (Stitzel, 2017). However, to our knowledge no type of empathy has ever been termed in similar terms towards offenders.

Further, empathy seems to be an emotive response based on state and trait interactions (Cuff et al., 2016). Trait empathy is the ability to empathize that remains relatively constant throughout a person's whole life (Cuff et al., 2016). Trait empathy is based on genetics and developmental factors. Yet, there is also state empathy, which is situational and changes based on the context (Cuff et al., 2016). Examples of situational factors which affect empathy include observer-target similarity, mood and blame of the subject (Cuff et al., 2016). Generally speaking, trait empathy is the most common way researchers measure empathy when measuring a threshold of empathic degree.

Having clear terminology of concepts allows for clarity when exploring any depth of it. Hence, Cuff et al. (2016) reviewed 43 different definitions of empathy and compiled a concrete meaning after analyzing all principles of empathy. This definition included aspects like affective and cognitive empathy and self/other distinction, and although thorough, it goes beyond the basic understanding of empathy (Cuff et al., 2016). Therefore, this study will define empathy by Colman's (2009, p. 248) definition because of simple and forward meaning that still critically adhered to the analysis of Cuff et al. (2016): "The capacity to understand and enter into another person's feelings and emotions or to experience something from the other person's point of view". Under this definition, state empathy is more rappresentative. Additionally, in this study we will define offender empathy as "The capacity to understand and enter an offender's feelings and emotions or to experience something from their point of view".

Usage of empathy in criminology

Empathy is an important tool in criminology because it helps people go beyond themselves and see bigger pictures of situations (Krzesni, 2015). Understanding how empathy

works and what makes people feel this emotion could help the spreading of various justice methods, but beyond that, with the creation of interventions. Such interventions could help communities work with offenders better towards restorations and break stigma, which seems to be a driving factor to social exclusion, hindering relationships and rehabilitation (Mae Boag & Wilson, 2013).

Numerous studies that worked with empathy, have found that increased empathy can bring on positive behaviours, such as decrease in judgment, and opinions in regard to offenders (Mae Boag & Wilson, 2013). A good example of this is seen when individuals interacting with incarcerated offenders found themselves feeling more empathetic and understanding of offending behaviour, instead of viewing the individual as the crime they committed (Mae Boag & Wilson, 2013). A description of the experience from a participant in Mae Boag and Wilson's study (2013) said that they did not feel manipulated into feeling sympathy or empathy for the offender, or made to feel that the criminal was less guilty. However, they felt better able to imagine life and obstacles for incarcerated people. In a similar manner, studies focused on outgroup behaviours found that inducing empathy through perspective taking reduced negative emotions such as racism and promoted anti-violence behaviours against LGBTQ+ community members (Mae Boag & Wilson, 2013). This helps show that empathy can lower various undesirable beliefs and overall allow others to see struggles and ways to help those being empathized with.

The attribution theory can be used to explain why the public might support restorative justice. This theory explains that individuals look for justifications to assess the likelihood of the offender repeating the offense, and to determine the fitting reaction or penalty (Roberts & Stalans, 2004). In other words, everyone examines behaviours with external and internal attributions in mind, where the former is based on situational factors, such as the environment one is in, and the latter is based on dispositional factors, such as one's personality traits (Gordon, 2022). Therefore, it can be theorized that if the public got to know the offender on a deeper level and understand how they got to the point of offending, then they might empathize with them as they would see the situational factors as well. As a consequence they might realize that punishing the offender might not be effective. This could ultimately lead to a view on restorative justice being the most beneficial response to the wrongdoing for the offender as it would help the offender reform all around. For this reason it is expected that when people read a personal life experience of an offender they have more empathy for that offender, compared to people who

would only read a story about how the crime was committed. Based on this we predicted the following:

> *H1: Participants who read the offender's personal story show more offender empathy compared to participants who only read a factual crime case*

Additionally, in a study looking at attitudes towards sex offenders and the role of empathy, it was found that higher cognitive empathy was linked with positive attitudes towards sex offenders (Johnson et al., 2007). Authors of this study reflect that increased perspective taking, which is linked with empathy, would help improve mindsets towards sex offenders (Johnson et al., 2007). Moreover, Johnson et al. (2007) says that individuals who exhibit empathy comprehension towards others, in general, are more prone to react positively to a particular criminology related target. This shows that empathic individuals are more likely to have open mindsets and generally feel higher levels of empathy all around. Similarly, previous research has shown that empathy reduces the tendency to support punitive attitudes (Unnever & Cullen, 2009). Unnever and Cullen (2009) report that people who are able to empathize with offenders are also more likely to give them another opportunity. We extend Unnever and Cullen's (2009) argument by claiming that with less punitive attitudes one might support methods which endorse nonpunitive approaches such as restorative justice. For this reason it is expected that people high on state empathy might be better in understanding what the offender might need, and subsequently, they might support restorative justice more as it can help the offender with the rehabilitation they need. Because of this we hypothesize that:

> *H2: People who are more prone to empathize show more support for restorative justice responses*

It also seems that personal traits of the public have an effect on the orientation towards restorative and retributive justice. In a study by Okimoto et al. (2012) subjects were tested through various personality surveys looking at right-wing authoritarianism and social dominance orientation. Right-wing authoritarianism is a trait that makes people concerned with power, conformity and tradition, which means they usually have strong respect for authority and seem

submission from others (Okimoto et al., 2012). Social dominance orientation is a trait that looks at how societies create group-based discrimination, so this trait can be linked with inequality and even racism (Okimoto et al., 2012). Overall, the study found that participants with strong retributive beliefs also had high levels of narcissism, right-wing authoritarianism and social dominance orientation (Okimoto et al., 2012). This shows that individuals that prioritize ingroups and authority, see justice as the suffering of the offender and submission to the authorities. This might show the lack of empathy people with retributive justice orientation have towards multiple targets. For this reason it is expected that people people with retributive justice orientation might feel less empathic towards an offender. Hence, the following hypothesis was created:

H3: People with a higher retributive justice orientation show less offender empathy

It is important to note that empathy is influenced by a number of factors such as similarity, mood and most importantly blame (Cuff et al., 2016). Moreover, if one feels empathy it does not automatically mean that this person will indulge in prosocial behaviour. This can be seen in psychopaths who manipulate their victims, and might feel empathy towards them however they do not stop regardless (Cuff et al., 2016). Such information is useful in explaining why prosocial behaviour is expected yet still does not occur. Telling people about the offender and his complicated life might also seem as an excuse for his behaviour. Moreover, it seems that in a lot of studies conducted around this topic, participants were forced to choose between restorative justice or retributive justice, without being given an in between stance. Overall, this research may help policymakers understand better what influences people's opinions and consequently implement restorative justice programmes. Empathy is a complicated emotion that needs to be researched further to see to what extent it functions and how this skill can be used to make positive change, such as increasing restorative justice knowledge and approval. Restorative justice can bring about high positive change as the benefits extend from decreasing post traumatic stress symptoms in victims to lowering reoffending rates. Therefore, factors promoting restorative justice methods, such as empathy, are important in the field of criminology.

Methods

Research Design

This study used a between-subject experimental research design with two conditions (confession of offender on crime vs confession with personal life story) and was conducted online in the form of an online survey utilizing quantitative methodology. Participants were randomly assigned to one of the conditions and asked to read an offender's personal statement. The first condition was to simply have a confession on a car theft and the knowledge of stealing a car, or it could also include a personal story of the offender's life in order to show what pushed him to commit a crime. The personal story was supposed to induce offender empathy by allowing participants to step into the mind and feelings of the offender. Regardless of the conditions, an identical set of questionnaires was administered to every participant, two before the offender statement and two after.

Participants

Participants were recruited via two different kinds of convenience sampling methods. The first was SONA, an internal participant recruitment site of the University of Twente community where BMS students can obtain credit points as part of their curriculum. The second method used was using social media and posters put around the city of Enschede to reach as many participants as possible. Participants from the SONA website were compensated for their time with credits which are needed for the bachelor course, this was in the form of 0.50 points for the thirty minutes spent on filling in the survey. Participants were randomly assigned into the two different experimental conditions (confession of offender on crime vs confession with personal life story). However, after the screening of participants there were 25 participants in the personal story condition and 28 in the confession only condition. All participants filled in an informed consent form, a necessary prerequisite to continue with the experiment, therefore agreeing to being part of the study. In total 78 people took part in this study. However, cases were screened based on whoever completed at least 75% of the study. Therefore, 21 people were dismissed and the final sample was 57 people as can be seen in Table 1.

From this sample most of the participants were women, with ages ranging 19 to 56 ($M = 27$, $SD = 12$). Therefore, the rest were men with ages ranging from 18 to 60 ($M = 24$, $SD = 8$). Participants were almost equally split between being Dutch residents ($n = 26$, 46%) and non-Dutch residents, with a higher number of non-residents ($n = 31$, 54%). Furthermore, respondents

were mainly German (n = 18, 32%). The occupation of participants was mainly students (n = 38, 67%) with most students being from Psychology (n = 25, 66%).

In order to understand whether there were differences between the two study conditions, basic demographics for the two groups were also examined. For the personal story condition there were 26 participants in total, of which most of them being women (n_{women} = 16, 62%, n_{men} = 10, 38%). In this condition the mean age was 25. Similarly, for the confession only condition there were 27 participants in total, and again mainly women participants (n_{women} = 15, 54%, n_{men} = 13, 46%). Moreover, the mean age for this condition was also 25, therefore, reporting almost no differences between the two conditions.

Table 1

Participant demographics table

	N	Mean	SD
Women	32	27	12
Men	25	24	8
Nationality	German (18) Italian (12) Dutch (11) Swiss (3) Polish (2) Spanish (2) Others (9)	-	-
Highest Education	High school (46) Bachelor (6) Master (4) Professional degree (1)	-	-
Dutch Residency	Yes (26) No (31)	-	-

Student	Yes (38)	-	-
	No (19)		
Faculty/work	Psyc (25)	-	-
	Communication (7)		
	CreaTe (4)		
	Architect (1)		
	Teacher (1)		
	Others (13)		

Materials

Questionnaire tool

Qualtrics, a platform for survey designing and data collection, was used to design the experiment. The experiment was designed for desktop and mobile devices.

Previous knowledge

To understand the background knowledge people already had on restorative justice, participants reported how much they were familiar with various ideas and methods of restorative justice. This was done through four items with a 7-point Likert scale ranging from not familiar at all to extremely familiar. Participants were asked about their knowledge on restorative justice and whether they had worked with this concept before. Additionally, the same was asked but for a popular restorative justice method, victim-offender mediation. An example of an item is "are you familiar with the term restorative justice?". Previous knowledge is important to measure in order to get a general understanding of how knowledgeable the public is about this topic. Furthermore, if results showed that the general public was extremely knowledgeable then this could have an effect on all other variables and results of the study could be reflected upon with the help of this data. All four questions on previous knowledge can be seen in Appendix A.

Personal statement of the offender (manipulation)

Induced empathy is the main independent variable in this study. This variable was manipulated by randomly allocating participants to one of two conditions: 1) a confession from the offender on the crime or 2) a confession from the offender with also a personal life story. The personal life story is designed in a way that is supposed to evoke offender empathy. Both

conditions were based on the interview by Edmunds (2008) with a car thief. The interview strictly talks about the knowledge and experience of the serial car thief. The man in the interview has stolen hundreds of cars and talks about techniques and factors when one is stealing cars. Since the source is a car dealer website, it goes into detail about the small behaviors that can lead to a car being stolen. We based our description of the crime on this, however, we had to create the background and personal story of the offender. Both conditions used the same confession of the crime in order to keep that as a control.

The description of the crime is 425 words long and talks about the knowledge of the thief and how he got caught (see Appendix B). The condition with the personal story has an added 291 words which describe a troubled life of death, drug abuse and poverty (see Appendix C). These aspects were chosen as usually they are outside of someone's control, and these situations of no control usually seem to generate emotion and compassion. The identity given to the offender was made up and includes a mugshot of a man in his 30s (Harness, 2021), along with the name "Carlos", the age being 29 and that he lives in the Rotterdam area. It is important to note that the name "Carlos" is not a typical Dutch name, and this could have some discriminatory effect as the expected population for the study was mainly Dutch. Prejudice can occur for people outside of ingroup, however, it was expected to have various nationalities besides Dutch, hence this choice was justified. The information about the offender was given to participants in order to prevent them from giving the offender their own imagined identity so that everyone can picture the same person. Therefore, in both conditions people saw the same image and descriptions of the offender. Different descriptions could have big impacts on the data collection, therefore, having identical descriptions allows for the separation of the empathy variable that we are trying to measure.

Variables

General Empathy.

In order to measure an overall (trait) empathy level, the Toronto Empathy Questionnaire was used (Spreng et al., 2009). This questionnaire was chosen over other tests that measure empathy because of the neutral measures used in the Toronto Empathy Questionnaire. Other tests on empathy measured specific traits of empathy like only cognitive empathy, or specific victim empathy, whereas this test measures general empathy (emotional ability to understand and respond to others) (Spreng et al., 2009). The Toronto Empathy Questionnaire contains sixteen

items (see Appendix D) with eight positively worded items and 8 negatively worded items which had to be reverse scored. An example of a positively worded item is "when someone else is feeling excited, I tend to get excited too". The Toronto Empathy Questionnaire uses a 5-point Likert scale ranging from 0 (never) to 4 (always). The scores get added up together and the maximum score is 64, however, scores of 45 or higher indicate that one has higher than normal empathy and the lower the score, the less empathetic one is. This scale is shown to have high validity and reliable (α = .81) (Spreng et al., 2009)

Offender Empathy.

Although scale measuring state empathy already existed, no scale existed to measure people's state empathy towards offenders. Therefore, a new scale was created. This scale looks at how much empathy participants feel towards the offender. The Offender Empathy Questionnaire includes 11 items (see Appendix E) and uses a 7-point Likert scale ranging from 0 (strongly disagree) to 7 (strongly agree). Questions focused on empathy and how well participants could understand the offender's experience, rather than sympathy and pity, an example of an item is "I can really experience the same feelings as the offender". One factor with an Eigenvalue higher than one was found. All items loaded high on this factor, except for item 11: I know what it would be like to be in the offender's position. This item had a loading score of 0. Consequently, item 11 was removed from the scale for further hypothesis testing. Together the remaining items formed a reliable scale, with an alpha (α) score of .93.

Justice Orientation.

In order to measure orientation towards restorative and retributive justice, a scale from Okimoto et al. (2012) was used which measures personal meaning of justice. This scale does not relate to any specific incident, and contains 12 items of which six measured retributive orientation (items 1 to 6) and the other six items measured restorative orientation (items 7 to 12) (see Appendix F). The personal meaning of the justice scale helps show to what extent people have an orientation towards restorative justice, for example "justice is served when an offender is penalized". Differently, it shows to what extent they have an orientation towards retributive justice, for example "justice is restored when an offender has learnt to endorse the values violated by the incident". A 7-point Likert scale ranging from strongly disagree to strongly agree was used. The measures from various studies using this scale show it has a strong reliability with

scores always higher than .80 (retributive (α = .88) and restorative (α = .85)) (Okimoto et al., 2012).

Restorative Justice Support.

No scale existed to measure support towards implementing restorative justice methods into society. Therefore a new scale was created. The scare for restorative justice support is different from an orientation, but rather, it shows how much one agrees with the implementation of restorative justice methods. From this one can understand to what extent they support restorative justice. This scale contains 10 items and they are in the form of statements all in the support of restorative justice (see Appendix G), an example "If I was a victim, I would want the possibility to talk to my offender". The scale uses a 7-point Likert scale ranging from 0 (strongly disagree) to 7 (strongly agree). Therefore, the higher the participants scores these statements, the more support towards restorative justice implementations they have. One factor with an Eigenvalue higher than one was found. All items loaded high on this factor, except for item 10: I think after every crime, victim and offender should be told of the possibility of restorative methods. This item had a loading score of 0. Consequently, item 10 was removed from the scale for further hypothesis testing. Together the remaining items formed a reliable scale, with an alpha (α) score of .87.

Procedure

The survey has been ethically approved by the UTwente Ethics Committee and the ethics number 230465 was given to this experiment. The participants of the study filled out an online survey designed with Qualtrics. The completion of the whole survey took between 10 to 30 minutes on average. Firstly, participants read about confidentiality, purpose and procedure in order to give consent to participating in the study and having their data recorded and used. The explanation of the procedure and purpose was clear, however some information was withheld in order to make sure results would not be biased if participants knew about the manipulation. This missing information was then mentioned later in the debriefing after the questionnaire was completed. Then, the participants filled out some demographic information. After that, participants filled out the Toronto Empathy Questionnaire to get a general empathy score. Afterwards, they answered the Personal Meaning of Justice scale relating to their justice orientation. Subsequently, participants answered some questions on their previous knowledge

about restorative justice such as if they have heard of it before and whether they worked with such methods before.

Then participants were randomly assigned to one of two conditions and read the corresponding written stories. Participants all got a picture of the offender along with some basic background information. Depending on the condition assigned, participants either read an additional piece of text with the offender's personal life story or not. After that, every participant, regardless of the condition, got the same questionnaires. Participants were asked to rate their felt empathy towards the offender based on the story they read. Then, a thorough explanation of what restorative justice is was given to every participant, regardless of whether they already knew what it was, in order to prepare them for the last set of questions. Participants had to answer questions on their restorative justice support stating how much support towards restorative justice they felt. Lastly, participants were thanked for their participation and a debrief explained the whole scope of the experiment, allowing them to consent to still being part of the study or not before completing the survey.

Data Analysis

In order to analyze the gathered data, the program Rstudio 2023.3.1.446 was used. The analysis used the packages tidyverse, haven, dplyr, REdaS, psych, readxl, GPArotation, car and olsrr (Posit team, 2023). The R script can be seen in Appendix H. Descriptive statistics and frequencies were used for data screening and exploration. Reliability and validity tests were run on the offender empathy data and restorative justice data in order to determine how reliable they are and if someone were to reuse them how accurate they would be, and exclude any items that did not fit. The Shapiro-Wilk test was used for assumption testing. One way ANOVA was used to test H1, which tests whether participants with the offender's personal story have increased offender empathy levels. Whilst two linear regressions were used to test H2, with predictor variable trait empathy and outcome variable high restorative justice support, and H3, with predictor variable retributive justice orientation and the outcome variable low offender empathy.

Results

Descriptive Statistics

When asked about the familiarity with the term restorative justice, the average answer was 3.19 (*SD* = 1.93). This shows that the average participant of the study thought to be slightly familiar with restorative justice. Similarly, when asked about the familiarity with victim-offender mediation, the average answer was also relatively high at 4.05 (*SD* = 2.04). Differently, experience with restorative justice and victim-offender mediation were much lower, with average scores of 1.89 (*SD* = 1.34) and 2.21 (*SD* = 1.60) respectively, meaning participants were on average hardly or slightly familiar with such practices.

Table 2 shows the descriptive statistics and correlation matrix for each variable measured. On average participants had a total score of 49.86 on trait empathy. This score is rather high as the test outlines that answers above 45 are high empathy scores. Moreover, the measures for restorative justice support report that people were on average moderately supportive of restorative justice methods (*M* = 5.18). In addition, for justice orientation, in general, people leaned further towards restorative justice methods (*M* = 4.93) rather than retributive justice (*M* = 4.54) as the general scores were more positive for restorative orientation. It can be seen that there is a moderate positive relationship between restorative justice support and restorative justice orientation. Lastly, offender empathy scores showed that participants generally showed average levels of empathy towards the offender, however, it is important to notice a high deviation in scores (*SD* = 1.33), which might be due to the different conditions. Overall, relationships between the variables remain rather low.

Table 2

Descriptive statistics and correlation matrix

Variable	*M*	*SD*	1	2	3	4	5	6
Empathy	49.86	6.31	–					
Retributive justice orientation	4.54	.99	-.008	–				

Restorative justice orientation	4.93	1.06	.24	-.20	–		
Offender empathy	3.66	1.33	.25	-.12	.29	–	
Restorative justice support	5.18	.86	.22	-.26	.61	.30	–
Previous knowledge	2.84	1.73	.20	-.10	.25	-.04	.20	–

Note. The max mean score for general empathy is 64 by summing all rows, for retributive justice orientation, restorative justice orientation, offender empathy and for restorative justice support it is a max score of 7 because of using the mean of rows function.

Testing the Hypothesis

For each one of the hypotheses, a one-way ANOVA or regression analysis was conducted in order to understand whether there was significance to allow for the hypothesis to be accepted or rejected.

ANOVA

Firstly, an analysis of variance was conducted to examine hypothesis 1: *Participants who read the offender's personal story show more offender empathy compared to participants who only read a factual crime case*. Firstly, the normality of the data was test and it was found that the outcome variable is likely to follow a normal distribution as the *p*-value was .36. Then, the ANOVA results show to be significant, $(F(1) = 15.71, p < .001)$. Participants exposed to the offender's personal story demonstrated significantly higher levels of empathy $(M = 4.35, SD = 1.09)$ compared to those who read the factual story $(M = 3.05, SD = 1.24)$. This means the hypothesis can be accepted.

Linear Regression

To test the second hypothesis a regression analysis was used. H2 states: *People who are more prone to empathize show more support for restorative justice responses*. Firstly, the normality was tested on the support towards restorative justice based on trait empathy levels data and it was found that residuals errors are likely to follow a normal distribution as the *p*-value was .85. In the regression analysis restorative justice support was the dependent variable and trait

empathy was the independent variable. The overall model showed to be not significant ($R^2 =$ .03, $F(1, 50) = 2.64$, $p = .11$). Trait empathy did not predict support for restorative justice processes (t = 1.62, $p = .11$). The standard error was .02 and the unstandardized Beta (β) for restorative justice support was 0.03. Therefore, the hypothesis cannot be accepted and has to be rejected.

H3 states: *People with a higher retributive justice orientation show less offender empathy*. Firstly, a normality test was run for the justice orientations and offender empathy variables and the *p*-value reported was .46, therefore, also normally distributed. Then, in the regression analysis offender empathy was the dependent variable and retributive orientation was the independent variable. The overall model showed to be not significant ($R^2 = -.004$, $F(1, 51) =$ 0.75, $p = .39$). The standard error was .19 and the unstandardized Beta (β) for retributive justice orientation was -0.16. However, retributive justice orientation did not predict lower offender empathy levels (t = -0.87, $p = .39$). Therefore, the hypothesis cannot be accepted and has to be rejected.

Exploratory analysis

Once the primary analysis was completed, it seemed beneficial to investigate other possible patterns between the data and hypotheses to explore whether there were other results to be discovered. Four additional regression/ANOVA analyses were run. An interest was taken in these specific explorations as they were all additions to the current hypothesis. Since H2 and H3 were rejected, it felt crucial to test other relations with (trait and state) empathy and restorative justice directions in order to test whether the results would really yield no relationships at all or whether certain factors did correlate with empathy. The first exploration examined if people prone to empathize had more restorative justice support. The second exploration tried to look whether gender could be a moderator to offender empathy based on the story condition. The third exploration tried to see whether people that read the story also have more support for restorative justice methods. The last exploration looked at how reading the offender's personal story or not affected restorative justice orientation. From these explorations it was concluded that none were significant as *p*-values were >.05 for all.

Discussion

Previous studies have shown that despite declining crime rates, the public tends to demand harsher penalties for offenders (Van Gelder et al., 2015). Restorative justice shows to have success rates across all elements; rehabilitation, satisfaction, low reoffending. However, people still lack the knowledge and awareness of this system, leading to a primary reaction of punishing the offender (Roberts & Stalans, 2004). The aim for researchers in this field is to unravel what predicts the response of the public to crime and punishment. When this information is uncovered, we might be able to find ways to influence people's reaction to endorse restorative methods. Accordingly, this study aimed at exploring how empathy can affect restorative justice views. In sum, the first hypothesis determining if the personal stories invoking empathy would lead to higher offender empathy was accepted. However, the two other hypotheses exploring empathy and restorative/retributive opinions were both rejected. It was hypothesized that people with a higher retributive justice orientation would express less offender empathy, and ultimately, people with higher empathy levels would show more restorative justice support. However, no significant result was found for the other two hypotheses, meaning that the current study does not have enough evidence to support them.

The hypothesis that was accepted, and a possible way of explaining this is the attribution theory (Roberts & Stalans, 2004), which explains how external factors, in this case the personal life circumstances of the offender, can have as much of an effect on actions and opinions as internal factors, such as criminal behaviour. It is important to note that this was not directly tested, however in this study, it could be likely that participants felt that the disturbed childhood of the offender and other life events lead to him committing the crime instead of the idea that he is a bad person. Therefore, we can assume that induced empathy is a powerful tool that proves to influence even empathy towards offenders, which can be marginalized people. The goal from this is understanding that empathy could make people take a more nuanced approach to punishment rather than a more singular focus on retribution.

Although this research showed that offender empathy is an existing construct, since it was never termed or tested before, there is not enough evidence to show that this empathy could then affect restorative justice beliefs. Based on these research outcomes, state empathy and restorative justice opinions seem to not be related. This could mean that other factors, such as the decentralized justice views people hold, or a larger sample size may be necessary to establish a

stronger and statistically significant association. Differently, the non-significant results could be explained by what this exploratory study was trying to understand all along, whether there really is a relation between empathy and restorative justice opinions. Since, the second and third hypotheses were shown to have no relation in regard to justice orientation, but also four other exploratory analyses looking at relationships with empathy and restorative justice showed no significant results, it is a possibility that these two factors are not directly related. Instead something other than empathy can be of influence. There could be many other factors affecting the way the public feels towards restorative justice.

One factor to consider is forgiveness. According to Lash (2019), people find it hard to forgive, as individuals often do not understand that forgiveness is not about forgetting about someone's actions, but instead it is about accepting and repairing. In research by Lash (2019), forgiveness helps people enhance empathy and ultimately increases restorative justice support. Therefore, not feeling forgiveness might also hinder the application of empathy. In the case of this study, participants were presented with a crime and a person responsible, therefore, in their eyes the bad was done and forgiving might not have been something they cared for, potentially blocking empathy. A way to examine this factor could be to let participants know whether the victim forgave the offender or not. This change could allow participants to themselves forgive or not, ultimately, not blocking empathy or at least further testing if this would be a possible explanation.

Another factor to consider is the way that people do not tend to be polarized. Usually people have varying levels of support for opposing topics. Hence, one can support restorative justice while still having some support for retributive justice, or the other way around. Retributive and restorative justice are not mutually exclusive, that is, a decrease in one direction does not necessarily bring an increase in the other (Okimoto et al., 2012). Because of this, we cannot expect results on justice orientation to be fully in support of restorative justice or fully against retributive justice. The most likely outcome would be that people would have average scores or slightly above or below that depending on which orientation they prefer. It can be seen in our results that people were around average orientation for both showing that people tend to endorse both. Therefore, the results of this study are justified since you cannot put people in an orientation box. Impact on people with information or empathy might still occur however orientation would not drastically change in an indisputable way. Empathy induced by the stories

could change restorative justice opinions, however not significantly enough as it is different from an orientation. An opinion is easier to impact than orientation.

A further explanation for the results, or lack of significance, is the limiting reactors of empathy. Empathy is not always displayed by people. Firstly, individuals might experience empathy bias. Empathic bias pertains to the notion that individuals tend to feel greater empathy towards individuals they are familiar with, such as their in-group or friends (Krzesni, 2015). In this study this could be a likely possibility since the offender in the story likely differed from all the backgrounds and lives most of our participants experience as students. Moreover, people generally experience a stronger sense of empathy when directly witnessing a crime compared to when they read a written description (Krzesni, 2015). In relation to this study, it is possible that people did not relate with the offender as his background description was rather different from the conventional lives most of the participants (students) probably experienced. Results from the study showed overall high general trait empathy but average offender (state) empathy. This could aline with the explanation of not relating with the offender or story since levels of offender empathy were rather average. Empathy is not experienced by all people the same way and it can manifest in various ways, therefore it can be assumed that the results could have been affected by one or more of these factors.

Limitations

A limitation to the study was the sample size and dropout rate. Although much of the research community says that in order for a study to have meaningful results a minimum of a hundred participants is needed (Harrison & Rentzelas, 2021), it can be seen that the power analysis is also important to keep in mind. Cohen (1992) stated that the statistical power of .80 is ideal for studies, and the sample size to achieve this varies a lot based on the type of study, going from 20 participants up to the hundreds. Overall, finding enough participants for this study proved to be difficult, as only 78 were involved. On top of that there were many participants who dropped out shortly after starting the study, with some even interrupting the survey after 5 seconds. It is unknown why so many participants decided to not complete this survey, however length and the disinterest of the survey topic could be at fault. Some participants dropped out after having completed 50% of the survey, showing that although it was not too long as it took between 15 to 30 minutes, that could still be a factor. Furthermore, research shows that interest in the topic of the survey is rather important, and that dropout rates increase when the study is

not in the interest field of participants (Galesic, 2006). This would explain why many participants dropped out after 5 seconds as they read the title and immediately understood it was not of interest to them. When a study does not contain enough participants, results could show as not significant and the sample might not have enough diversity to apply to the whole population. To have more power, a bigger sample is needed. To resolve this, it would be beneficial to conduct the study in a more formal setting, possibly not online or having a more efficient way to gather participants such as active recruiting in the streets and interviewing.

Another limitation possible to the study could be the informative text (and personal story) offered to participants. As discussed previously, empathy bias can be an obstacle to studies, because people might only empathize with people they consider like them or part of their ingroup. In this case, the use of the name Carlos might have led to prejudice from participants as there is a well-known stigma in society around different cultures and ethnicities. This factor could have led participants to subconsciously or even consciously judge the offender based on his ethnic name. This could have consequently led to empathic bias decreasing overall empathy. This is just an assumption, however, it could be changed and tested in future studies by using names appropriate to the population being studied.

The last limitation pertains to the matter that representation of the sample gathered might be ambiguous as the sampling method mainly targeted university students. Various sampling techniques were used for this study. However, all were of appeal to students as most of the techniques were convenience sampling. What this means for the study is that the results might be affected and non-generalizable. With an average age of participants of 24 to 25 and most participants being psychology students from the University of Twente, scores might be focused on a specific group and not representative of the general population. This means that the results may not accurately reflect what would happen in the broader population, leading to potentially misleading or incorrect conclusions, while at the same time, limiting the applicability to a bigger population. A solution to this would be using more tools such as the SONA points system, where various people from different cities or countries can display their surveys.

Future directions

This study offers several possibilities for future research. The study explored the effects of empathy towards an offender who committed a lower rate crime. It would be interesting to investigate if offender empathy would still apply with different crimes. In the current study, this

specific car theft scenario was chosen because past research showed that people felt stronger support for restorative justice methods when the crime committed was a less serious offense (Roberts & Stalans, 2004). Therefore, testing different types of offenses, such as highly serious offense like murder or rape, would help deepen the understanding of offender empathy and in which cases empathy can be evoked in people with the offender's story. Such explorations could broaden what we now know about offender empathy and findings could lead to higher rate interventions that allow the public to be involved in the rehabilitation of severe offenders.

Adding to this, in order to explore the relation between empathy and restorative justice opinions in a more concrete way, it could be beneficial to use different vignette types of crime scenarios. Past research on crime scenarios have explored if empathy is better expressed to participants in different presentation styles. For example, in some studies with date rape scenarios, written text has shown to be more impactful rather than video vignettes (Seed et al., 2002). However, other sources claim the opposite as videos leave more vivid images in the participants' heads (Dawtry et al., 2020). It is because of this that using different presentation styles of crime scenarios could help further induce empathy in participants and then test for their restorative justice support.

Beyond exploring opinions of the public, the current study found that changing orientation was not an outcome. In future studies, it would be helpful to compare opinions versus orientation and explore to what extent they differ. The same study conditions as the current study mixed with the previous suggestions could be implemented, while also including more extremes. Adding extreme scenarios and even extreme opinions of other people could help shift the average opinions by polarizing them in order to understand if truly empathy and restorative justice do relate.

Conclusion

This research had some meaningful contributions on a topic that was not extensively researched before. Empathy is a response which has more impact on people's lives than conventional expectations. This study termed offender empathy and explored to what extent it is experienced and whether this concept could be used for future interventions by exploring how public opinions on restorative justice change. Although no substantial relationship was found between empathy and restorative justice support, it creates a path for future research and also helps to value other factors in this system. Still, this study showed that induced empathy does

increase empathy felt towards an offender. Understanding how empathy works can help researchers in the field to create better mediation. Since punishing offenders remains an initial reaction for many, the implementation of empathic techniques in informational advertisements or programs could familiarize the public with restorative methods and normalize the use of it. As it can be seen in other research fields such as environmental studies, empathy increases people's support towards environmentally friendly behavior (Wang et al., 2023). Therefore, it can be seen that empathy is detrimental towards the creation of opinions and orientations in the public. In addition, policy makers and advocates for restorative justice systems can use these empathic tools to their advantage. The implementation of restorative justice in society is important because the benefits it shows cannot be ignored. Restorative justice's success rates are detrimental to the growth of a safer society as communities can be restored and offenders can grow from their errors.

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Appendix
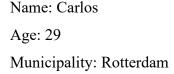
Appendix A: Previous Knowledge on Restorative Justice

Below is a list of statements, rate from a scale of not familiar at all to very familiar.

To what extent...

1. …are you familiar with the term restorative justice?
2. ...are you familiar with victim-offender mediation?
3. ...do you have experience with restorative justice?
4. ...do you have experience with a restorative justice program such as victim-offender mediation?

Appendix B: Personal statement from offender with confession only

Name: Carlos

Age: 29

Municipality: Rotterdam

Car thieves like to talk about their business; they think it's cool, so most new thieves get their knowledge and tools from other criminals. The guys from Las Flores gang taught me everything on how to commit the perfect crime of stealing cars. They told me to look around for cars parked outside around 4:30 or 5 in the morning. People have a habit of going outside and starting their car to warm it up. Then they leave their keys in the ignition, go back in and get their coffee or books or whatever. Often you can't really make any money on a new car, because the parts are all stock and stamped with serial numbers. But there are ways around that, too. A lot of gangs take the stolen cars to a crooked used car dealership. That dealership will file off the serial numbers, stamp their own numbers on it, then sell and register the car. To make real money, you want something that's been all tricked out. You can just take it apart yourself and make money selling the parts on the streets.. I also learned from the gang to avoid police "bait cars;" cops leave 'em unlocked to attract car thieves. The time of day doesn't matter either; it just calls for a different approach. If it was broad daylight, the gang would go to auto parts stores or gas stations. They would also go for a car parked in a carport or an underground garage — somewhere they could hide in the dark. The golden rule was to not go for any car with an alarm. The night that I committed my first ever car theft was also when I got caught. Before I approached the car, I hung

around and watched the area. At first I saw a big van driving by, so I didn't go for the car. It could mean someone in the van was watching, maybe a cop. After the van sped off I approached a parking lot and just tried every door. A couple of doors were open due to dumb luck. Not realizing I should have walked away, I stepped inside and started taking the cars apart. I was told that selling the parts yourself would be the most dangerous but I didn't listen and this is how the police found me after my first theft and having stolen from 3 different cars. They were able to track the serial numbers and since I was the one making the direct sale I found right away.

Appendix C: Personal statement from offedender with personal story

Name: Carlos

Age: 29

Municipality: Rotterdam

My name is Carlos and I'm 29 years old. I grew up in a not so rich area in the outer skits of Rotterdam. Since I was small I was accustomed to seeing crime and violence around me. My mother died when I was just 4 years old because of a mugging gone wrong. Growing up without my mom was obviously tough, but what made it harder was the fact that my brother was a dope dealer and my dad was on drugs. Because of this, the time I was 15 I did a lot of methamphetamine. My grades were spiraling, but I honestly didn't care at the time what would happen to me. I never felt like I had a good day. My addiction got so bad that I was living on the streets, in motel rooms and abandoned houses. I felt like, "only the strong survive" and I did whatever it took to get money. I would get any quick job that was undocumented and would pay something. I was picking up scraps from the streets and trying to sell them for money. But there was never enough money. Then, I started hanging out with a couple guys from Las Flores, a gang who among other things stole cars. I didn't want to get mixed up in the crime, but I felt there was no other path my life could take. I didn't think beyond me or the people I could hurt, because in that moment I was the one hurting.

When I was hanging out with Las Flores gang, I quickly learned many things. Car thieves like to talk about their business; they think it's cool, so most new thieves get their knowledge and tools

from other criminals. The guys from Las Flores gang taught me everything on how to commit the perfect crime of stealing cars. They told me to look around for cars parked outside around 4:30 or 5 in the morning. People have a habit of going outside and starting their car to warm it up. Then they leave their keys in the ignition, go back in and get their coffee or books or whatever. Often you can't really make any money on a new car, because the parts are all stock and stamped with serial numbers. But there are ways around that, too. A lot of gangs take the stolen cars to a crooked used car dealership. That dealership will file off the serial numbers, stamp their own numbers on it, then sell and register the car. To make real money, you want something that's been all tricked out. You can just take it apart yourself and make money selling the parts on the streets.. I also learned from the gang to avoid police "bait cars;" cops leave 'em unlocked to attract car thieves. The time of day doesn't matter either; it just calls for a different approach. If it was broad daylight, the gang would go to auto parts stores or gas stations. They would also go for a car parked in a carport or an underground garage — somewhere they could hide in the dark. The golden rule was to not go for any car with an alarm. The night that I committed my first ever car theft was also when I got caught. Before I approached the car, I hung around and watched the area. At first I saw a big van driving by, so I didn't go for the car. It could mean someone in the van was watching, maybe a cop. After the van speed off I approached a parking lot and just tried every door. A couple of doors were open due to dumb luck. Not realizing I should have walked away, I stepped inside and started taking the cars apart. I was told that selling the parts yourself would be the most dangerous but I didn't listen and this is how the police found me after my first theft and having stolen from 3 different cars. They were able to track the serial numbers and since I was the one making the direct sale I found right away. Since that night, I realized that crime was not my only option, but I was just so surrounded by negativity and bad people that it's all I saw. What I need to do right now is just find a better environment for myself and make things right with others and my conscious.

Appendix D: General Empathy

Please read each statement carefully and rate how frequently you feel or act in the manner described from a scale of never to always. There are no right or wrong answers or trick questions. Please answer each question as honestly as you can.

1. When someone else is feeling excited, I tend to get excited too
2. Other people's misfortunes do not disturb me a great deal
3. It upsets me to see someone being treated disrespectfully
4. I remain unaffected when someone close to me is happy
5. I enjoy making other people feel better
6. I have tender, concerned feelings for people less fortunate than me
7. When a friend starts to talk about his/her problems, I try to steer the conversation towards something else
8. I can tell when others are sad even when they do not say anything
9. I find that I am "in tune" with other people's moods
10. I do not feel sympathy for people who cause their own serious illnesses
11. I become irritated when someone cries
12. I am not really interested in how other people feel
13. I get a strong urge to help when I see someone who is upset
14. When I see someone being treated unfairly, I do not feel very much pity for them
15. I find it silly for people to cry out of happiness
16. When I see someone being taken advantage of, I feel kind of protective towards him/her

Appendix E: Offender Empathy

Below is a list of statements. Please read each statement carefully and rate how much you agree
or disagree with the statement from a scale of strongly disagree to strongly agree.

1. I empathize with the offender
2. I understand that the offender was desperate at the moment of committing the crime
3. I understand that the offender feels regret
4. I deeply understand what actions lead to the offender committing the crime
5. I can really experience the same feelings as the offender
6. I feel in tune with the offender
7. I genuinely understand what the offender felt when committing the crime
8. I understand that the offender wants to genuinely apologize
9. I can really imagine the thoughts going through the offeder's mind
10. I feel I can take the perspective of the offender
11. I know what it would be like to be in the offender's position

Appendix F: Justice Orientation

1. As a matter of fairness, an offender should be penalized
2. The only way to restore justice is to punish an offender
3. Justice is served when an offender is penalized
4. Only a punishment restores the justice disrupted by an incident
5. For the sake of justice, some degree of suffering has to be inflicted on an offender
6. An offender deserves to be penalized
7. For justice to be reinstated, the affected parties need to achieve agreement about the values violated by an incident
8. To restore justice, the offender and the victim need to reaffirm consensus on their values and rules
9. Without an offender's sincere acknowledgement of having acted inappropriately, the injustice is not completely restored
10. A sense of justice requires that the offender and the victim develop a shared understanding of the harm done by an incident
11. Justice is restored when an offender has learnt to endorse the values violated by the incident
12. For a sense of justice, we all, including the offender and the victim , need to reaffirm our belief in shared values

Appendix G: Restorative Justice Support

Below is a list of statements. Please read each statement carefully and rate how much you agree or disagree with the statement from a scale of strongly disagree to strongly agree.

1. I think that restorative justice should be applied more often as a response to crime
2. Offenders and victims more often should together talk about the offense to solve crime
3. I believe that restorative justice would be a suitable system for the law
4. If I were a judge, I would agree with implementing restorative justice as a response to crime
5. Restorative justice would best help avoid the victim from reliving traumatic experiences in a negative way (like having to testify against their aggressor and being judged on the stand)
6. I believe that giving the offender a voice is important
7. If I were a community member, I would want to help in restorative methods
8. Victim-offender mediation should be available for victims who want to have a mediation meeting with the offender to discuss how the crime affected them and how the offender can repair the harm
9. If I was a victim, I would want the possibility to talk to my offender
10. I think after every crime, victim and offender should be told of the possibility of restorative methods

Appendix H: R studio script

```
# LIBRARIES
library(tidyverse)
library(haven)
library(REdaS)
library(psych)
library(readxl)
library(GPArotation)
library(olsrr)
library(car)

# IMPORT DATA
Paradigm_Shift_Data <- read.csv("Paradigm+Shift+in+Response+to+Crime+-
+Public+Opinions+on+Restorative+Justice_May+2,+2023_12.18.csv")

# CLEAN DATA
Paradigm_Shift_Clean <-
  dplyr::select(Paradigm_Shift_Data, c(4, 12:52, 54, 56:65, 68:76)) %>%
  dplyr::rename("residency" = "Q1",
          "age" = "Q2",
          "gender" = "Q3",
          "nationality" = "Q4",
          "education" = "Q5",
          "student" = "Q6",
          "faculty" = "Q7",
          "worker" = "Q8") %>%
  dplyr::slice(-(1:2)) %>%
  dplyr::mutate_at("Progress", as.numeric) %>%
  dplyr::mutate_at("age", as.numeric) %>%
  dplyr::mutate(across(10:62, as.numeric)) %>%
  dplyr::filter(Progress > 74)

#MUTATE AND REVERSE Q9 ITEMS
Paradigm_Shift_Clean <- Paradigm_Shift_Clean %>% dplyr::mutate(Q9_1 =
dplyr::case_match(
  Q9_1,
  1 ~ 0,
  2 ~ 1,
  3 ~ 2,
  4 ~ 3,
```

```
  5 ~ 4
))
Paradigm_Shift_Clean <- Paradigm_Shift_Clean %>% dplyr::mutate(Q9_2 =
dplyr::case_match(
  Q9_2,
  1 ~ 0,
  2 ~ 1,
  3 ~ 2,
  4 ~ 3,
  5 ~ 4
))
Paradigm_Shift_Clean <- Paradigm_Shift_Clean %>% dplyr::mutate(Q9_3 =
dplyr::case_match(
  Q9_3,
  1 ~ 0,
  2 ~ 1,
  3 ~ 2,
  4 ~ 3,
  5 ~ 4
))
Paradigm_Shift_Clean <- Paradigm_Shift_Clean %>% dplyr::mutate(Q9_4 =
dplyr::case_match(
  Q9_4,
  1 ~ 0,
  2 ~ 1,
  3 ~ 2,
  4 ~ 3,
  5 ~ 4
))
Paradigm_Shift_Clean <- Paradigm_Shift_Clean %>% dplyr::mutate(Q9_5 =
dplyr::case_match(
  Q9_5,
  1 ~ 0,
  2 ~ 1,
  3 ~ 2,
  4 ~ 3,
  5 ~ 4
))
Paradigm_Shift_Clean <- Paradigm_Shift_Clean %>% dplyr::mutate(Q9_6 =
dplyr::case_match(
```

```
  Q9_6,
  1 ~ 0,
  2 ~ 1,
  3 ~ 2,
  4 ~ 3,
  5 ~ 4
))
Paradigm_Shift_Clean <- Paradigm_Shift_Clean %>% dplyr::mutate(Q9_7 =
dplyr::case_match(
  Q9_7,
  1 ~ 0,
  2 ~ 1,
  3 ~ 2,
  4 ~ 3,
  5 ~ 4
))
Paradigm_Shift_Clean <- Paradigm_Shift_Clean %>% dplyr::mutate(Q9_8 =
dplyr::case_match(
  Q9_8,
  1 ~ 0,
  2 ~ 1,
  3 ~ 2,
  4 ~ 3,
  5 ~ 4
))
Paradigm_Shift_Clean <- Paradigm_Shift_Clean %>% dplyr::mutate(Q9_9 =
dplyr::case_match(
  Q9_9,
  1 ~ 0,
  2 ~ 1,
  3 ~ 2,
  4 ~ 3,
  5 ~ 4
))
Paradigm_Shift_Clean <- Paradigm_Shift_Clean %>% dplyr::mutate(Q9_10 =
dplyr::case_match(
  Q9_10,
  1 ~ 0,
  2 ~ 1,
  3 ~ 2,
```

```
 4 ~ 3,
 5 ~ 4
))
Paradigm_Shift_Clean <- Paradigm_Shift_Clean %>% dplyr::mutate(Q9_11 =
dplyr::case_match(
 Q9_11,
 1 ~ 0,
 2 ~ 1,
 3 ~ 2,
 4 ~ 3,
 5 ~ 4
))
Paradigm_Shift_Clean <- Paradigm_Shift_Clean %>% dplyr::mutate(Q9_12 =
dplyr::case_match(
 Q9_12,
 1 ~ 0,
 2 ~ 1,
 3 ~ 2,
 4 ~ 3,
 5 ~ 4
))
Paradigm_Shift_Clean <- Paradigm_Shift_Clean %>% dplyr::mutate(Q9_13 =
dplyr::case_match(
 Q9_13,
 1 ~ 0,
 2 ~ 1,
 3 ~ 2,
 4 ~ 3,
 5 ~ 4
))
Paradigm_Shift_Clean <- Paradigm_Shift_Clean %>% dplyr::mutate(Q9_14 =
dplyr::case_match(
 Q9_14,
 1 ~ 0,
 2 ~ 1,
 3 ~ 2,
 4 ~ 3,
 5 ~ 4
))
```

```
Paradigm_Shift_Clean <- Paradigm_Shift_Clean %>% dplyr::mutate(Q9_15 =
dplyr::case_match(
  Q9_15,
  1 ~ 0,
  2 ~ 1,
  3 ~ 2,
  4 ~ 3,
  5 ~ 4
))
Paradigm_Shift_Clean <- Paradigm_Shift_Clean %>% dplyr::mutate(Q9_16 =
dplyr::case_match(
  Q9_16,
  1 ~ 0,
  2 ~ 1,
  3 ~ 2,
  4 ~ 3,
  5 ~ 4
))

cols = c("Q9_2", "Q9_4", "Q9_7", "Q9_10", "Q9_11", "Q9_12", "Q9_14", "Q9_15")
Paradigm_Shift_Clean [ ,cols] = 4 - Paradigm_Shift_Clean[ ,cols]

#SPLIT
Personal_Story <-
  Paradigm_Shift_Clean %>% dplyr::filter(!is.na(.$Q14))

Confession <-
  Paradigm_Shift_Clean %>% dplyr::filter(!is.na(.$Q26))

#DEMOGRAPHICS
  Paradigm_Shift_Clean %>% count(gender)
  Paradigm_Shift_Clean %>% count(nationality)
  Paradigm_Shift_Clean %>% count(residency)
  Paradigm_Shift_Clean %>% count(education)
  Paradigm_Shift_Clean %>% count(student)
  Paradigm_Shift_Clean %>% count(faculty)
  Paradigm_Shift_Clean %>% count(worker)

  mean_of_column <- mean(Paradigm_Shift_Clean$age)
  mean_of_story <- mean(Personal_Story$age)
```

```
mean_of_confession <- mean(Confession$age)

age_stats <-
  Paradigm_Shift_Clean %>%
  group_by(gender) %>%
  summarize(m = mean(age), sd = sd(age))

Personal_Story %>% count(gender)
Confession %>% count(gender)

Paradigm_Shift_Clean %>% count(Q12_1)
Paradigm_Shift_Clean %>% count(Q12_2)
Paradigm_Shift_Clean %>% count(Q12_3)
Paradigm_Shift_Clean %>% count(Q12_4)

  mean_q12_1 <- mean(Paradigm_Shift_Clean$Q12_1)
  sd_q12_1 <- sd(Paradigm_Shift_Clean$Q12_1)
  mean_q12_2 <- mean(Paradigm_Shift_Clean$Q12_2)
  sd_q12_2 <- sd(Paradigm_Shift_Clean$Q12_2)
  mean_q12_3 <- mean(Paradigm_Shift_Clean$Q12_3)
  sd_q12_3 <- sd(Paradigm_Shift_Clean$Q12_3)
  mean_q12_4 <- mean(Paradigm_Shift_Clean$Q12_4)
  sd_q12_4 <- sd(Paradigm_Shift_Clean$Q12_4)
overall <- rowMeans(Paradigm_Shift_Clean[,38:41])

  tapply(H1_dataframe$offender_empathy, H1_dataframe$Q14, mean, na.rm=TRUE)
  tapply(H1_dataframe$offender_empathy, H1_dataframe$Q14, sd, na.rm=TRUE)

#RELIABILITY AND VALIDITY ANALYSIS OFFENDER EMPATHY
  #to do a factor analysis, I need to put the items in a subset on which I can run the analysis
  #subset pretrust
  offenderempathydata <- Paradigm_Shift_Clean[,c(44:53)]

  #barthletts test must be significant
  bart_spher(offenderempathydata)
  #result is p-value < 2.22e-16 which means its highly significant

  #kaiser-Meyer-Olking test must be above .7
  KMO(offenderempathydata)
  #KMO = 0.86 which means its meritorious (great score)
```

#first a factor analysis in which I order R to look for 11 factors.
#outcomes show that only 1 factor has an Eigenvalue > 1

fa(offenderempathydata, nfactors = 11, rotate = "oblimin")
#SS loadings   2.13 1.47 1.30 1.19 1.17 0.71 0.59 0.30 0.29 0.21 0.00

#for that reason I do the same analysis, but want R to look for only 1 factor
#now you can look at the factor loadings. Items 7,4,8,6,10 and 11 have a low loading --> maybe not include?
fa(offenderempathydata, nfactors = 5, rotate = "oblimin")

#reliability test with the remainder of the trust items.

alpha(offenderempathydata)
# alpha 0.82

#RELIABILITY ANALYSIS RESTORATIVE JUSTICE SUPPORT
restorativejusticesupportdata <- Paradigm_Shift_Clean[,c(55:62)]

#barthletts test must be significant
bart_spher(restorativejusticesupportdata, use = c("na.or.complete"))
#result is p-value < 2.22e-16 which means its highly significant

#kaiser-Meyer-Olking test must be above .7
KMO(restorativejusticesupportdata)
#KMO = 0.83 which means its meritorious (great score)

#first a factor analysis in which I order R to look for 6 factors.
#outcomes show that only 1 factor has an Eigenvalue > 1

fa(restorativejusticesupportdata, nfactors = 10, rotate = "oblimin")
#SS loadings   1.31 1.25 1.20 1.12 0.95 0.88 0.45 0.41 0.19 0.00

#for that reason I do the same analysis, but want R to look for only 1 factor
#now you can look at the factor loadings. Items 2,1,7,6,8 and 10 have a low loading --> maybe not include?
fa(restorativejusticesupportdata, nfactors = 4, rotate = "oblimin")
#SS loadings   2.43(1) 1.77(3) 1.61(2) 0.91(4)

```
#reliability test with the remainder of the trust items.

alpha(restorativejusticesupportdata)
# alpha of 0.83 (good)

#ALPHA
empathydata <- Paradigm_Shift_Clean[,c(10:25)]
alpha(empathydata)
KMO(empathydata)

restodata <- Paradigm_Shift_Clean[,c(32:37)]
alpha(restodata)
KMO(restodata)

retodata <- Paradigm_Shift_Clean[,c(26:31)]
alpha(retodata)
KMO(retodata)

knowledgedata <- Paradigm_Shift_Clean[,c(38:41)]
alpha(knowledgedata)
KMO(knowledgedata)
#NORMALITY TESTING
ols_test_normality(H1_regression)
ols_test_normality(H2_regression)
#Shapiro-Wilk <- rediduals follow a normal distrubution as p-value = 0.8543
ols_test_normality(H3_regression)
#Shapiro-Wilk <- rediduals follow a normal distrubution as p-value = 0.4602

#HOMOGENEITY OF VARIENCE TEST
leveneTest(H2_dataframe$Sums_Empathy, H2_dataframe$mean_Restorative_Justice_Support,
center=mean)
#the results are significant and p-value is <0.01 therefore the variances are not assumed to be
equal
leveneTest(H3_dataframe$Means_Orientation_Retr, H3_dataframe$mean_Offender_Empathy,
center=mean)
#the results are significant and p-value is <0.01 therefore the variances are not assumed to be
equal

#TORONTO EMPATHY SUMS AND MEANS LEVEL Q9
Sums_Empathy <- rowSums(Paradigm_Shift_Clean[,10:25])
```

```
Toronto_Empathy_mean <- mean(Sums_Empathy)
Toronto_Empathy_SD <- sd(Sums_Empathy)
#people with levels bigger than 45 have high empathy
High_Empathy <- Sums_Empathy[Sums_Empathy > 45]

#JUSTICE ORIENTATION MEANS Q10
 Means_Orientation_Retr <- rowMeans(Paradigm_Shift_Clean[,26:31])
 Orientation_mean_Retr <- mean(Means_Orientation_Retr)
 Orientation_SD_Retr <- sd(Means_Orientation_Retr)


 Means_Orintation_Rest <- rowMeans(Paradigm_Shift_Clean[,32:37])
 Orientation_mean_Rest <- mean(Means_Orintation_Rest)
 Orientation_SD_Rest <- sd(Means_Orintation_Rest)


#OFFENDER EMPATHY MEANS Q15
 mean_Offender_Empathy <- rowMeans(Paradigm_Shift_Clean[,44:53])
 Offender_Empathy_mean <- mean(mean_Offender_Empathy, na.rm = TRUE)
 Offender_emapthy_SD <- sd(mean_Offender_Empathy, na.rm = TRUE)

#RESTORATIVE JUSTICE SUPPORT MEANS Q17
 mean_Restorative_Justice_Support <- rowMeans(Paradigm_Shift_Clean[,54:62])
 Restorative_Justice_Support_mean <- mean(mean_Restorative_Justice_Support, na.rm =
TRUE)
 Restorative_Justice_Support_SD <- sd(mean_Restorative_Justice_Support, na.rm = TRUE)

#CORRELATION MATRIX
 Dataframe <- data.frame(Sums_Empathy, Means_Orientation_Retr, Means_Orintation_Rest,
mean_Offender_Empathy, mean_Restorative_Justice_Support, overall)
 library(corrplot)
 cor(Dataframe, use = "complete.obs")

#ANOVA
 #H1 ANOVA: Reading the offenders personal story will lead to more offender empathy
compared to participants who only get factual stories
 Personal_story_knowledge <- Paradigm_Shift_Clean ["Q14"]
 Personal_story_knowledge [is.na(Personal_story_knowledge)] <- 0
```

```
   H1_dataframe <- data.frame(personal_story_knowledge = Personal_story_knowledge,
offender_empathy = mean_Offender_Empathy)
   H1_regression <- lm(mean_Offender_Empathy ~ Q14, data = H1_dataframe)
   anova.H1 <- aov(mean_Offender_Empathy ~ Q14, data = H1_dataframe)
   summary(anova.H1)
```

```
#REGRESSION
   #H2 REGRESSION: People who are more prone to empathize are more in favor of a restorative
justice response compared to people who are not prone to take perspective
   H2_dataframe <- data.frame(Sums_Empathy, mean_Restorative_Justice_Support)
   plot(H2_dataframe$Sums_Empathy, H2_dataframe$mean_Restorative_Justice_Support)
   H2_regression <- lm(mean_Restorative_Justice_Support ~ Sums_Empathy, data =
H2_dataframe)
   summary(H2_regression)
   #Residuals:
   #Min     1Q  Median    3Q    Max
   #-2.0263 -0.4884  0.1106  0.4867  1.9560 (looks good and regular)
   #But p value is 0.09798 which means its not significant
   abline(H2_regression, col="blue")
```

```
   #H2 EXPLORATORY
   H2_exp_dataframe <- H2_dataframe %>% dplyr::filter(Sums_Empathy > 45)
   plot(H2_exp_dataframe$Sums_Empathy,
H2_exp_dataframe$mean_Restorative_Justice_Support)
   H2_exp_regression <- lm(mean_Restorative_Justice_Support ~ Sums_Empathy, data =
H2_exp_dataframe)
   summary(H2_regression)
```

```
   #H3 REGRESSION: People with a higher retributive justice orientation show less offender
empathy
   H3_dataframe <- data.frame(Means_Orientation_Retr, mean_Offender_Empathy)
   plot(H3_dataframe$Means_Orientation_Retr, H3_dataframe$mean_Offender_Empathy)
   H3_regression <- lm(mean_Offender_Empathy ~ Means_Orientation_Retr, data =
H3_dataframe)
   summary(H3_regression)
   #Residuals:
   #Min     1Q  Median    3Q    Max
   #-2.6292 -1.0977  0.2288  0.7318  2.8199  (looks good and regular)
   #But p value is 0.512 which means its not significant
   abline(H3_regression, col="blue")
```

```
#H4 exploratory
GENDER <- Paradigm_Shift_Clean ["gender"]
H4_exploratory <- data.frame(Personal_story_knowledge, mean_Offender_Empathy,
GENDER)
mod4 <- lm(mean_Offender_Empathy ~ Q14 + Q14*gender, H4_exploratory)
summary(mod4)

#H5 exploratory : people that read the story also have more support for restorative jsutive
methods
H5_dataframe <- data.frame(Personal_story_knowledge, mean_Restorative_Justice_Support)
anova.H5 <- aov(mean_Restorative_Justice_Support ~ Q14, data = H5_dataframe)
summary(anova.H5)

#H6 exploratory
H6_dataframe <- data.frame(Personal_story_knowledge, Means_Orintation_Rest)
anova.H6 <- aov(Means_Orintation_Rest ~ Q14, data = H6_dataframe)
summary(anova.H6)
```