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Perceptions of Child Sexual Offending Cases Involving Biological Kinship and Victim Age

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Abstract

Perceptions of Child Sexual Offending Cases Involving Biological Kinship and Victim

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by

Carmen Lorraine Neufeld

MA, Trinity Western University, 2007

BA, University of Winnipeg, 2001

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

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Abstract

Child sexual offenders are commonly viewed as some of the worst offenders within

North American society, often eliciting responses such as fear, disgust, and moral

indignation. The purpose of this quantitative study was to test evolutionary theory's

notion of inclusive fitness by exploring how the relationship between child sexual

offenders and victims, as well as victim age affects the public's emotional responses

including fear and aversion. In addition to affective responses, opinions regarding crime

severity and length of sentence were also examined. Using a quantitative between-person

experimental vignette design, 200 participants were randomly assigned a child sexual

abuse case with varying degrees of relatedness between the perpetrator and victim, and

varied victim age. Following a review of the vignette, participants were asked to

complete a questionnaire measuring feelings of fear, aversion, crime severity, and

opinions regarding sentencing in the case reviewed. A Multi-Variate Analysis of

Variance (MANOVA) was used to analyze the data and found no significant differences

in perceptions based on degree of relatedness or victim age. While these results were

unexpected, several factors are discussed that may have contributed to the outcome. The

findings of this study contribute to the body of literature relating to child sexual abuse

and reveal an area of research that warrants further exploration as it may encourage

positive social change within judicial policy and decision making relating to child sexual

assault cases. Furthermore, it may inform the development of educational interventions

and initiatives regarding these types of offences and sentencing practices.

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Chapter 1: Introduction to the Study

Introduction

Child sexual abuse is a prevalent issue that has widespread and long-term outcomes for its victims, communities, and the justice system (Choudhary et al., 2019; Letourneau et al., 2018; Sanjeevi et al., 2018). The pervasive impact of these crimes results in the public functioning as a stakeholder in how the community and justice system responds to offenders and their victims (Richards, 2018). As such, the community has the ability to influence how child sexual crimes are managed within the community and within the justice system. This may also lead to the development of educational interventions and initiatives regarding these types of offences and sentencing practices.

The purpose of this study was to gain a better understanding of community responses to child sexual abuse across varying degrees of kinship between the perpetrator and victim and across varied victim age (6-years-old and 13-years-old). Responses investigated included fear, aversion, and opinions related to crime severity and sentencing. Results of this investigation contribute to the body of literature by providing a better understanding related to community perceptions and beliefs associated to child sexual crimes. This has the potential to impact social change by influencing judicial decision making and policy, as well as informing community education and program development.

This chapter includes an overview of the investigation. In this chapter, I provide a brief review of the literature, followed by the problem statement, the purpose, and the nature of the study. I also review theoretical foundations and research methods in

addition to key definitions and assumptions. I also discuss the significance and implications for social change.

Background

Child sexual offenders are viewed as some of the worst offenders within the criminal justice system. These types of crimes have been found to elicit responses such as fear, aversion, and disgust (Olver & Barlow, 2010). Over the last decades, numerous variables have been identified that contribute to affective responses to child sexual offending behaviors (Kresanov et al., 2018). Additionally, opinions relating to these types of crimes have also been examined (Quinsey et al., 1999).

Affective responses to child sexual abuse have been a topic of interest for numerous researchers for several decades. The aversion response has been examined by measuring participant's reactions to imagined sexual behaviors with children of varying degrees of kinship (Kresanov et al., 2018). Results indicated a positive linear relationship between the strength of respondent's aversive reactions and the degree of kinship between the victim and perpetrator.

The fear response has also been identified as a prominent emotion connected to sexual offending behavior. Kernsmith et al. (2009) measured participant's fear response related to different types of sexual offenders. Offenders were categorized based on their crimes that included incest, statutory rape, juvenile offender, marital rape, pedophilia, date rape, and old offenses. The authors reported that pedophiles with stranger victims were found to be the most feared of all sexual offenders examined.

Investigations have also been conducted examining participant's punitive attitudes toward varying types of sexual offending behavior. In 2019, Socia et al., compared punitive attitudes toward various types of sexual crimes and found that attitudes were strongest for those committed against children. While this finding was interesting, it did not explore whether attitudes varied across the age of the victim. Another study was conducted by Lewis et al. (2014) in which the researchers examined sentencing outcomes in child sexual cases and found that longer sentences were adjudicated for crimes committed against younger victims.

The variable of crime severity has also been examined as it relates to child sexual abuse. Quinsey (1999) examined perceptions of crime severity across varied levels of biological kinship and found a positive relationship between the variables. That is, as biological kinship increased, so did perceptions of crime severity reported by participants.

These studies highlight significant findings in perceptions and opinions relating to child sexual offending behaviors. However, the findings do not provide insight into how these variables are applied across varying degrees of kinship or across victim age; nor do they provide an understanding of how these variables might relate to one another. As such, I determined that there was cause for an exploration of public responses and opinions relating to these types of offenders and their management within the justice system. My goal for this research project was to fill this gap by exploring whether there is a relationship between affective responses to child sexual abuse and opinions regarding crime severity and sentencing across varying degree of kinship and victim age.

Problem Statement

Understanding community perceptions relating to child sexual abuse is an important endeavor as the public influences law makers and the adjudication process within the courts (Richards, 2018). While there has been some research investigating affective responses and beliefs relating to child sexual crimes, the findings have been limited in their scope. As such, it is unclear if these factors accurately reflect affective responses, opinions regarding punitive measures, and sentencing practices, particularly across varied degrees of kindship and age of child victim.

Research exploring emotional responses and opinions relating to child sexual abuse cases has been steadily growing over the past few decades. While progress has been made, it is not known how affective responses such as fear and aversion relate to opinions regarding crime severity and sentence length. In addition, it is not known how these variables correlate across varying degrees of kinship and victim age.

Purpose of the Study

The purpose of this quantitative between-person experimental vignette study was to examine perceptions of fear and aversion, as well as opinions regarding crime severity and sentencing relating to child sexual offending across varying degrees of kinship and victim age. Independent variables included degree of kinship between the perpetrator and victim (father/daughter, stepfather/stepdaughter, and unrelated perpetrator/female victim) and age of victim (ages 6 and 13 years). The dependent variables included feelings of aversion and fear, as well as opinions regarding crime severity and sentencing.

Research Questions & Hypotheses

I randomly assigned participants to review one of the six vignettes representing the experimental conditions. After reviewing the vignette, I asked participants to respond to a questionnaire consisting of 15 questions on a Likert-type scale and ordinal scale. I constructed the questions to measure perceptions of fear and aversion relating to the perpetrator, as well as opinions regarding the severity of the crime and sentencing of the offender (Appendix C).

Research Question 1 (RQ1): Does the level of fear reported vary significantly depending on the degree of kinship between the perpetrator and child victim?

Null Hypothesis ($H_0$1): Fear will not vary significantly across degrees of kinship between the perpetrator and child victim.

Alternative Hypothesis (H_a1): Fear will vary significantly across degrees of kinship between the perpetrator and child victim.

RQ2: Does the level of fear reported vary significantly depending on the age of the child victim?

$H_0$2: Fear will not vary significantly depending on the age of the child victim.

H_a2: Fear will vary significantly depending on the age of the child victim.

RQ3: Does the level of aversion reported vary significantly depending on the degree of kinship between the perpetrator and victim?

$H_0$3: Aversion will not vary significantly depending on the degree of kinship between the perpetrator and victim.

H_a3: Aversion will vary significantly depending on the degree of kinship between the perpetrator and victim.

RQ4: Does the level of aversion reported vary significantly across victim age?

H_04: Aversion will not vary significantly across victim age.

H_a4: Aversion will vary significantly across victim age.

RQ5: Do opinions regarding crime severity vary significantly depending on the degree of kinship between perpetrator and victim?

H_05: Opinions regarding crime severity will not vary significantly depending on the degree of kinship between a perpetrator and victim.

H_a5: Opinions regarding crime severity will vary significantly depending on the degree of kinship between a perpetrator and child victim.

RQ6: Do opinions regarding crime severity vary significantly depending on the age of the victim?

H_06: Opinions regarding crime severity will not vary significantly depending on the age of the child victim.

H_a6: Opinions regarding crime severity will vary significantly depending on the age of the child victim.

RQ7: Do opinions regarding sentencing vary significantly depending on the degree of kinship between perpetrator and child victim?

H_07: Opinions regarding sentencing will not vary significantly depending on the degree of kinship between a perpetrator and child victim.

H_a7: Opinions regarding sentencing will vary significantly depending on the degree of kinship between a perpetrator and child victim.

RQ8: Do opinions regarding sentencing vary significantly depending on the age of the child victim?

$H_0$8: Opinions regarding sentencing will not vary significantly based on the age of the child victim.

H_a8: Opinions regarding sentencing will vary significantly based on the age of the child victim.

Theoretical Framework

According to evolutionary theory, social norms and taboos have been developed to discourage sexual relationships between biologically related kin. The purpose of these norms and taboos will be discussed more thoroughly in Chapter 2. However, it is important to note that norms and taboos are intended to influence reproductive behavior to increase reproductive success and to support the survival of the species (Darwin, 1876; Kresanov et al. 2018; Westermark, 1891).

Social norms and taboos around pedophilia are less universal than those described above. This is due to varying beliefs across cultures, such as legalized child marriages. However, researchers investigating pedophilic behavior postulate that it may be linked to the male's indiscriminate drive for procreation and the desire to ensure paternity (Miller, 2018).

In Western society, the development of feelings such as disgust and aversion have been identified as factors that contribute to the formation of social taboos discouraging

both incest and pedophilic behaviors (Antfolk et al., 2012). These feelings have also been found to intensify as biological kinship increases (Antfolk et al., 2012). Evolutionary theory provided a theoretical framework for the present study as the investigator examined how feelings (aversion and fear) and beliefs (crime severity and sentencing) are related in child sexual abuse cases across varying degrees of biological kinship and child victim age.

Nature of the Study

The present study was a quantitative between-subject vignette research design. I chose an experimental vignette design due to several strengths as outlined by Steiner et al. (2016). First, realistic scenarios can be used, producing more genuine responses from participants. Second, multiple factors can be used and manipulated within the vignettes allowing for variables to be measured and examined for possible interactions. Finally, the nature of the design has been found to have high internal validity, allowing causal conclusions regarding attitudes and beliefs to be made (Steiner et al., 2016). Additional research has also shown that using vignettes reduces the likelihood of social desirability influencing responses compared to traditional surveys (Aguinis & Bradley, 2014; Steiner et al., 2016).

I randomly assigned the participants in the present study to one of six conditions. Each condition consisted of a vignette involving a child sexual abuse case. Vignettes were identical with the exceptions of the independent variables (IVs) consisting of victim's age and degree of kinship. Age consisted of two groups (6-years-old and 13-years-old) and degree of kinship consisted of three groups (biological father and child,

stepfather and stepdaughter, and unrelated neighbor and child). The dependent variables (DVs) included responses of fear and aversion, as well as opinions regarding crime severity and length of sentencing. Responses were measured using a Likert-type and ordinal scale.

The population of interest for the investigation was Canadian citizens ages 19 and older. The Qualtrics research company (*Qualtrics XM - Experience Management Software*, 2020) recruited participants, administered the survey, and collected the data. I performed the data analysis using SPSS version 27.0 for Mac. I used a two-way MANOVA to compare the means for the dependent variables.

Definitions

Aversion

Aversion is the tendency to withdraw or avoid a person, object, or situation that may be harmful. Similar to disgust, aversion is a protective response that motivates the individual to withdraw from a perceived threat in order to avoid possible harm (Woody & Teachman, 2000). I measured the aversion variable using a Likert-type scale.

Fear

Fear is an emotion that activates the *fight or flight* response and is intended to reduce the threat of a perceived danger (Plutchik, 1990; Woody & Teachman, 2000). I measured fear using a Likert-type scale.

Crime Severity

Crime severity refers to the perceived seriousness of the crime depicted in the case vignette. I measured crime severity using a Likert-type scale similar to Coburn et al., (2017).

Sentencing Opinions

Sentencing opinions refers to the respondent's beliefs regarding the length of sentence that should be adjudicated relating to a specific crime. Respondents were asked to choose a sentence between 0 to 100 years (Sparks, 2020).

Kinship

Kinship refers to the degree of relatedness between the perpetrator and victim. Consistent with Quinsey et al. (1999), I examined three levels of kinship, including biologically related father and daughter, legally related step-father and step-daughter, and biologically unrelated male neighbor and female child.

Assumptions

I made several assumptions when conducting this study. My main assumption was that respondents participating in the study would be reprehensive of the Canadian population at large. My second assumption was that the vignettes presented to participants would provoke measurable affective responses consistent with the dependent variables. My final assumption was that the variations of independent variables would elicit varying affective responses in respondents.

Scope and Delimitations

The scope of the study was to examine participants affective responses (fear and aversion) and opinions (crime severity and sentencing) relating to child sexual offenses involving various levels of kinship and varied victim age. I chose this focus as previous researchers have not examined how variations of kinship and victim age may influence affective responses that might inform opinions regarding crime severity and sentencing. I used a between-subjects experimental design to test participant's responses to vignettes depicting child abuse scenarios involving varying level of kinship (father-daughter, stepfather-stepdaughter, adult male neighbor and child) and victim age (6 and 13). Vignettes were identical with the exception of the kinship between the perpetrator and victim and victim age. I randomly assigned participants to one of six variations of the vignettes.

To be eligible to participate in the study, respondents were required to be Canadian citizens as this was the population of interest. Participants were also required to be at least 18 years of age. I chose the minimum age because is the age when individuals are eligible to vote in Canada. Therefore, this group of individuals have the ability to influence public policy through voting and participation in political activities as well as lobbying groups. As such, the results of this study reflected Canadian perspectives on the topic of interest and may not be generalizable to other countries or cultures.

Limitations

The current study included several limitations. One limitation involved the possibility of obtaining floor or ceiling effects. For example, questions used to measure

fear may have contained obscure differences. Another possible limitation involved obtaining socially desirable responses. For example, participants may have provided responses based on social taboos instead of their own perceptions. Finally, the results obtained reflect Canadian responses and may not be generalizable to other populations. To address the potential for a floor or ceiling effect, I designed the survey questions to reduce the risk of obtaining these types of responses. To address the potential for socially desirable responses, I used a vignette design as previous research has found this method to reduce the risk for these types of responses (Aguinis & Bradley, 2014).

Significance

The findings of the study may clarify the underpinnings of affect influencing community beliefs and opinions regarding crime severity and sentencing of child sexual offenses. This research may also contribute to the body of literature relating to child sexual abuse. The outcomes of this study may encourage positive social change within judicial policy and decision making relating to child sexual assault cases. Furthermore, it may inform the development of educational interventions and initiatives regarding these types of offences and sentencing practices.

Summary

My goal for the present study was to examine participant's perceptions of fear and aversion, and opinions regarding crime severity and sentencing relating to child sexual crimes. I used evolutionary theory as the basis for the study as it can be used to address the development of social norms and taboos discouraging child sexual offending behaviors, particularly among biologically related kin. Previous researchers have

examined the identified variables independently but have not investigated them collectively, nor have they examined them across varying degrees of kinship or across victim age (Albrecht et al., 2014; Antfolk et al., 2012; Coburn et al., 2017).

For the present investigation, the population of interest consisted of Canadian citizens who were 18 years of age or older, as this is the age when Canadian citizens are eligible to vote. I used a between-subject experimental vignette design to explore the relationship between the variables. I asked participants to review one of six hypothetical vignettes followed by a questionnaire designed to measure responses of fear and aversion, as well as opinions regarding crime severity and sentencing using Likert-type and ordinal scales. The results of the investigation may inform future policy and decision-making processes within the justice system as well as inform educational programs within the community.

Chapter 2 includes a more comprehensive review of the literature on community perceptions and beliefs relating to child sexual abuse cases. It will also include a more in-depth analysis of the theoretical framework informing the investigation. Chapter 3 will include an explanation of the research method and design, as well as provide information regarding procedures used for the experimental and data analysis. I will also discuss ethical considerations and limitations within the chapter.

Chapter 2: Literature Review

Introduction

Child sexual offenders are generally perceived as some of the most heinous offenders within North American society, often eliciting responses such as fear, disgust, and moral indignation (Olver & Barlow, 2010). Perceptions of child sexual abuse have been a salient topic for research for several decades. It is an important area of research due to the public's influence on law makers and on the court process (King, 2019; Richards, 2018). For example, Cochran et al. (2020) examined the court's responses to social concerns regarding sex crimes and found that public sentiments played a significant role in the adjudication of sexual offenders. Treatment and supervision strategies may also be affected by public attitudes and pressure (Cromer & Goldsmith, 2010). The purpose of the present study was to investigate how biological kinship and victim age influences perceptions and opinions associated with child sexual offending within a Canadian community sample.

The theoretical framework for this investigation was drawn from evolutionary theory. As such, this chapter includes an overview of child sexual abuse from an evolutionary perspective. I will also review the current literature regarding the etiology and characteristics of child sexual offenders and their subgroups. Furthermore, I will examine participant's emotional responses to child sexual abuse across varying degrees of kinship and victim age will be discussed. Finally, I will provide an overview of the research examining public perceptions of crime severity and beliefs regarding punitive measures across varying types of child sexual crimes.

The issue of child sexual abuse in Canada is a significant topic for investigation as these cases make up over half (55%) of all police-reported sexual offences within the country (Cotter et al., 2015). According to Statistics Canada, approximately 14,000 children and youth were the victims of sexual offences in 2012. Furthermore, Cotter et al. (2015) noted that 38% of cases were committed by a family member. Of those cases, 15% of perpetrators were parents, 10% were another immediate family member, and 14% were committed by extended family. Acquaintances comprised the largest group of child sexual offenders making up 44% of all police-reported child sexual abuse cases. These perpetrators were identified as friends (9%), casual acquaintances (26%), authority figures (6%), and other acquaintances (3%). Finally, 12% of cases involved a perpetrator who was identified as a stranger to the victim (Cotter et al., 2015).

These findings highlight significant differences in the perpetration of sexual offending across various levels of relatedness. As such, there is cause for exploration relating to public responses and beliefs regarding these types of offenders and their management within the justice system.

Literature Research Strategies

I conducted a literature review of articles retrieved through online data searches of the following databases: Criminal Justice Database, Google Scholar, ProQuest, PsychINFO, and Thoreau. I searched the identified databases using key words that included *child sexual abuse or assault, kinship, biological kinship, incest, evolutionary theory, perceptions or attitudes or opinions, disgust, fear, aversion, sentencing,* and *crime severity.* Verbal correspondence also took place with Dr. Stephen Hart on June 1,

2020 and Dr. Michael Seto on June 2, 2020. Dr. Hart is a professor at Simon Fraser University who specializes in clinical forensic psychology. Dr. Seto is the Director of the Forensic Mental Health Research Unit at The Royal's Institute of Mental Health Research affiliated with the University of Ottawa.

Theoretical Framework

Evolutionary Theory

Evolutionary theory suggests that natural selection is the process of adaptive change over generations (Darwin, 1872). It is driven by the need to reproduce to ensure the preservation of the species (King, 2019; Richards, 2018). This can be achieved directly through procreation and the protection of one's biological offspring (lineal kin), or indirectly through the protection of collateral or horizontal kin (e.g., siblings) and their offspring (Hamilton, 1964).

To support the preservation of one's genetic line, social norms and taboos have developed that eschew incestuous behavior (Antfolk et al., 2012). For example, incest aversion is an aversive response to participating in sexual behavior with one's kin (Antfolk, 2014). This response is associated with the potential for detrimental effects of inbreeding (Westermarck, 1906). For example, offspring of parents who are first-degree relatives have been found to be 20%-40% more likely to suffer from genetic deficiencies or death, potentially weakening the gene pool (Antfolk et al., 2012). These deficiencies may occur due to an increased risk of homozygotic recessive alleles (Bittles, 1983) or an impaired immune system (Tooby, 1982).

Role of Kinship

Research suggests that kinship may serve as a modulating factor for social and sexual behavior (Korchmaros & Kenny, 2001). This is known as inclusive fitness theory and proposes that people treat kin more favorably than individuals who are not biologically related to them (M. C. Seto, 2018). Consequently, as biological kinship increases, so does altruism and support. However, as biological kinship decreases, the likelihood of maltreatment, including unwanted or coerced sexual behavior and abuse also increases. For example, step-fathers were found to be more likely to sexually abuse their step-children compared to biological fathers (Sariola & Uutela, 1996).

According to Westermarck (1906), the length of proximal living (i.e., co-residence) may also be an activating factor for the incest aversion response among family members. This argument was supported by Shepher's (1971) findings that biologically unrelated children who were raised together abstained from having sexual relationships together in adulthood. Another study exploring incestuous relationships between siblings noted a negative association between length of co-residence during childhood and incestuous behavior (Bevc & Silverman, 2000). That is, siblings were less likely to engage in incestuous behavior when they had lived together for longer periods of time throughout their childhood.

Recent research has examined Westermarck's (1921) hypothesis that proximal living during childhood contributes to the development of incest aversion, with disgust playing a mediating role. In their investigation, Pullman et al. (2019) surveyed 632 participants (fathers) to test Westermarck's (1906) hypothesis within biological and

sociolegal father-daughter relationships. The authors reported that results did not support

Westermark's (1906) hypothesis within the father-daughter relationship paradigm. That

is, proximal living did not contribute to the development of incest avoidance within

father-daughter relationships (Pullman et al., 2019). However while proximal living was

not associated with incest proclivity or disgust toward incest, it was found that lower

levels of disgust were associated with increased incest propensity (Pullman et al., 2019).

Pedophilia and Hebephilia

Diagnostic Criteria

Pedophilia involves an ongoing sexual attraction to children (M. C. Seto, 2018).

The demarcation of pedophilia has not been without its controversies. (i.e., whether it is a

sexual preference, orientation, or mental disorder). However both the *Diagnostic and*

Statistical Manual of Mental Disorders, Fifth Edition (DSM-5; American Psychiatric

Association, 2013) and the *International Classification of Disease and Related Health*

Problems, 11th revision (*ICD-11; - Mortality and Morbidity Statistics*, n.d.) agree that

pedophilia consists of intense and recurrent feelings of sexual arousal or fantasies toward

prepubescent children. The individual has either acted on these sexual urges, or has

experienced significant distress or interpersonal difficulty because of these urges. These

feelings must be present for a period of at least a 6 months to be classified a pedophilia.

Hebephilia involves a sexual interest in children who are pubescent (M. C. Seto,

2017) and displaying signs of sexual development. Age ranges associated with hebephilia

vary due to differences in the onset of puberty across age but typically occurs between

the ages of 11 and 14 (Stephens & Seto, 2016). Unlike pedophilia, hebephilia has not

been included as a specified paraphilia in the DSM-5. It does however meet the criteria for diagnosis under Otherwise Specified Paraphilic Disorder (American Psychiatric Association, 2013).

Etiology of Child Sexual Offenders

Pedophilia and sexual offending against prepubescent children are challenging issues from an evolutionary perspective. However, they may be explained as biologically maladaptive and divergent from inclusive fitness theory (M. C. Seto, 2018). They may also be explained as an atypical form of the male's *indiscriminate drive* for procreation (Miller, 2013; M. C. Seto, 2018).

Social norms and taboos around sexual behavior with non-kin children are less universal as beliefs vary across cultures. However, males have evolved dissimilar mating strategies than females. Females tend to be selective when choosing a mate due to the physical costs of pregnancy and due to the resources required to raise a child (Miller, 2013). In contrast, minimal effort is required for males to distribute their DNA. Therefore, males tend to disseminate their DNA via many female partners in an effort to increase the spread of their genes (Miller, 2013).

Unlike females who can be confident that they are the biological parent of the children they birth, males may not be as confident regarding their paternity. Therefore choosing a younger partner may not only increase the likelihood of virginity, but also increases dependency which contributes to the male's assurance of paternity (Miller, 2013). This explains cultural practices such as procuring child brides, betrothals, and other practices that demand chastity prior to marriage. While this may provide some

insight into hebephiliac behavior (i.e., sexual attraction to pubescent girls), it fails to explain pedophilic behavior (i.e., recurrent sexual interest in prepubescent children).

Typologies of Child Sexual Offenders

Several typologies have been proposed for explaining sexual offending behavior against children. One such classification scheme developed by Tenbergen et al. (2015) divides child sexual offenders into two subgroups. The first group of offenders do not identify a sexual preference for children (pedophilia), but whose behavior may be explained by impulse control disorders. Offenders in this group include individuals who are mentally challenged, unexperienced adolescents, persons with antisocial personality disorder (ASPD), or individuals with a trauma history within the family who seek out substitute partners in children. The second group includes individuals who identify having a sexual preference disorder such as pedophilia as defined in the DSM-V (2013).

The preconditions model developed by Finkelhor (1984) separates child sexual offenders into three subgroups based on motivational factors. These consist of offenders who are sexually attracted to children (pedophilia), offenders who feel more emotionally connected to children than to adults (emotional congruence with children), and offenders who feel unable to meeting their emotional and sexual needs within other adult relationships (blockage). Finkelhor (1984) also identified an additional factor that applies to all three subcategories. This factor involves disabling one's inhibitions toward such behavior.

The categorization of child sexual offenders is supported by the findings of Schiffer and Vonlaufen (2010), who assessed the neuropsychological function of

pedophilic and nonpedophilic child molesters, and compared them to controls. Schiffer

and Vonlaufen (2010) used neurocognitive tests and semistructured diagnostic interviews

to examine cognitive functioning of child sexual abusers (pedophiles and nonpedophilic

offenders) and compared them to controls.

Results of Schiffer and Vonlaufen's (2010) investigation found that individuals in

the pedophilic child abuse group exhibited fewer cognitive deficits than those in the

nonpedophilic child abuse group. When compared with controls, the pedophilic group

showed deficits restricted to response inhibition, whereas the nonpedophilic group

showed more severe deficits, specifically in cognitive flexibility and verbal memory.

Additional support was provided by Dillien et al. (2020) who conducted a

systematic review of research examining the neuropsychological functioning of child

sexual offenders. Based on their evaluation, Dillien et al. (2020) found that pedophiles

and nonpedophiles had distinct neuropsychological profiles. Some overlap of factors

were noted including inhibition and verbal function (Dillien et al., 2020).

Prenatal Factors

Several studies have explored the possibility that there may be antecedents to the

development of chronophilias during the early stages of gestation. Research has found

that pedophiles were three times more likely to be left-handed than teleiophilic (sexually

attracted to physically mature adults) subjects (J. Cantor et al., 2005; James M. et al.,

2004). A later investigation found that offenders in pedophilic and hebephilic groups

were also shorter in stature than teleiophilic offenders (J. M. Cantor et al., 2007). The

authors concluded that the results of these studies suggest that there may be factors

during the prenatal period that contribute to the development of pedophilia and hebephilia.

Neurological Investigations

Other investigations have focused on examining the brain matter of pedophilic men, comparing them to controls in an effort to identify underlying neurological differences. Cantor et al. (2008) utilized Magnetic Resonance Imagining (MRIs) to compare 65 pedophilic offenders with 62 nonsexual offenders. The investigators reported that results indicated wide-spread deficiencies within the white matter of the temporal and parietal lobes bilaterally in pedophilic subjects. Cantor et al. (2008) concluded that lower volumes of white brain matter may be related to the development of pedophilia. Cantor and Blanchard (2012) expanded their research when they added a hebephilic group in the comparison. Results of the MRIs indicated that hebephiles were more similar to pedophiles than teleiophiles, adding support to a neurological component in the development of chronophilias (J. M. Cantor & Blanchard, 2012).

A more recent study also used structural MRI imaging when they examined brain structure differences between healthy male controls and male patients who met the DSM-5 criteria for Pedophilic Disorder (Abé et al., 2021). The investigators found that individuals with pedophilic disorder had abnormal volumes of white matter within the region of the brain's default mode network, an area that that is predominantly active when the brain is in a state of wakeful rest. It was also noted that the experimental group had a smaller hippocampus and nuclei accumbens than controls (Abé et al., 2021).

Contributing Factors to Pedophilia and Hebephilia

Several theories have been developed in an attempt to explain the development of pedophilic behaviors. According to Seto (2018) one of the leading theories points to the behavior as a malformation of male's affinity for cues that indicate youthfulness (Kenrick & Keefe, 1992a). According to Kenrick and Keefe's (1992a) theory, males typically seek out sexual partners with youthful facial features and sexually mature bodies, as these features suggest greater reproductive success. However, malfunctions such as a lack of responsiveness to age related cues may contribute to the development of various chronophilias (age-related sexual preferences). For example, in the case of pedophilia, individuals were found to be sexually attracted to individuals with youthful facial features but not to sexually mature bodies (Ponseti et al., 2016).

The motivation-facilitation model (MFM) developed by Seto (2019) also highlighted the importance of traits (e.g., high sex drive) and states (e.g., intoxication) in sexual offending behaviors, particularly when done opportunistically (M. C. Seto, 2019). In this model, motivation was defined as the psychological process that drives and directs behavior. An individual's motivation for sex can also affect their psychological processes such as perception and intention (Seto, 2019). While motivation may differ across offenders, Seto (2019) identified three primary types of sexual motivation that include paraphilias, high sex drive, and intense mating effort.

High sex drive is the strength of an individual's need to engage in sexual behaviors. It can be influenced by a number of factors including an individual's age, relationship status, and physical health. According to Seto (2019), an individual's sex

drive can be a motivating factor for sexual offending, particularly if one disregards any inhibitions preventing this behavior. For example, an individual who utilizes the services of a prostitute must first overcome their inhibition regarding engaging in such tabooed behavior. Once they have committed their primary act of deviance (i.e., paid for sexual services), it is easier to continue engaging in the behavior.

The final motivational factor identified by Seto (2019) is intense mating effort, an evolutionary biology construct that relates to the amount of time, energy, and resources required to procure sexual partners. Unlike high sex drive, a preoccupation with sexual desire is not the focus; rather, the focus is on obtaining novel sexual partners. However, similar to high sex drive, mating effort is influenced by factors such as age and hormones.

Motivational factors are not sufficient for a person to act out their antisocial behaviors unless there are additional influences that contribute to overcoming one's inhibitions. These include state and trait factors. For example, intoxication (state) or low impulsive control (trait) may contribute to a person's engagement in antisocial behaviors.

Finally, Seto (2019) stated that situational factors are needed for sexual offending behavior to occur. That is, motivation and facilitation factors require opportunities for an individual to commit the sexual offense. For example, children who are unattended at a park may be viewed by the offender as an opportunity to act out on his pedophilic desires.

According to the American Psychiatric Association (2013), paraphilias involve recurrent, intense, and unusual sexual interest in atypical sexual activities or objects.

Some paraphilias may depart from the evolutionary mechanisms directing reproductive behavior and for inclusive fitness, as is the case in pedophilia. In addition to facilitating and situational factors, neurodevelopmental difficulties may play a role in the development of pedophilic behaviors (Seto, 2019). Notwithstanding, numerous factors may contribute to the development of pedophilia and therefore it cannot be deduced to a single etiological path (M. C. Seto, 2019).

Affective Responses to Child Sexual Abuse

Child sexual abuse is a complex issue that garners strong emotional responses. From an evolutionary perspective, inclusive fitness theory suggests that adverse feelings toward child sexual abuse is most profound in cases of biological kinship (Quinsey et al., 1999). This may be a distal subconscious response to the detrimental effects that inbreeding may have on the genepool. While incest aversion tends to be a universal response, attitudes regarding sexual relationships with children are not as globally accepted. However, in most societies, and western society in particular, all forms of child sexual interactions yield adverse responses.

While aversive responses have been observed, differences have also been noted, particularly across varying degrees of kinship between a perpetrator and victim. Research has found that when an threat is perceived, a physiological response is initiated aimed at reducing or eradicating the perceived threat (Krusemark & Li, 2011). Two notable emotional responses have been identified that play a role in threat reduction. These include disgust, which is part of the aversion response, and fear (Woody & Teachman, 2000).

Disgust Response to Threat

Disgust is a central threat emotion that has been associated with survival responses such as avoidance and distancing behaviors (Jahnke, 2018; Woody & Teachman, 2000). The physiological response to disgust involves a parasympathetic response which includes the suppression of sensory perception and attentional processing. This results in avoidant behavior directed at reducing the risk of harm by the identified threat (Krusemark & Li, 2011).

Disgust and aversion have been subject to investigation for several years. One recent study examined participant's degree of aversion to various types of offenders. Participants were randomly presented with a hypothetical scenario where they were asked if they would volunteer with different types of offenders. The authors found that participants were most likely avoid associating with child sex offenders than any other type of criminal (Lowe & Willis, 2020). Another notable study utilized vignettes depicting sexual interactions where biological kinship between the victim and perpetrator was varied (Antfolk et al., 2012). Respondents were asked to rate the degree of disgust that they felt following their review of the vignette. Results indicated a positive linear relationship between biological kinship and feelings of disgust. That is, as biological kinship increased, the strength of disgust and aversive reactions also increased (Antfolk et al., 2012).

These results were also supported by a recent study examining intergeneration incest aversion. Investigators asked participants to rate their affective response to imagined hypothetical sexual contact scenarios across varying degrees of kinship

(Kresanov et al., 2018). Similar to Antfolk et al.'s (2012) findings, Kesanov et. al (2018) found that as biological kinship increased between perpetrator and victim, so did levels of reported disgust. The authors also found higher levels of sexual aversion in scenarios involving younger individuals than those who were considered fertile (Kresanov et al., 2018).

Fear Response to Threat

Fear is an emotional responsive to perceptions of imminent threat or danger. However, unlike disgust, the physiological response to fear involves a sympathetic response that results in an increase of sensory perception and attention on the perceived threat, resulting in the fight or flight response (Krusemark & Li, 2011).

The subject of fear as an evolutionary adaptation was discussed by Plutchik (1990) who identified fear as a basic emotional response to danger. In his model, Plutchik (1990) proposed that the emotion of fear serves three functions. These include a protective function (avoidance), a communication function (warning others of danger and maintaining social order), and a survival response (fight or flight).

Fear within the context of child sexual abuse was investigated by Kernsmith et al., (2009) who measured participant's degree of fear of different types of sexual offenders. Types of offenses included incest, statutory rape, juvenile offender, marital rape, pedophilia, date rape, and old offenses. Using computer assisted telephone interviewing (CATI), investigators measured participant's level of fear using a four-point Likert-type scale (1= *very afraid to* 4 = *not at all afraid*).

Results indicated that pedophiles whose victims were biologically unrelated were the most feared of all of the sexual offenders (M = 1.68, SD = 1.09) followed by offenders who sexually offended toward their own children (incest) (M = 1.73, SD = 1.12). By contrast, the 'least' feared were statutory rapists.

Jahnke (2018) conducted a vignette study to determine the role of specific emotions (i.e., fear and disgust) in participant's beliefs, attitudes, and behaviors toward pedophiles. The investigator found that negative affect increased when exposed to vignettes where the offender was a pedophile and refrained from assaulting the victim due to fear of getting caught (extrinsic motivation) compared to knowing that it was wrong (internal motivation). Results also indicated that fear was related to more punitive attitudes while disgust was linked to avoidant and social distancing behaviors (Jahnke, 2018).

Perceptions of Severity and Sentencing in Child Sexual Abuse Cases

Perceptions of Crime Severity

When examining perceptions regarding crime severity from an evolutionary perspective, theorists have hypothesized that crimes committed by biologically related offenders would be viewed as more severe than those committed by strangers. This is consistent with inclusive fitness theory postulating that biological relatives are treated with more care than unrelated individuals (Quinsey et al., 1999). Furthermore, sexual crimes committed against children by relatives would also be viewed a more serious due to the negative effects of inbreeding depression (Florence Lespiau & Gwenael Kaminski, 2016).

Considering these issues, Quinsey et al. (1999) examined Canadian university student's responses to scenarios involving child sexual crimes across various levels of kinship and age (i.e., ages 11, 16, and 21). Within the scenarios, the kinship between the perpetrator and victim was varied, as was the age of the victim. Following the presented scenario, participants completed a questionnaire and reported their opinions regarding the severity of the offenses. Results indicated a positive relationship between biological kinship and crime severity. That is, as biological kinship increased, so did perceptions of crime severity (Quinsey et al., 1999). In addition, a significant positive linear trend was found for each age across biological kinship.

Another study conducted by Bornstein (2007) also examined perceptions of crime severity in child sexual abuse cases involving varied levels of biological kinship. Vignettes depicting a sexual abusive scenario between an adult and an 8-years-old child were presented to participants. Several factors were manipulated within the scenarios. Factors included victim sex, perpetrator sex, type of abuse, and the relationship to the victim (i.e., parent or babysitter). Following a review of the vignettes, participants were asked to rate several factors that included crime severity and degree of trauma. Results indicated that participants viewed crimes committed by parents as more severe and traumatic than those committed by unrelated offenders (Bornstein et al., 2007).

Another investigation conducted by Davies and Rogers (2009) examined variables such as victim-perpetrator relationship within a hypothetical child sexual abuse case scenario. The victim was identified as a female with varying age (5, 10, or 16-years-old). The perpetrator was identified as either a father, male family friend, or male

stranger. Results indicated that participants considered younger children as more credible than older victims. In addition, participants rated child sexual abuse cases more severe in scenarios where the father was the perpetrator (Davies & Rogers, 2009).

Sentencing Practices in Child Sexual Offending Cases

In the past years, numerous studies have examined the actual sentencing outcomes in child sexual abuse cases within the court system, including differences across varying degrees of kinship (Amirault & Beauregard, 2014; Levesque, 2000; McCormick et al., 1998; Patrick & Marsh, 2011). For example, McCormick et al. (1998) noted that offenders received lesser sentences when they were related to their victims. Levesque (2000) also examined sentencing practices by reviewing file information from 387 child sexual abuse cases that occurred between 1987 and 1991. Files were analyzed for sentence length, offender characteristics, and victim characteristics. Based on the assessment, the author reported almost no distinction between sentences based on biological kinship.

Canadian Sentencing Practices

According to Section 718.2 (a)(ii) of the Canadian Criminal Code, offenders should receive longer sentences when their victims are under the age of 18. However, no distinction is made between the various stages of the child's development (Branch, 2020; Coburn et al., 2017). Notwithstanding, more recent analyses within the Canadian judicial system have found discrepancies in court proceedings and dispositions across various types of child sexual assault cases. According to Rotenberg (2017), attrition during the judicial process was greatest in child sexual assault cases where the parent was the

perpetrator. Furthermore, these cases had a lower conviction rate (13%) compared to those involving pedophilic strangers (30%). It was also noted that cases involving victims who were 13-years-old or younger had a higher conviction rate (61%) than crimes where the victims were between the ages of 14-17 years of age (52%). Furthermore, Rotenberg (2017) found that parents convicted of sexually assaulting their children were more likely to receive a custodial sentence. That is, 79% of parents convicted of sexually offending against their children received a custodial sentence whereas 67% of other family members convicted received a custodial sentence. Finally, 52% of convictions involving stranger assailants resulted in custodial sentences (Rotenberg, 2017).

The above information provides some insight into actual sentencing practices for child sexual assault cases in Canada. Notwithstanding, less is known about public opinions regarding the sentencing of child sexual offenders, across varying degrees of kinship and age.

Punitive Beliefs for Child Sexual Assault Cases

Recent research has found public attitudes to be more punitive toward sexual offenders than other types of offenders (Cochran et al., 2021; Socia et al., 2019). However, punitive attitudes are complex (King & Roberts, 2017) and involve numerous motivational factors including a desire to punish the offender and the need to protect the public (Socia et al., 2019b; Sparks, 2020).

Several studies have examined community opinions regarding the sentencing of sexual offenders. One investigation conducted by Mears et al. (2008) utilized phone surveys to explore participant's opinions regarding sanctions for sexual crimes. The

authors reported that all participants identified imprisonment as an appropriate punishment for sexual assault, against both adults and children.

Another study conducted by Levenson et al. (2007) examined respondent's opinions regarding the length of sentences prescribed to sexual offenders. Results indicated a mean sentence length of 38.8 years and a mode of 99 years which was the highest number available to respondents. Another study conducted by Comartin et al. (2009) measured public opinions regarding the punishment of sexual offenders using telephone surveys. Results indicated that almost half of participants endorsed a life sentence for sexual offenders and 40% were supportive of castration.

Finally, a recent study explored college student's punitive attitudes relating to sexual offenders, particularly regarding using the death penalty in such cases (Dierenfeldt et al., 2020). The authors found that punitive attitudes were influenced by factors such as fear and the age of the victim. The authors noted an inverse relationship between participant's support for the death penalty and victim age. That is, more respondents endorsed the use of the death penalty in cases where the victims were younger such as children and adolescents.

Summary

Child sexual offenders are regarded as some of the most repugnant criminals within North American society (Olver & Barlow, 2010). Public response to these types of crimes include emotions such as fear, disgust, and aversion (Comartin et al., 2009; Kernsmith, et al., 2009; Stevenson et al., 2015). Furthermore, these emotions are related

to perceptions regarding crime severity and beliefs regarding punitive measures (Cochran et al., 2020; Socia et al., 2019).

In an effort to understand these offenders, evolutionary theory was utilized as it provide a framework for the function of these emotions and beliefs as they contribute to the preservation of the species (Antfolk, 2014). The theory also provided a viewpoint on the development of these types of behaviors. For example, hebephilia may be due to the male's attempt to increase the likelihood of paternity by increasing the probability of virginity and subsequent dependency (M. C. Seto, 2017). Pedophilia may be the result of an atypical form of the male's indiscriminate drive for procreation (Kenrick & Keefe, 1992b; M. C. Seto, 2018).

Previous research has focused on participant's emotional responses to numerous forms of child sexual abuse cases, including those involving various degrees of biological kinship (Kresanov et al., 2018). Other studies have examined public perceptions of crime severity (Quinsey et al., 1999) as well as punitive responses to sexual abuse cases (Socia et al., 2019). However, there is limited information regarding the intersection between emotional responses to child sexual abuse across varying degrees of biological kinship, age, perceptions of crime severity, and beliefs regarding sentencing of these offenders. For example, Klein and Cooper (2019) investigated the relationship between moral panic (fear) and punitive attitudes toward sexual offenders, noting a positive relationship between moral panic and support for punitive measures (Klein & Cooper, 2019). The present study attempted to bridge the gap in this area of study, and endeavored to provide a greater understanding of how emotional responses (i.e., fear and disgust) are related to

perceptions of crime severity, and intersect with beliefs regarding punitive measures for such offenses across varying degrees of kinship and victim age.

Chapter 3: Research Method

Introduction

The purpose of this quantitative study was to investigate how biological kinship and victim age influences perceptions and opinions associated with child sexual offending within a Canadian community sample. In this chapter, I provide an overview of the methodology used for the present study. I also describe the research design along with the rationale for its use. Information regarding the target population is provided in addition to information regarding sampling procedures. Instrumentation and operationalization of constructs are provided that support the research questions and test the hypotheses. Plans for data analysis is also discussed, followed by potential limitations and ethical considerations.

Research Design and Rationale

This study was a quantitative between-person experimental vignette design. I examined two independent variables (IV) that included the degree of kinship between the perpetrator and victim, and victim age. Degree of kinship consisted of three levels (father, stepfather, and neighbor) and victim age included two levels (ages 6 and 13). I examined four dependent variables (DV) were examined that included feelings of fear and aversion, and opinions regarding crime severity and sentencing.

I chose an experimental vignette design as it has several advantages over traditional survey methods. According to Steiner et al., (2016): (a) the scenarios depicted in the vignettes are realistic and therefore garner more genuine responses from participants, (b) multiple variables can be added and manipulated within the vignettes

allowing for individual factors to be measured and examined for possible interactions, and (c) the nature of the design ensures high internal validity, increasing the ability to make causal conclusions regarding attitudes and beliefs. Additionally, investigators have found that the responses to vignette experiments are less likely to be influenced by the social desirability bias compared to traditional surveys (Aguinis & Bradley, 2014; Steiner et al., 2016).

Experimental vignette surveys have been used in numerous studies of similar nature. For example, Socia et al. (2019) used a similar method when they presented participants with vignettes followed by a questionnaire measuring punitive attitudes toward individuals convicted of sexual offenses. Jahnke (2018) also used an experimental vignette design in a study developed to measure cognitions and affect relating to the stigma of nonoffending pedophiles.

I determined that an experimental vignette design was appropriate for the present study as it allowed for variables regarding a sensitive subject (i.e., child sexual abuse) to be manipulated in an ethical manner. Additionally, it allowed for a high degree of control of the independent variables. This advantage is also underscored by Aguinis & Bradley (2014) who note that vignette designs allow for relevant factors to be included while confounding variables can be omitted.

Methodology

Population and Sampling Procedure

For the current investigation, the population of interest was Canadian citizens who were 18-years-old and older, encompassing an $N = 22\,867\,727$ (Government of Canada,

Statistics Canada, 2020). Qualtrics, the internet-based global market research company recruited the sample of participants. I chose to use Qualtrics as it facilitated access to large pool of diverse samples, was cost effective, was faster than conventional methods of data collection, and is easy to replicate due to standardized data collection processes.

I calculated the sample size for the project using the G*Power 3.1 software sample size calculator (*G*Power Guide*, n.d.). I utilized several factors to determine the sample size required for the study. Factors included the alpha level, statistical power, and the effect size. The alpha level (α) is the probability of rejecting the null hypothesis assuming that the null hypothesis is true. The critical value that I selected for the present study was an α error probability $= 0.05$. The statistical power is the probability of rejecting the null hypothesis assuming that the alternative hypothesis is true. A power level for the present study was (1- β error probability) $= 0.80$. The effect size is the difference between the parameter values assumed by the null and alternative hypotheses. I determined the effect size (f^2) using the G*Power calculator and by conducting a review of similar investigations (Harper & Bartels, 2017; Jahnke, 2018; Socia et al., 2019). Based on my review of the research and the G*Power calculation, I chose an $f^2 = 0.1$. Additionally, based on the identified parameters, I determined that a minimum sample size of 80 (n=80) was required for the investigation.

Procedures for Recruitment, Participation, and Data Collection

I utilized the Qualtrics online survey platform to recruit Canadian citizens between the ages of 18 and 65 for participation in the study (*Qualtrics XM - Experience Management Software*, 2020). Once recruited, Qualtrics administered the consent form,

conducted the survey, and collected the results. Once the data were collected, Qualtrics transferred the dataset to me for analysis.

Prior to participation, Qualtrics provided respondents with a consent form that explained the voluntary nature of the study, all potential risks and benefits, and who to contact with any questions or concerns regarding the study. Once participants provided consent, the research study commenced with the presentation of a short hypothetical vignette. The vignette described a child who had disclosed to her teacher that she had been sexually abused (Appendix A). Six versions of the vignette were developed by factorially crossing two factors: kinship between the perpetrator and the victim (father, stepfather, or neighbor) and victim age (6 and 13).

Qualtrics randomly assigned participants to review one of the six versions of the vignettes representing the experimental conditions. After reviewing the vignette, participants were asked to respond to 15 questions designed to measure perceptions of fear and aversion relating to the perpetrator. Participants were also be asked to provide opinions regarding the severity of the crime and sentencing of the offender (Appendix B). A brief demographic survey was administered following the completion of the questionnaire (Appendix C). The approximate time required to complete the survey was determined to be between10 – 15 minutes.

Instrumentation and Operationalization of Constructs

Survey Questions

Several instruments have been developed that measure attitudes toward sexual offenders (Hogue & Harper, 2019). While these instruments are valid and are widely

used, I determined that they are not compatible with the present investigation as they do not address the variables being examined. For example, the Community Attitudes Toward Sex Offenders Scale (CATSO), developed by Church et al. (2008) is an 18-item self-report measure that is used to examine community perceptions regarding behaviors such as social isolation, capacity to change, crime severity and dangerousness, and sexual deviancy. I determined that this instrument not suitable for the present study as it did not capture responses regarding fear, aversion, or sentencing opinions. Additionally, the instrument did not examine differences based on biological kinship or victim age.

The Perceptions of Sex Offenders (PSO) is a more recent 20-item scale developed by Harper and Hogue (2015). The PSO is designed to examine three factors relating to perceptions of sexual offenders. Factor 1 involves perceptions regarding sentencing and management, Factor 2 involves stereotype endorsement, and Factors 3 consists of risk perception. Similar to the CATSO, the PSO does not address the factors identified in the current study, nor does it address variances in biological kinship or victim age.

The Attitudes to Sexual Offenders Scale (ATS) was also developed to measure community views regarding sexual offenders (Hogue, 1993). A shortened version of the instrument (ATS-21) consists of 21 questions designed to measure attitudes toward sexual offenders that include trust, social distance, and intent (Hogue & Harper, 2019). Similar to the CATSO and PSO, the ATS-21 addresses perceptions from a macro perspective and does not break down the criminal behavior based on factors such as victim age and kinship.

Due to the absence of an instrument that captured the variables being investigated in the study, I determined that an instrument was needed that was succinct and that could accurately capture the required responses. To meet these needs, I conducted a comprehensive review of the literature and consulted with known experts in the field of study (S. Hart, personal communication, June 1, 2020; M. Seto, personal communication, June 2, 2020; R. Zanatta, personal communication, October 18, 2020). The survey developed for the present study consists of four scales designed to measure affective responses of fear and aversion, and opinions relating to crime severity and sentencing.

Vignettes

To determine whether responses differed based on the variations of the independent variables (degree of biological kinship and age of child victim), I had participants assigned to one of six conditions. Each condition included a short hypothetical vignette (example below) that described a child who disclosed that she had been sexually assaulted. The age of the victim was varied (ages 6 and 13) as was the degree of kinship between the perpetrator to the victim (father, stepfather, or neighbor). All other factors within the vignettes remained constant. An example of the vignette is as follows.

> Hannah, a 6-year-old girl informed her school teacher that her father has been sexually assaulting her for some time. Her teacher called the police and Hannah was taken to a hospital where an examination confirmed that she had been sexually assaulted. Her father was arrested.

Demographic Questionnaire

I created a demographic questionnaire (Appendix C) to assess several variables including age, gender, education, parenting status, and whether they had been affected by child sexual abuse.

Operationalization of Variables

Independent Variables

Kinship

Kinship refers to the degree of biological kinship between individuals. For the present investigation, biological kinship was varied between the perpetrator and victim. Evolutionary theory posits that biologically related individuals are more protective and nurturing toward one another compared to unrelated individuals. This notion was supported by research findings indicating that biologically related individuals were more altruistic than unrelated individuals (Quinsey et al., 1999).

Biological kinship has also been examined as it relates to child sexual abuse. For example, Antfolk et al. (2012) measured respondent's disgust and incest aversion across varying degrees of kinship. The authors noted a positive relationship between aversive feelings and biological kinship. That is, as kinship increased, so did feelings of disgust and incest aversion.

For the present study, the level of biological kinship between the perpetrator and victim was varied to determine if respondent's perceptions and opinions differed based on this variable. Biological kinship consisted of three levels that included biological father, stepfather, and neighbor.

Victim Age

The age of the victim was varied (ages 6 and 13) to determine whether victim age had an effect on responses provided. Victim age has been a factor considered in studies exploring perceptions relating to factors such as victim credibility, responsibility, and crime severity. According to Davies and Rogers (2009), younger victims (age 6) have been perceived by respondents as more credible than older victims (age 14). Davies and Rogers (2009) also noted that there is strong evidence that older children may be perceived as having some responsibility in their victimization due to maturation and an increased understanding of sexual behavior. Rogers et al. (2007) also examined the effect of victim age on perceptions relating to child sexual abuse and noted that younger victims (10-years-old) were rated as more credible and less blameworthy than older victims (15-years-old). The authors suggested that this may be due to the developmental factors relating to vulnerability and sexual naiveté in younger victims. Because previous research has found differences in responses based on the age of the child victim, it seemed appropriate to assess whether the age of the victim also influenced responses in the present study.

Dependent Variables

Fear

Fear is a central threat emotion that signals an individual to biological or psychological harm (Xu et al., 2015). This results in the sympathetic pathway response commonly known as fight or flight. The variable fear has been identified as a prominent emotion related to pedophilia and child sexual offending behaviors (Jahnke, 2018).

According to Jahnke (2015) 62% of German and 59% of American participants reported experiencing feelings of fear when thinking about people with pedophilia.

Other research has investigated the fear response across varying types of sexual offending behaviors. For example, Kernsmith et al. (2009) found that participants reported the highest levels of fear toward sexual offenders who victimize children compared to other sexual crimes. Another study conducted by Jahnke (2018) examined the role of emotions including fear and disgust. Findings indicated that fear and anger mediated the effect of punitive attitudes. Comartin et al. (2009) also found that fear of sexual offenders was positively associated to support for public policy regarding punitive measures.

As indicated above, fear has been determined to be a prominent emotion related to child sexual abuse. For the purpose of the present investigation, I measured the emotion fear to determine whether it varied depending on the degree of kinship between the perpetrator and victim, as well as across victim age. For the investigation, fear was measured using a Likert-type scale.

Aversion

According to Dictionary.com (2020), aversion refers to an extreme dislike and disgust accompanied by avoidant behavior and rejection. According to Krusemark and Li, (2011) aversion is part of the disgust response, which is a central threat emotion initiating distress and avoidance of biological or psychological harm. From a physiological perspective, disgust is a parasympathetic response to threat. It provokes sensory rejection, causing the individual to minimize contact with harmful objects for the

purpose of preservation. This differs from incest aversion, which refers to a lack of sexual attraction toward biological relatives (Kresanov et al., 2018). However, both constructs involve parasympathetic responses grounded in evolutionary theory intended to preserve life and the species. For the purpose of the present investigation, I referred to aversion as avoidant behaviors exhibited for the protection of the species. I measured aversion using a Likert-type scale.

Crime Severity

I assessed crime severity as it has been found to be strongly influenced by the nature of the crime committed, including child sexual abuse. Previous research has found that the degree of biological kinship is positively related to perceptions of crime severity. That is, as kinship increases, so do perceptions of crime severity (Quinsey et al., 1999). This is consistent with the theory of inclusive fitness that suggests that individuals are more invested and supportive of their own genetic relatives (Antfolk et al., 2018). However, little is known about the relationship between perceived crime severity and opinions regarding sentence length in child sexual abuse cases, particularly across varying degrees of kinship. The present study investigated the relationship between crime severity and biological kinship across victim age, while holding constant the child sexual abuse case. (Coburn et al., 2017; Harper & Harris, 2017; Imhoff, 2015; Imhoff & Jahnke, 2018, 2018; Payne et al., 2004; Quinsey et al., 1999; Socia et al., 2019; Stevenson et al., 2015). I measured crime severity using a Likert-type scale.

Sentence Length

Sentence length in child sexual assaults cases has not been a significant area of focus for research (Coburn et al., 2017). However, some investigators have noted a positive relationship between sentence length and crime severity (Faller et al., 2006; Hilinski-Rosick et al., 2014). However, according to Coburn et al. (2017), while crime severity has typically been found to correlate with variability in sentences, the definition of crime severity may be variable and the age of the victim may also serve as a confound. I designed the current study to examine the relationship between community opinions regarding sentence length and biological kinship, controlling for age and type of child sexual crime. Participants provided opinions regarding the length of sentence (ranging between 0 and 100 years) that the perpetrator should serve.

Data Analysis

Analysis Methods

I performed the Data analysis using SPSS version 27.0 for Mac and conducted a two-way MANOVA to compare the means for the dependent variables. This was appropriate for this investigation as the purpose of a two-way MANOVA is to determine if there is an interaction effect across the variables. That is, it helps determine whether the effect of an independent variable on the dependent variables relies on the value of other independent variables. In addition to interactions, the main effect of each independent variable was assessed.

Research Questions

RQ1: Does the level of fear reported vary significantly depending on the degree of kinship between the perpetrator and child victim?

$H_0 1$: Fear will not vary significantly across degrees of kinship between the perpetrator and child victim.

$H_a 1$: Fear will vary significantly across degrees of kinship between the perpetrator and child victim.

RQ2: Does the level of fear reported vary significantly depending on the age of the child victim?

$H_0 2$: Fear will not vary significantly depending on the age of the child victim.

$H_a 2$: Fear will vary significantly depending on the age of the child victim.

RQ3: Does the level of aversion reported vary significantly depending on the degree of kinship between the perpetrator and victim?

$H_0 3$: Aversion will not vary significantly depending on the degree of kinship between the perpetrator and victim.

$H_a 3$: Aversion will vary significantly depending on the degree of kinship between the perpetrator and victim.

RQ4: Does the level of aversion reported vary significantly across victim age?

$H_0 4$: Aversion will not vary significantly across victim age.

$H_a 4$: Aversion will vary significantly across victim age.

RQ5: Do opinions regarding crime severity vary significantly depending on the degree of kinship between perpetrator and victim?

$H_0$5: Opinions regarding crime severity will not vary significantly depending on the degree of kinship between a perpetrator and victim.

H_a5: Opinions regarding crime severity will vary significantly depending on the degree of kinship between a perpetrator and child victim.

RQ6: Do opinions regarding crime severity vary significantly depending on the age of the victim?

$H_0$6: Opinions regarding crime severity will not vary significantly depending on the age of the child victim.

H_a6: Opinions regarding crime severity will vary significantly depending on the age of the child victim.

RQ7: Do opinions regarding sentencing vary significantly depending on the degree of kinship between perpetrator and child victim?

$H_0$7: Opinions regarding sentencing will not vary significantly depending on the degree of kinship between a perpetrator and child victim.

H_a7: Opinions regarding sentencing will vary significantly depending on the degree of kinship between a perpetrator and child victim.

RQ8: Do opinions regarding sentencing vary significantly depending on the age of the child victim?

$H_0$8: Opinions regarding sentencing will not vary significantly based on the age of the child victim.

H_a8: Opinions regarding sentencing will vary significantly based on the age of the child victim.

Threats to Validity

The aim of the present study was to provide a better understanding of perceptions regarding child sexual offenders and opinions relating to crime severity and the adjudication of such cases within the courts. The use of an experimental vignette methodology has some limitations, particularly within a between-person design. When using a between-person design, a participant responds to a single vignette and therefore does not provide a comparison that assist to ground their responses contextually. This may challenge the ability to capture the participant's authentic judgment (Aguinis & Bradley, 2014).

Another limitation relates to the specifics of the scenario presented to participant. That is, the factors and factor levels identified in the vignette, and the selection of participants does not allow for inferences to be made in other settings, factors, or populations. However, incorporating a survey and random sampling of participants allows for external validity to the target population (Steiner et al., 2016).

Ethical Procedures

To ensure that ethical issues relating to the investigation were sufficiently addressed, approval was obtained from the Walden University Institutional Review Board prior to commencing the study. Once approval was obtained, participants were recruited via the Qualtrics research platform. Prior to their participation, respondents were given a consent form providing information regarding the voluntary nature of the study and any potential risks and benefits to their participation. Participants were also be

provided contact information should they have any questions or concerns regarding the investigation.

The current study presented some risk to participants, particularly those who previously experienced or witnessed child sexual abuse. Participants were informed of this risk and given an opportunity to decline participation if they chose. For those participants who chose to proceed with the study and who experienced feelings of discomfort or distress, information for contacting the Crisis Service Canada was provided.

The data obtained from the investigation was obtained by the third party internet survey organization Qualtrics. Once the data was collected, Qualtrics transferred the information to the writer for analysis. The information is being maintained on an external hard drive for a period no less than 5 years. To ensure participant's information remains confidential, identifying information was not obtained in the survey responses, nor was it included in any retained data.

Summary

The purpose of this quantitative study was to examine the relationship between perceptions of fear and aversion, and opinions regarding crime severity and sentencing across various levels of biological kinship and victim age. Using a between-subjects experimental vignette design, participants viewed one of six vignettes followed by a questionnaire designed to measure perceptions of fear and version, and opinions regarding crime severity and sentencing of the perpetrator.

Once the data was collected, analyses was conducted to determine whether the outcome variables differed based on biological related and victim age. In addition, analyses were conducted to determine any interaction effects. Based on the findings, conclusions and recommendations for future research were made.

Chapter 4: Results

Introduction

The purpose of this quantitative between-person experimental vignette study was to examine perceptions of fear and aversion, as well as opinions regarding crime severity and sentencing relating to child sexual offending across varying degrees of kinship and victim age. In this chapter, I provide an overview of the data collection procedures, outlines the demographic features of the sample, describes the methods used for analyzing the data, and reviews the descriptive characteristics of the sample. Finally, I review the results of the statistics analysis and provide the findings of the research.

Research Questions and Hypotheses

This study was guided by the following eight research questions:

RQ1: Does the level of fear reported vary significantly depending on the degree of kinship between the perpetrator and child victim?

$H_0$1: Fear will not vary significantly across degrees of kinship between the perpetrator and child victim.

H_a1: Fear will vary significantly across degrees of kinship between the perpetrator and child victim.

RQ2: Does the level of fear reported vary significantly depending on the age of the child victim?

$H_0$2: Fear will not vary significantly depending on the age of the child victim.

H_a2: Fear will vary significantly depending on the age of the child victim.

RQ3: Does the level of aversion reported vary significantly depending on the degree of kinship between the perpetrator and victim?

$H_0 3$: Aversion will not vary significantly depending on the degree of kinship between the perpetrator and victim.

$H_a 3$: Aversion will vary significantly depending on the degree of kinship between the perpetrator and victim.

RQ4: Does the level of aversion reported vary significantly across victim age?

$H_0 4$: Aversion will not vary significantly across victim age.

$H_a 4$: Aversion will vary significantly across victim age.

RQ5: Do opinions regarding crime severity vary significantly depending on the degree of kinship between perpetrator and victim?

$H_0 5$: Opinions regarding crime severity will not vary significantly depending on the degree of kinship between a perpetrator and victim.

$H_a 5$: Opinions regarding crime severity will vary significantly depending on the degree of kinship between a perpetrator and child victim.

RQ6: Do opinions regarding crime severity vary significantly depending on the age of the victim?

$H_0 6$: Opinions regarding crime severity will not vary significantly depending on the age of the child victim.

$H_a 6$: Opinions regarding crime severity will vary significantly depending on the age of the child victim.

RQ7: Do opinions regarding sentencing vary significantly depending on the degree of kinship between perpetrator and child victim?

$H_0$7: Opinions regarding sentencing will not vary significantly depending on the degree of kinship between a perpetrator and child victim.

H_a7: Opinions regarding sentencing will vary significantly depending on the degree of kinship between a perpetrator and child victim.

RQ8: Do opinions regarding sentencing vary significantly depending on the age of the child victim?

$H_0$8: Opinions regarding sentencing will not vary significantly based on the age of the child victim.

H_a8: Opinions regarding sentencing will vary significantly based on the age of the child victim.

Data Collection

The sampling group consisted of Canadian Qualtrics participants who were at least 18 years of age. I asked the Qualtrics team to collect at least 80 surveys to meet the required sample size as calculated using G*power 3.1 software. The survey was launched on April 20, 2021. Approximately 1.5 hours after the launch, the research services project manager sent notification that 200 completed surveys had been submitted and closed the study. As a result, the number of responses exceeded the required sample size for the study.

<p style="text-align:center">Descriptive analysis and demographic characteristics</p>

Descriptive Statistics

Table 1 contains the summary statistics of the sample. There were 200 valid
entries. The table depicts of the mean of each variable. The table also indicates the
presence of skewness and kurtosis across all the dependent variables. The presence of
skewness indicates that there is a lack of symmetry in the distribution. Kurtosis indicates
that the data is heavy or light-tailed relative to a normal distribution. This outcome may
have been the result of a ceiling or floor effect in responses.

Table 1

Summary Statistics

Response	N Statistic	Range Statistic	Minimum Statistic	Maximum Statistic	Mean Statistics	Std. Error	Std. Deviation	Skewness Statistic	Std. Error	Kurtosis Statistic	Std. Error
Anxiety	200	3.20	1.80	5.00	3.0100	.05919	.83702	.286	.172	-1.026	.342
Fear	200	3.40	1.60	5.00	3.7700	.06005	.84918	-.613	.172	-.532	.342
Sentencing	200	98	2	100	44.25	2.299	32.515	.648	.172	-.975	.342
Severity	200	3.25	1.00	4.25	3.4950	.05257	.74346	-1.602	.172	1.912	.342
Valid	200										

Demographic Data

The demographic survey consisted of five questions. Participants were asked to
provide information regarding their gender, age range, level of education, whether they
had been affected by child sexual abuse, and whether they raised a child.

The Sample consisted of 59% female ($n = 118$), 40.5% male ($n = 81$), and 0.5%
gender variant ($n = 1$) participants (Table 2). This distribution is similar to the Canadian

population. According to Statistics Canada, in 2020, the male to female ration was 98.54 males per 100 females (Government of Canada, 2020). Therefore, I concluded that on the basis of gender, the sample was reasonably representative of the Canadian population.

Table 2

Participant Gender

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Female	118	59.0	49.0	59.0
Gender Variant	1	.5	.5	59.5
Male	81	40.5	40.5	100.00
Total	200	100.0	100.0	

The age of the participants ranged from 18 years and older. Table 3 depicts an analysis of the distribution across the sample. This was also compared with the age distribution across the Canadian population and determined to be representative of the population of interest (Figure 1).

Table 3

Participant Age

Age Range	Frequency	Percent	Valid Percent	Cumulative Percent
18-24	9	4.5	4.5	4.5
25-34	34	17.0	17.0	21.5
35-44	39	19.5	19.5	41.0
45-54	49	24.5	24.5	65.6
55-64	46	23.0	23.0	88.5
65-74	21	10.5	10.5	99.0
75-84	2	1.0	1.0	100.0
Total	200	100.0	100.0	

Figure 1

Comparison of Age by Percentages
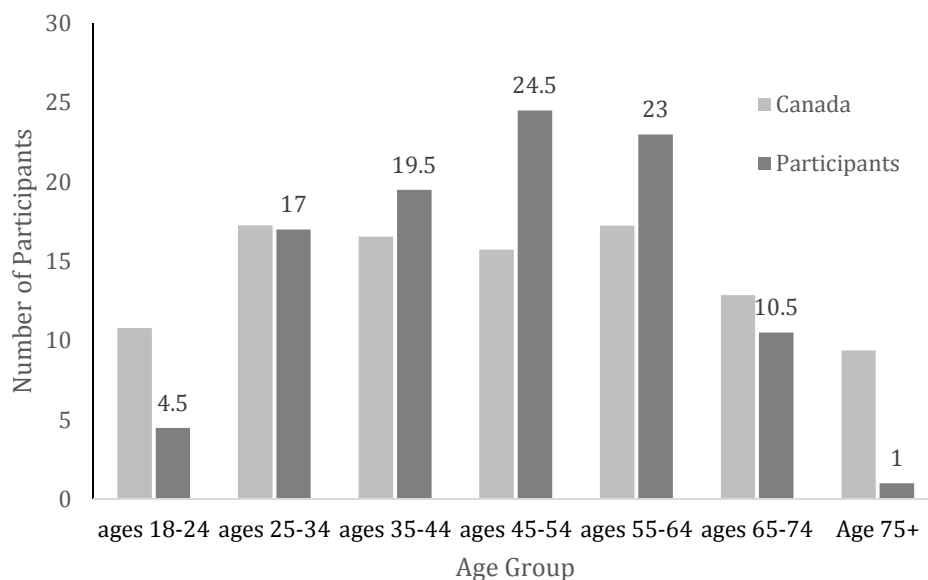
Another demographic factor that was explored involved participant level of education. Table 4 depicts the level of education reported by participants. Results indicated that 57% of participants reported having college or university qualifications. This result is similar to the 2016 Canadian census data that determined that 54% of Canadians between the ages of 35 – 64 had either a college of university degree (*Education in Canada: Key Results from the 2016 Census*, 2017).

Table 4

Participant Education

Level of Education	Frequency	Percent	Valid Percent	Cumulative Percent
Bachelor's Degree	82	41.0	41.0	41.0
College Diploma	30	15.0	15.0	56.0
High School Graduate	51	25.5	25.5	81.5
Master's Degree	22	11.0	11.0	92.5
PhD or Higher	2.	1.0	1.0	93.5
Some High School	3	1.5	1.5	95.0
Trade School	10	5.0	5.0	100.0
Total	200	100.0	100.0	

Participants were also asked if they had participated in raising a child. Results indicated that 60.5% of respondents reported having raised a child while 39.5% had not (Table 5). This is somewhat higher than the Canadian population as indicated by 2016 census information. According to Statistics Canada, 51.1% of Canadians reported having children (Government of Canada, 2017). The discrepancy in reporting however may be due to the phrasing of the question within the demographic survey that asked if participants has participated in raising a child and not whether they parented a child. As such, the results appear to be relatively consistent with the general population.

Table 5

Parenting History

Parented	Percent	Valid Percent	Cumulative Percent
No	79	39.5	39.5
Yes	121	60.5	100.0
Total	200	100.0	100.0

The final questions presented in the demographic survey was whether participants had been affected by child sexual abuse. According to the Canadian Centre for Child Protection, 1 in 10 Canadians reported being sexually victimized as a child or youth 10/19/2021 11:01:00 PM. This number appears to be compatible with survey responses where 14% of respondents indicated that they have been affected by child sexual abuse in some way.

Table 6

Participant's Affected by Child Sexual Abuse

Response	Frequency	Percent	Valid Percent	Cumulative Percent
No	172	86.0	86.0	86.0
Yes	28	14.0	14.0	100.0
Total	200	100.0	100.0	

Results

Data and Statistical Analysis

A Multi-Variate Analysis of Variance (MANOVA) was an appropriate statistical test as it uses multiple dependent variables while having more than one independent variable. The research question for the current analysis was whether there was a relationship between participant's affective responses and opinions (i.e., fear, aversion, crime severity, and sentencing) relating to child sexual abuse, and the degree of relatedness between the perpetrator and victim, and victim age. The continuous dependent variables used for this data were fear, anxiety, perceptions of crime severity,

and sentencing opinions. The independent fixed categorical variables were biological

relatedness (father, stepfather, and neighbor) and victim age (ages 6 and 13).

The null hypothesis was that the degree of relatedness between the perpetrator and

victim, and victim age would not be predictive of any of the dependent variables (fear,

aversion, perceived crime severity, and sentencing opinions).

The data output depicted in Table 7 is the Box's Test of Equality of Covariances

Matrices. This is an assumption of the MANOVA and tests the null hypothesis that the

observed covariances matrices of the dependent variables are equal across groups

(Warner, 2013). The result of the current analysis is not statistically significant indicating

that the assumption has been met.

Table 7

Box's Test of Equality of Covariance Matrices

Box's M	34.025
F	.644
df1	50
df2	63812.409
Sig.	.976

The multivariate tests output (Table 8) indicates that there is no significant main

effect for the vignettes. The result obtained is $\Lambda = .919$, $F(20, 634.425) = .823$, $p > .05$).

Table 8

Multivariate Tests

	Effect	Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.989	4212.205	4.000	191.000	.000
	Wilk's Lambda	.011	4212.205	4.000	191.000	.000
	Hotelling's Trace	88.214	4212.205	4.000	191.000	.000
	Roy's Largest Root	88.214	4212.205	4.000	191.000	.000
Vignettes	Pillai's Trace	.084	.829	20.000	776.000	.679
	Wilk's Lambda	.919	.823	20.000	634.425	.687
	Hotelling's Trace	.086	.817	20.000	758.000	.695
	Roy's Largest Root	.043	1.669	5.000	194.000	.1444

The Levene's Test of Equality of Error Variances (Table 9) was used to examine whether the error variances was equal across the dependent variables. The output shown in Table 9 shows that the variables are above the threshold of $p = .05$. Therefore, equality can be assumed.

Table 9

Levene's Test of Equality of Error Variances

		Levene's Statistic	df1	df2	Sig.
Sentencing	Based on Mean	.596	5	194	.703
	Based on Median	.309	5	194	.907
	Based on Median and with adjusted df	.309	5	185.462	.907
	Based on trimmed mean	.597	5	194	.702
Fear	Based on Mean	.862	5	194	.508
	Based on Median	.752	5	194	.586
	Based on Median and with adjusted df	.752	5	176.435	.586
	Based on trimmed mean	.858	5	194	.510
Severity	Based on Mean	.641	5	194	.669
	Based on Median	.816	5	194	.540
	Based on Median and with adjusted df	.816	5	169.433	.540
	Based on trimmed mean	.746	5	194	.590
Anxiety	Based on Mean	.332	5	194	.893
	Based on Median	.261	5	194	.934
	Based on Median and with adjusted df	.261	5	185.314	.934
	Based on trimmed mean	.312	5	194	.906

Results indicate that the degree of relatedness between the offender and child does not differ across the dependent variables (fear, aversion, opinions regarding crime severity and sentencing). A possible reason for the null results was the time taken to complete the survey. Table 10 depicts that the mean duration in seconds to complete the survey was 237.14 seconds (3.95 minutes). Figure 2 illustrates the distribution of responses with the majority falling around the 3-minute duration timeframe. This finding was concerning as the average time does not seem sufficient to read and consider the consent form, read the vignettes, and questions presented.

Table 10

Completion Time in Seconds

N	
Valid	200
Missing	0
Mean	237.14
Median	199.50
Range	1051
Minimum	108
Maximum	1159

Figure 2

Completion Time in Seconds
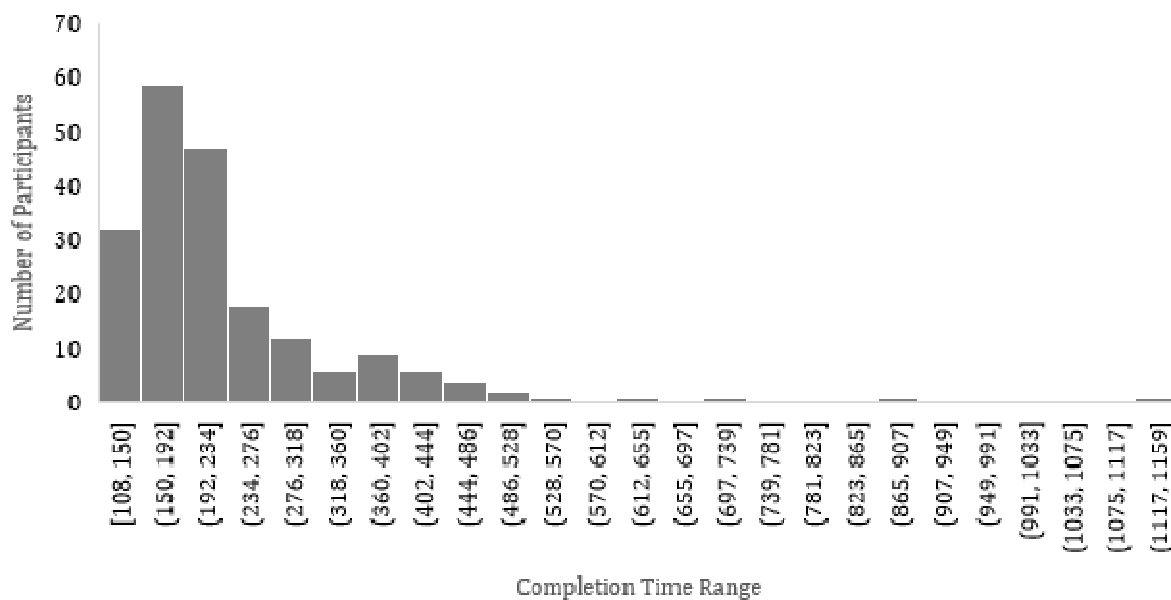
Considering this outcome, another analysis was conducted using data from participants who took a minimum of 5 minutes to complete the survey. A review of the

data determined that 35 participants completed their surveys in a minimum of five

minutes (Table 11) with a mean of 447.03 seconds (7.45 minutes). A MANOVA was

conducted on these responses.

Table 11

Completion Time in Seconds (> 5 minutes)

N	Valid	35
	Missing	0
Mean		447.03
Median		400.00
Range		172.026
Minimum		306
Maximum		1159

The data output depicted in Table 12 is the Box's Test of Equality of Covariances

Matrices. This is an assumption of the MANOVA and tests the null hypothesis that the

observed covariances matrices of the dependent variables are equal across groups

(Warner, 2013). The result of the current analysis is not statistically significant indicating

that the assumption has been met.

Table 12

Box's Test of Equity of Covariance Matrices

Box's M	74.661
F	1.087
df1	40
df2	982.599
Sig.	.329

The multivariate tests output (Table 13) indicates that there was no significant main effect for completion times more than 5 minutes. The result obtained is $\Lambda = .750$, $F(20, 83.865) = .380, p > .05)$.

Table 13

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.995	1151.728	4.000	25.000	.000
	Wilk's Lambda	.005	1151.728	4.000	25.000	.000
	Hotelling's Trace	184.276	1151.728	4.000	25.000	.000
	Roy's Largest Root	184.276	1151.728	4.000	25.000	.000
Vignettes	Pillai's Trace	.271	.407	20.000	112.000	.988
	Wilk's Lambda	.750	.380	20.000	83.865	.992
	Hotelling's Trace	.306	.359	20.000	94.000	.994
	Roy's Largest Root	.161	.904	5.000	28.000	.493

The outcomes produced by the statistical tests determined that participant's reported responses of fear and aversion, perceptions of crime severity, and opinions

regarding sentencing were not associated with the relatedness between perpetrator and victim and victim age.

Summary

The purpose of this quantitative between-person experimental vignette study was to examine perceptions of fear and aversion, as well as opinions regarding crime severity and sentencing relating to child sexual offending across varying degrees of kinship and victim age.

This chapter provided a review of the research questions and hypotheses, including a review of descriptive and demographic data. Statistical analyses were conducted using SPSS. Results indicated that there were no significant differences in perceptions based on degree of kinship or victim age. Post hoc tests were not performed as all results were determined to not be significant. Chapter 5 provides a summary of the research and a discussion regarding the findings. Limitations and recommendations for future research are also addressed in addition to potential for positive social change.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this quantitative study was a test of evolutionary theory's concept of inclusive fitness by exploring how the relationship between child sexual offenders and victims, as well as victim age affects emotional responses of fear and aversion, as well as opinions regarding crime severity and length of sentence. The outcomes produced by the statistical tests determined that participant's reported responses of fear and aversion, perceptions of crime severity, and opinions regarding sentencing were not associated with the relatedness between perpetrator and victim and victim age. Within this chapter the conclusions of the statistical analysis will be discussed and will outline how the literature connects with this research. I will also present the limitations, implications for social change, and future recommendations.

Interpretation of the Findings

Based on inclusive fitness theory (Quinsey et al., 1999), I expected that there would be a positive relationship between the degree of relatedness (IV) and perceptions of fear and aversion, as well as opinions regarding crime severity, and length of sentencing (DV).The findings of this study however showed that the measures used to examine relatedness between the independent variables (relationship between child sex offender and victim, and victim age) and dependent variables (perceptions of fear, aversion, opinions regarding sentencing, and crime severity) did not produce statistically significant results.

These findings are somewhat unexpected, particularly from an evolutionary perspective. According to evolutionary theory, taboos and social norms have been developed that discourage sexual relationship between biologically related kin. This has been done in an effort to support the survival of the species (C. Darwin, 1872; Kresanov et al., 2018; Westermarck, 1906). Based on this theory, it would be expected that the results show a positive relationship between the degree of relatedness (IV) and the perceptions of fear, aversion, crime severity, and sentencing (DV).

Findings from previous research also have found a positive linear relationship between variables similar to those examined in the present study. For example, Kresanov et al. (2018) examined the respondent's aversive responses and found a positive linear relationship. That is, as biological kinship increased between the offender and victim, so did respondent's aversive responses increase. Quinsey (1999) investigated respondent's perceptions of crime severity across varied levels of relatedness between perpetrators and victims. Similar to Kresanov et al.'s (2018) findings, the Quinsey (1999) found a positive linear relationship. That is, as relatedness increased, so did perceptions of crime severity.

While previous research has found statistically significant relationships between perceptions of aversion, sentencing, and crime severity across levels of biological relatedness, investigations have not examined perceptions relating to sexual crimes involving child victims or across varying ages of child victims; nor have they examined if there is a relationship across the dependent variables (fear, aversion, crime severity, and sentencing).

Based on previous findings and a review of the present study, I identified several factors that may have contributed to the null results. According to the statistical analysis, there is evidence of skewedness and kurtosis across all dependent variables. That is, the data was either heavy or light-tailed relative to a normal distribution. This may be evidence of a ceiling or floor effect in the responses.

As such, it may be that the survey lacked the sensitivity required to capture subtle differences in respondent's perceptions (fear and aversion) and opinions (sentencing and crime severity). According to Olver and Barlow (2010), all child sex offenders are seen as abhorrent by the public, therefore differences may be more difficult to detect and require a more sensitive instrument. As such, more research is needed to determine whether the present results are valid.

Limitations and Recommendations

This study was designed to examine if the degree of relatedness between child sexual offenders and their victims, and differences in victim age affected emotional responses (fear and aversion) and opinions (crime severity and length of sentencing) in a community sample. The results indicated no significant differences in responses across all independent variables. I identified several limitations that may have contributed to the null results.

The sample in this study was drawn from Qualtrics, an internet-based global market research company. Individuals within the Qualtrics subject pool are matched with research projects and invited to participate. They are financially compensated for their participation. While this sampling technique was quick and efficient, it also has several

limitations. For example, a review of the responses in this study indicated that 82.5% of participants completed the survey in less than 5 minutes which may not have been a sufficient amount of time to complete the survey in a thoughtful manner. If so, the responses may not have accurately reflected participants' genuine responses to the scenarios presented. However, further analysis excluding responders that completed the survey in less than 5 minutes rendered similar results (i.e., no significant differences). In future research, a pilot study could be used to determine the minimum or reasonable amount of time required to complete the survey in a thoughtful manner. A condition could then be created within the Qualtrics platform wherein only responses that meet or exceed the minimum amount of time would be accepted.

Another approach to ensuring thoughtful or sufficient engagement would be to include several *dummy* questions within the survey. These questions may be related to the vignette or simply irrelevant questions and could alert the researcher to participants who have not engaged in the survey process. Asking participants who sexually abused the child (i.e., A: Her father; B: Her stepfather; C: Her neighbor; D: A stranger) would be an example of a question related to the vignette and could be used as a rough gauge of whether the participant was attending to details. Asking who is the Prime Minister of Canada would be an example of irrelevant question but may disrupt any tendency to answer Likert-type scales in the same manner.

Conducting this study in person rather than using an online platform would be another way to monitor the time and level of engagement of participants. The researcher may be able to ensure that consent has been thoroughly reviewed and can monitor

participants as they complete the survey. While in-person participation may increase the level of engagement and ensure more uniformity in the manner the research was conducted; it would also add challenges to the recruitment of subjects and the length of time required to conduct the research particularly when trying to secure a representative community sample.

Another limitation relates to the use of the experimental vignette methodology. According to Aguinis and Bradley (2014), exposing participants to a single vignette does not allow for comparisons that may ground their responses. This may limit the ability to extract participant's authentic judgements relating to the presented scenario. This limitation may have contributed to the skewedness and kurtosis identified in the statistical analyses, suggesting the presence of a floor or ceiling effect. In other words, participants across all groups tended to respond in particular manner (or direction) and finer distinctions may have been possible if participants were presented with multiple vignettes that differed in degree or according to the variables of interest.

Another factor that may have limited the validity of the present study was the length and content of the vignettes presented to participants. I designed the vignettes to be identical across all conditions, with the exception of variations in the independent variables (relatedness between perpetrator and victim, and victim age). I also designed the vignettes to be short in an effort to minimize any potential distress that may have resulted due to the content (child sexual assault). However, this may also have limited participant's ability to emotionally identify or connect with the scenario which may have restricted the ability to capture differences in responses obtained by the survey questions.

Providing more information about the victim, the perpetrator, and their dynamics may increase participants' understanding of the circumstances surrounding the sexually assaultive behavior and possibly increase the depth of emotional responses and opinions obtained by the survey questions.

The vignette used in this study was:

Hannah, a 6-year-old girl informed her school teacher that her father has been sexually assaulting her for some time. Her teacher called the police and Hannah was taken to a hospital where an examination confirmed that she had been sexually assaulted. Her father was arrested.

An alternative and lengthier vignette could be:

Hannah is a 6-year-old girl with a big heart and a contagious smile. She is an active child who says that she loves to play soccer, loves to play with her friends, and loves her pet kitten. Hannah says that her favorite food is pizza, and that she is afraid of thunder storms and spiders. Recently, Hannah's teacher has noticed that she has been more withdrawn lately. She is not playing with her friends and is having difficulties completing her work. Her teacher decides to speak with Hannah privately. During their talk, Hannah informs her school teacher that her father has been sexually assaulting her for some time. Her teacher calls the police and Hannah is taken to a hospital where an examination confirms that she has been sexually assaulted. Her father is arrested.

This second vignette contains more information about Hannah and perhaps allows for greater connectiveness with the victim. In a similar vein, more personal information could be provided about the perpetrator and or details about the sexual assault.

Implications and Positive Social Change

The results of this study indicated no significant relationship between the degree of biological relatedness between the child sex offender and the victim (ages 6 and 13), and respondent's perceptions of fear, aversion, opinions of crime severity, and opinions regarding sentencing. While the results were not significant, the findings contribute to the body of literature relating to child sexual abuse and reveal an area of research that warrants further exploration.

Continued explorations may contribute to a greater understanding of the underpinnings of the affect influencing community beliefs and opinions regarding crime severity and sentencing of child sexual offenses. It may also encourage positive social change within judicial policy and decision making relating to child sexual assault cases. Furthermore, it may inform the development of educational interventions and initiatives regarding these types of offences and sentencing practices.

Conclusion

Child sexual offending behavior is considered one of the most heinous crimes in Western society. It is a crime that provokes fear and aversive responses among the public (Olver & Barlow, 2010). Emotional responses and opinions also influence law makers and the court processes pertaining to these crimes (King, 2019; Richards, 2018). As such, it is important that more research is conducted to better understand public perceptions

and beliefs relating to these types of crime as they play a significant role in the judicial

process and sanctioning of child sexual offenders (Cochran et al., 2020).

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Appendix A: Vignettes

#1: Hannah, a 6-year-old girl informed her school teacher that her father has been sexually assaulting her for some time. Her teacher called the police and Hannah was taken to a hospital where an examination confirmed that she had been sexually assaulted. Her father was arrested.

#2: Hannah, a 6-year-old girl informed her school teacher that her stepfather has been sexually assaulting her for some time. Her teacher called the police and Hannah was taken to a hospital where an examination confirmed that she had been sexually assaulted. Her stepfather was arrested.

#3: Hannah, a 6-year-old girl informed her school teacher that a neighbor has been sexually assaulting her for some time. Her teacher called the police and Hannah was taken to a hospital where an examination confirmed that she had been sexually assaulted. The neighbor was arrested.

#4: Hannah, a 13-year-old girl informed her school teacher that her father has been sexually assaulting her for some time. Her teacher called the police and Hannah was taken to a hospital where an examination confirmed that she had been sexually assaulted. Her father was arrested.

#5: Hannah, a 13-year-old girl informed her school teacher that her stepfather has been sexually assaulting her for some time. Her teacher called the police and Hannah was taken to a hospital where an examination confirmed that she had been sexually assaulted. Her stepfather was arrested.

#6: Hannah, a 13-year-old girl informed her school teacher that her neighbor has been sexually assaulting her for some time. Her teacher called the police and Hannah was taken to a hospital where an examination confirmed that she had been sexually assaulted. The neighbor was arrested.

Appendix B: Questionnaire

1   You are attending a community meeting and notice the perpetrator walk in the door. He takes a seat next to you. How comfortable are you sitting beside the perpetrator?

1-----2-----3-----4-----5-----6-----7-----8-----9-----10
Very Uncomfortable   Neutral   Very Comfortable

2   I would be afraid to have my child play near the offender's residence

1-----2-----3-----4-----5-----6-----7-----8-----9-----10
No fear   Moderate Fear   High Fear

3   The offender described above committed one of the worst types of crimes against a child.

1-----2-----3-----4-----5-----6-----7-----8-----9-----10
Definitely Disagree   Somewhat Agree   Definitely Agree

4   When I think about this offender, it causes me to feel scared

1-----2-----3-----4-----5-----6-----7-----8-----9-----10
No fear   Moderate Fear   High Fear

5   You have booked a trades person with good reviews to fix a problem in your home. The individual arrives and you realize that he is the perpetrator described above. How comfortable are you having him work in your home.

1-----2-----3-----4-----5-----6-----7-----8-----9-----10
Definitely Not   Neutral   Definitely Yes

6   The victim of this crime has been harmed in the worst way imaginable

1-----2-----3-----4-----5-----6-----7-----8-----9-----10
Definitely No   Maybe   Definitely Yes

7   It is scary to have offenders such as this living in your neighborhood

1-----2-----3-----4-----5-----6-----7-----8-----9-----10
Disagree   Neutral   Agree

8   Please rate the severity of the crime described in the vignette

1-----2-----3-----4-----5-----6-----7-----8-----9-----10
Not Severe   Moderately Severe   High Severity

9   You see the perpetrator and he is obviously having problems with his car. How likely are you to stop and offer assistance?

1-----2-----3-----4-----5-----6-----7-----8-----9-----10
Definitely Not   Maybe   Definitely Yes

10   This offender causes me to be afraid for the children in my community.

1-----2-----3-----4-----5-----6-----7-----8-----9-----10

Not afraid   Moderate   Very afraid

11   You are dining at a restaurant and realize that the server is the perpetrator. How comfortable are you having him serve you your meal.

1-----2-----3-----4-----5-----6-----7-----8-----9-----10

Not Comfortable   Neutral   Very Comfortable

12   I would not be afraid if I saw the offender sitting in the park

1-----2-----3-----4-----5-----6-----7-----8-----9-----10

No fear   Moderate Fear   High Fear

13   You become aware that this perpetrator lives in your neighborhood. How likely are you to help him out if he asked for a favor?

1-----2-----3-----4-----5-----6-----7-----8-----9-----10

Definitely Not   Maybe   Definitely Yes

14   The victim's future is severely damaged or compromised because of the perpetrator.

1-----2-----3-----4-----5-----6-----7-----8-----9-----10

Definitely No   Maybe   Definitely Yes

15   Assuming that the perpetrator has been found guilty, how many years do you believe he should serve in prison. Choose a number between 0 and 100 years._____

Appendix C: Demographic Information

Date of birth: D/M/Y

Gender:
      Male
      Female
      Transgender
      Gender Variant
      Prefer not to answer

Highest Level of Education:
      Some High School
      High School
      Bachelor's Degree
      Master's Degree
      Ph.D. or higher
      Trade School
      Prefer not to say

Have you parented or raised a child?
      Yes
      No

Have you been personally or indirectly affected by child sexual abuse?
      Yes
      No
      I would prefer not to answer