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Factors Predicting Conviction in Child Stranger Rape

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Abstract

Background. Public knowledge of child stranger rape is shaped largely by media portrayals of a small number of cases, often marked by sensational trials, which may result in juror misconceptions of this offense. It is important to understand the factors that may influence jury verdicts in order to maximize the chance of guilty defendants being convicted.

Objective. The aim is to explore the factors that predict juries' decisions to convict or acquit in child stranger rape cases.

Participants and Setting. The study utilizes a police database of recorded child stranger rape cases from a UK urban force from 2001-2015. Seventy cases that were tried by jury were analyzed. We investigated the extent to which 19 child-, accused- and offense-related factors predict jury verdicts.

Methods. A four stage analytic process was employed: (a) Kendall's tau-b measured inter-correlations among the factors; (b) Chi-Square and Welch t-tests measured associations between factors and verdicts; (c) binary logistic regression measured the power of factors in predicting verdicts; and (d) Stein's formula was used to cross-validate the model.

Results. Verdicts were predicted by two offense-related factors. A weapon increased the odds of conviction by 412%. An outdoor location increased the odds by 360%.

Conclusions. The findings have potential implications for prosecution case building and courtroom policy. Prosecutors could gather as much information as possible from victims about the factors found to be of importance to juries. Judges could challenge incorrect beliefs and stereotypes by instructing juries.

Keywords: Stranger rape, child sexual abuse, child victims, jury decision-making

Introduction

Child sexual abuse (CSA) refers to a variety of sexual offenses committed against a person under the age of 16, from sexual communication through grooming to rape. While the majority of CSA offenses are committed by perpetrators known to the child, a significant minority are committed by those who are strangers to their victims (Snyder, 2000). Unfortunately, such cases are difficult to investigate and only a small proportion result in a perpetrator being identified and subsequently prosecuted (Fitzgerald, 2006). In England and Wales, the average conviction rate for CSA, which includes both guilty pleas and jury convictions, is 72% (Kelly & Karsna, 2017). This figure, however, disguises wide variations depending on the type of CSA offense concerned. In particular, rape offenses have been found to have much lower conviction rates i.e., 49% for rape of a child under 13 years, and 39% for rape of a child aged 13 to 16 years(Kelly & Karsna, 2017). This suggests that some victims are less likely to receive justice than others.

In the courtroom, the likelihood of conviction should rest solely on a jury's consideration of the facts of the case. However, past research has found that jurors are often influenced by 'extra-legal' factors such as characteristics associated with the victim, witness, or defendant (Gerbasi, Zuckerman, & Reis, 1977; Pozzulo, Dempsey, Maeder, & Allen, 2010). Furthermore, since CSA trials involving strangers are relatively rare, public knowledge of these cases is shaped largely by media portrayals of a small number of cases, often marked by lengthy, challenging, and sensational trials. This may result in misconceptions about children, offenders, and CSA that jurors bring to the courtroom (Calvert & Munsie-Benson, 1999; Cossins, Goodman-Delahunty & O'Brien, 2009; Kovera & Borgida, 1997; Morison & Greene, 1992; Quas, Thompson, Alison & Clarke-Stewart, 2005). There is very little research regarding

stranger rape against children and the features of this particular type of CSA that may influence jury verdicts. Therefore, the main aim of the present paper is to explore the factors that predict juries' decisions to convict or acquit in child stranger rape cases. Before presenting the methods and findings of our study, we review relevant past research on this topic.

Past Research on Conviction in CSA Cases

Theoretically, conviction in CSA cases might be influenced by a myriad of factors, many of which can be sub-divided into those related to evidence, the accused (perpetrator), child (victim) and offense. The majority of past studies have used mock jurors to examine how such factors influence juror (as opposed to jury) decision-making in CSA cases (for a review see Bottoms, Golding, Stevenson & Yozwiak, 2007). Less common are studies that analyze real criminal justice data to determine which factors are associated with, or predictive of case outcomes in CSA. Such studies have greater external validity – they involve actual decisions, made by real decision-makers (rather than the often used student samples), who are faced with a variety of factors (rather than one or few), under genuine legal procedural conditions (rather than the laboratory). Thus, we review the findings of this latter body of research. Table 1 provides an overview of each study reviewed with details of the sample and factors examined, and any statistically significant findings. As can be seen, past studies utilize data from 1975 to 2010 and from several jurisdictions, namely the USA, Australia, New Zealand and Canada. Below, we summarize the main findings from these studies.

INSERT TABLE 1 HERE

Factors Associated with Conviction

Child-related factors. Researchers have examined a small number of child-related factors, and these can be divided into demographic characteristics and behavioral factors. De

Jong and Rose (1991) found that cases involving the youngest victims had a lower conviction rate than those involving older children. However, no age effects have been found in other studies (Blackwell & Seymour, 2013; Bradshaw & Marks, 1990). Hill (2008) studied the effect of victim gender, ethnicity and disability on conviction and showed that whereas gender and ethnicity were not predictive of conviction, the presence of a disability reduced the likelihood of conviction.

Examination of victim post-offense behaviors has also yielded mixed findings. Bradshaw and Marks (1990) found that shorter time delays between CSA and reporting/disclosure were positively associated with conviction. Stolzenburg and Lyon (2014) found that cases were more likely to result in acquittal when the child had continued contact with the defendant. Lewis, Klettke and Day (2014) found that a jury was more likely to acquit in cases where child victims demonstrated destructive behavior.

Accused-related factors. Surprisingly few studies have examined accused-related factors. Hill (2008) studied accused age and race but found no significant relationship with conviction. Stolzenburg and Lyon (2014) examined a number of accused post-offense behaviors (e.g., confession, contact with other witnesses) but none were associated with conviction.

Offense-related factors. Some studies have examined the impact of a small number of offense-related factors on case outcome. Stolzenberg and Lyon (2014) reported that cases where the defendant was not charged with force were more likely to result in acquittal than cases where the defendant was. By contrast, Hill (2008) found that the presence of coercive behaviors was not predictive of conviction. Hill (2008) also showed that cases involving child-to-adult masturbation were predictive of conviction.

Only two studies have examined the effect of accused-child relationship on case outcome, and neither revealed any relationship between the two factors (Bradshaw & Marks, 1990; Hill, 2008). Hill (2008) examined the frequency and duration of abuse and found no relationship between increases in either and conviction. Stolzenberg and Lyon (2014) found no relationship between a victim being given alcohol or drugs and conviction.

Limitations of Past Research

Despite the external validity of research using real criminal justice data, the past studies have some shortcomings that may limit our understanding of why some CSA cases result in conviction while others do not. In particular, past studies often include both guilty pleas and guilty verdicts in their definition of 'conviction' (Blackwell & Seymour, 2013; Bradshaw & Marks, 1990; Cashmore, 1995; De Jong & Rose, 1991; Hill, 2008) or they do not distinguish clearly between the two types of case outcomes (Lewis et al., 2014). One is a decision made by the accused to plead guilty and the other is a decision arrived at by a jury after hearing the facts of the case. The factors that influence these two types of decisions may be very different. In the present study, we focus on jury verdicts.

The vast majority of past research has examined outcomes for all type of CSA cases together. Only one study, De Jong and Rose (1991), focused specifically on cases involving penetration only. Legal definitions and sanctions for child abuse vary, and rape of a child is considered to be one of the most serious offenses. The factors associated with case outcome for different types of CSA may differ. In the present study, we focus solely on stranger rape of a child.

There is also a lack of consistency across studies in the age definition for a child. In some studies, the upper age limit is 17 years (Bradshaw & Marks, 1990), in others it is 18 years (Cashmore, 1995; De Jong & Rose, 1991; Stolzenberg & Lyon, 2014) or 19 years (Hill, 2008). In one study, no age range is specified (Lewis et al., 2014). In our study, we use an upper age limit of 15 years to reflect the legal age of consent in the UK which is currently 16 years (Sexual Offences Act 2003). It is important to clearly distinguish between (legal definitions of) childhood and adulthood because juries may respond to cases involving these two groups of victims differently.

Finally, although past research has examined a variety of factors (i.e., related to the child, accused and offense) that might be associated with case outcome, with two exceptions (Hill, 2008, Stolzenberg & Lyon, 2014), researchers have focused on a rather limited number of such factors. For example, there has been no examination of factors relating to offense context (e.g., location type, approach style) which may be relevant for juries in deciding on the plausibility of an offense narrative. In the present study, we include factors relating to offense context.

The Present Study

In the present study we attempted to overcome some of the limitations of past research. Specifically, we examined the power of a range of accused-, child- and offense-related factors in predicting jury verdicts (i.e., guilty or acquittal) in child stranger rape cases using recent court data. This study is, to the authors' knowledge, the first of its kind to focus on real jury verdicts in cases involving child stranger rape in the England and Wales jurisdiction. Unfortunately, the lack of consistency in past findings and a lack of research on child stranger rape precludes us from making a priori directional hypotheses about the relationship between specific accused-, child- and offense-related factors and jury verdicts in such cases.

Method

Ethics Statement

This study was conducted in accordance with the recommendations of Anglia Ruskin University Ethical Guidelines for research. The study was approved by the Humanities and Social Sciences Departmental Ethics Panel at Anglia Ruskin University. In research utilizing police data it is considered unnecessary to seek the consent of those involved as the data are under the supervision of the police authority. All identifying information (e.g., names and addresses) was removed from records prior to the release of the data for research purposes.

Dataset

We analyzed data from the sexual offense database maintained by the Sexual Offenses Intelligence Unit of the UK London Metropolitan Police Service (LMPS). The database includes every sexual offense committed within the LMPS area. The database contains information describing characteristics of the alleged perpetrator (where known), alleged victim and the offense.

The information in the database is obtained from case files that contain a number of documents (e.g., police reports, victim statements). In recent years, the quality of information gathered from victims has benefitted from the introduction of dedicated police units trained in the investigation of rape complaints (Stern, 2010). Specially trained analysts and researchers use an established coding dictionary when coding factors contained in the documents. This coding is also used in a number of other jurisdictions (e.g., USA, New Zealand). All new analysts are required to undertake a rigorous data coding training program, use a 'Quality Control Guide' (Sexual Offence Page Guidance, 2015) to maximize consistency across analysts/researchers, and have their data inputting quality assured during the first three months working in the unit.

Sample

For present purposes, we selected all of the child victim (aged under 16) stranger rape[1] and attempted rape[2] cases i.e., where the accused and child had no prior contact, that were reported to the LMPS between 1st January 2001 and 31st September 2015 and where at least one defendant was tried by a jury. This process yielded a total of 70 cases, all comprising a single child victim and in total 91 accused[3]. Of these, 44 resulted in a conviction for rape (i.e., hereafter called rape-convicted) and 26 resulted in an acquittal for rape ($n = 23$) or a conviction for a lesser offense[4] ($n = 3$) (i.e., hereafter called rape-acquitted). Therefore, the rape conviction rate in the present sample was 62%.

Factors

Based on the above review of the past literature and the availability of information contained in the database 19 factors were included in the present study[5]. These were grouped as follows: three accused-related factors, five child-related factors, and 11 offense-related factors. We list these factors below (see also first column in Table 2).

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[1] Sexual offenses against children committed after 1 May 2004 in England and Wales are governed by the Sexual Offenses Act 2003. The Sexual Offenses Act identifies two main categories of offenses against children of different ages. Offenses against those under 13; Offenses against those under 16; (a third category, offenses against those under 18 was not utilised in the current study). The definition of rape is:
 (1) A person commits an offence if—
(a) he intentionally penetrates the vagina, anus or mouth of another person with his penis
An individual may be convicted of an offense other than rape where they have more than one charge against them in one offense (Criminal Procedure Rules, 2010).
[2] The sample includes both rape ($n = 82.86\%$) and attempted rape cases ($n = 17.14\%$).
[3] Of the 91 perpetrators, 47 were involved in multiple perpetrator cases, and there 26 of such cases. Chi Square analysis revealed no significant differences in case outcome between multiple and single perpetrator rape.
[4] An individual may be convicted of an offense other than rape where they have more than one charge against them in one offense (Ministry of Justice, 2015). Three of the accused in our sample received a conviction for a lesser offense (i.e., robbery, false imprisonment, sexual assault).
[5] Five other factors (i.e., perpetrator under influence of alcohol/drugs; non-penetrative sexual behaviors of kisses child, cunnilingus, force child to masturbate perpetrator, removes clothing, sexual touching, verbal sexual behavior); false imprisonment; perpetrator records offense; perpetrator obscures identification) were excluded on the basis of low frequency occurrence (i.e., < 5% of cases).

TABLE 2 HERE

Accused-related factors. All of the accused in the sample were male. The three factors describing an accused's demographic characteristics were: age at time of the offense, ethnicity and previous criminal convictions.

Child-related factors. The five factors that described a child's demographic characteristics and behavior around the time of the offense were: age at time of offense, gender, ethnicity, consumption of alcohol or drugs prior to the offense, and the number of days elapsed between the offense and reporting to the police.

Offense-related factors. Eleven factors described the circumstances of the offense. One of these described the difference in age (measured in years) between a child and the accused, and another described whether a child and accused were from the same ethnic group or not. These two factors were created from existing factors in the database in order to better capture the demographic differences between the accused and the child.

We collapsed the sexual behaviors of the accused into two different factors so as to capture the range of behaviors in an offense including the low occurring ones. The first was a penetrative sexual contact factor which recorded the total number (from 1 to 5) of five types of penetrative contact (i.e., vaginal penetration, oral penetration, anal penetration, attempted penetration and digital penetration) that occurred during an offense. The second was a non-penetrative sexual contact factor which recorded the total number (from 0 to 3) of three types of non-penetrative sexual behaviors (i.e., kissing, sexual touching, and cunnilingus) that occurred during an offense.

Three factors described the non-sexual violent behaviors committed by the accused. The first referred to whether any type of physical violence (e.g., hitting/punching, dragging, hair pulling, strangulation, gagging) was used during an offense. The second factor described whether

the accused used verbal violence (e.g., threats, obscene language) during an offense. A third

factor described whether the accused had either used or implied a weapon of any kind (e.g.,

knife, blunt object) during the offense.

Other offense-related factors were: the number of accused involved in an offense, whether

an offense had occurred outdoors or indoors, and whether the accused stole personal belongings

from the child. An approach style factor was also included with two categories i.e.,

conversational approach (accused spoke to child prior to attack) or surprise approach (no speech

prior to attack).

Analyses and Findings

Characteristics of Child Stranger Rape Cases

Table 2 presents the descriptive statistics of child stranger rape cases in our sample, broken

down by the accused-, child- and offense-related factors being examined.

Accused. The mean age of the accused at the time of the offense was 22.12 years ($SD =$

9.84) with an age range of 14 to 71 years. The majority of the accused were of black ethnic

origin (67.44%). Sixty-two percent of the accused were recorded as having a prior criminal

conviction of some kind (details of type of conviction were unavailable).

Child. The mean age of the child at the time of the offense was 13.34 years ($SD = 2.23$;

with a range of 3 to 15 years. The majority were female (92.98%) and white (55.71%). The mean

number of days it took a child to report was 2.99 days ($SD = 10.81$)[6].

Offense. On average, the accused were 8.70 years older than the victims ($SD = 9.68$) with a

maximum difference of 56 years. In 43.33% of cases, the accused was a different race to the

child. Forty-eight percent of the accused acted alone and more than half (52.85%) of the alleged

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[6] One extreme outlier of 636 days was excluded from the analysis

offenses took place in an outdoor environment such as a park, street or alley way. The majority

of cases involved a conversational approach style (67.14%) and only one penetrative sexual act

(60.00%). Just over a quarter (27.14%) of the cases involved some kind of overt violence such as

hitting, hair-pulling, or gagging. Verbal threats were made in 18.57% of cases, and 30.00% of

cases involved either the use or threat of a weapon.

Predicting Conviction in Child Stranger Rape Cases

The remaining data analyses were conducted in four main stages. The first stage involved

measuring associations among the accused-, child- and offense-related factors using Kendall's

tau-b correlation, with a Bonferroni correction applied to the alpha level to reduce the chances a

type I error. The second stage identified the factors associated with case outcome (i.e., conviction

or acquittal). Here, for dichotomous factors we used Chi-Square tests and for factors measured

on a continuous scale we used Welch *t*-tests. In the third stage, we used logistic regression

analysis to establish the relative power of accused-, child- and offense-related factors in

predicting case outcome. Only the factors found to be statistically significantly associated with

case outcome identified in the preceding analyses were entered (simultaneously) into the model.

In the final stage, we used Stein's formula to 'cross-validate' the resulting model by calculating

the adjusted R^2. Below, we present the results of these four stages of data analysis.

Inter-relations among factors. The size of the first-order inter-correlations among the

child- and offense-related factors[7] ranged from -.39 to .30 (*M* excluding sign = .011). Applying a

Bonferroni correction to the alpha level reduced the number of statistically significant

correlations from nine to one (i.e., the relationship between weapon and victim age was -.39, *p* <

.001).

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[7] It was not possible to include accused-related factors in this analysis because of the presence of multiple
perpetrators.

Accused-related factors. Welch's *t*-test was used to analyze the relationship between accused age and conviction, while Chi-Square tests were used for accused ethnicity and previous convictions. None of the accused-related factors were found to be statistically significantly associated with case outcome. The mean age of the accused in rape-convicted cases was 21.26 (SD = 10.01) compared to 23.17 (SD = 9.64) in rape-acquitted cases. This difference was statistically non-significant, $t(86)$= .86, p = .358, d = .193. The percentage of accused who belonged to two ethnic groups (i.e., white, black and Asian minorities) was not significantly different between rape-convicted and rape-acquitted cases, χ^2 (1, N = 86) = .04, p = .847, d = .021. Finally, the number of accused with previous convictions also did not differ significantly between rape-convicted (68.00%) and rape-acquitted cases (56.10%); χ^2 (1, N = 91) = 1.36, p = .243, d = .122.

Child-related factors. Child age and the number of days before reporting to the police were analyzed using Welch's *t*-test, and child gender, ethnicity and drug/alcohol consumption were analyzed using Chi-Square tests. One of the child-related factors was found to be statistically significantly associated with case outcome. Specifically, the mean age of the children in rape-convicted cases was 12.95 years (SD = 2.60) and 14.00 years (SD = 1.17) in rape-acquitted cases. This difference was statistically significant, $t(64)$ = 5.32, p = .024, d = .523.

There was no significant difference between rape-convicted cases (6.82%) and rape-acquitted cases (7.69%) in relation to the proportion of children who had consumed drugs/alcohol at the time of the offense χ^2 (1, N = 70) = .02, p = .619, d = .02. Rape-convicted and rape-acquitted cases were not significantly different in relation to child ethnicity, χ^2 (2, N = 70) = 1.60, p = .449, d = .15. The mean time a child took to report the rape was 2.42 days (SD = 10.68) in rape-convicted cases and 3.92 days (SD = 11.16) in rape-acquitted cases. This

difference was non-significant, $t(51) = .30$, $p = .584$, $d = .14$. Rape-convicted and rape-acquitted cases were not significantly difference in relation to child gender, χ^2 (1, $N = 70$) = .68, $p = .381$, $d = .10$

Offense-related factors. Number of perpetrators, age gap between accused and child, penetrative sexual contact and non-penetrative sexual contact were all analyzed using Welch's *t*-tests. Weapon, offense location, victim-offender ethnic-match, approach style, violence, verbal violence and theft of property were analyzed using Chi-Square tests. Two of the 11 offense-related factors were found to be statistically significantly associated with case outcome.

Rape-convicted cases were statistically significantly more likely to involve a weapon (implied or used) (45.45%) than rape-acquitted cases (11.43%); χ^2 (1, $N = 70$) = 8.52, $p = .004$, d = .35. Rape-convicted cases were also significantly more likely to occur outdoors (63.63%) than rape-acquitted cases (34.61%); χ^2 (1, $N = 70$) = 5.52, $p = 026$, $d = .28$.

The mean age gap between accused and child (i.e., accused's age minus child's age) in rape-convicted cases was 8.20 years (*SD* = 9.99) and 9.32 years (*SD* = 9.38) in rape-acquitted cases. This difference was statistically non-significant, $t(87) = .30$, $p = .588$, $d = .115$. There was no significant difference in the percentage of ethnically matched accused and children in the rape-convicted cases 43.33(%) and rape-acquitted cases (42.50%); χ^2 (1, $N = 91$) = .02, $p = .887$, $d = .015$. There were also no significant differences in the style of approach between rape-convicted (conversational: 62.79%, surprise: 37.20%)and rape-acquitted cases (conversational: 80.00%, surprise: 80.00%); χ^2 (1, $N = 68$) = 2.19, $p = .178$, $d = .18$. There was no significant difference in the number of perpetrators involved in a case between rape-convicted cases (*M* = 1.89, *SD* = 1.98) than rape-acquitted cases (*M* = 2.38, *SD* = 2,14), $t[49] = .95$, $p = .337$, $d = .237$.

There was no significant difference between rape-convicted and rape-acquitted cases in terms of the number of penetrative sexual behaviors that occurred (rape-convicted: $M = 1.30$, $SD = .70$; rape-acquitted: $M = 1.15$, $SD = .88$, $t[43] = .49$, $p = .488$. $d = .188$) and in the number of non-penetrative behaviors (rape-convicted: $M = .16$, $SD = .42$; rape-acquitted: $M = .12$, $SD = .33$, $t[64] = .23$, $p = .632$, $d = .107$). There was no significant difference between rape-convicted cases (31.81%) and rape-acquitted cases (19.23%) in relation to whether or not physical violence was used, $\chi^2 (1, N = 70) = 1.31$, $p = .282$, $d = .13$. Similarly, there was no significant difference in relation to the use of verbal violence or not (rape-convicted = 20.45%, rape-acquitted = 15.38%, $\chi^2 [1, N = 70] = .27$, $p = .754$, $d = .06$. Lastly, there was no significant difference between the two groups in relation to whether theft of the child's property occurred or not (rape convicted = 11.36%, rape-acquitted = 11.53%, $\chi^2 [1, N = 70] = .00$, $p = 1.00$, $d = .003$).

Model predicting conviction. As revealed by the preceding analyses, a total of three of the 19 factors examined were significantly associated with case outcome, namely the age of the child, the implied or actual use of a weapon and the location of the offense. These three factors were entered simultaneously into a logistic regression model to ascertain their relative power in predicting case outcome.

Table 3 presents the results of the regression analysis. A test of the full model against a constant only model was statistically significant, $\chi^2 (3) = 15.86$, $p < .001$. Prediction success rose from 62.48% to 71.43%. This indicates that the set of predictors reliably distinguished between rape-convicted and rape-acquitted cases. A Nagelkerke's R^2 of .28 indicated a moderate association between prediction and grouping. The Wald criterion demonstrated that two of the three factors contributed significantly to the predictive utility of the model, from $p = .023$ to $p =$

.048. The presence of a weapon increased the odds of conviction by 4.12 (or 412%, $p = .048$). An outdoor offense location increased the odds of conviction by 3.60 times (or 360%, $p = .023$).

TABLE 3 HERE

Cross-validation of model. The cross-validation of a model across different samples is an important test of its generalizability and consequently of its scientific value. There are two main cross-validation methods. The first, known as data splitting, involves randomly splitting a sample into a fitting and a validation sample. The regression model is then developed on the fitting sample and then tested on the validation sample. An alternative approach, and the one employed here because of the relatively small sample size, is to calculate an adjusted R^2 that estimates the loss of predictive power (or shrinkage) were the model to be applied to a different dataset. One way to make this adjustment is to use Stein's formula (see Equation 1) where R^2 is the unadjusted value, n is the sample size and k is the number of predictors in the model (Field, 2009). Using this formula, we calculated an adjusted R^2 of .21 for the regression model.

$$\text{Adjusted } R^2 = 1 - \left[\left(\frac{n-1}{n-k-1}\right)\left(\frac{n-2}{n-k-2}\right)\left(\frac{n+1}{n}\right)\right](1 - R^2) \qquad (1)$$

Discussion

Conviction can be particularly difficult to secure in cases of CSA that involve rape. Indeed, the conviction rate of 62% in the present sample is lower than the 75% found in stranger cases involving adult victims over the same time period and in the same jurisdiction (Lundrigan et al., 2019). The conviction rate is however higher than the figures provided for England and Wales that include both cases where the perpetrator was known to the child and those where the perpetrator was a stranger to the child, which in 2016 was 49% for rape of a child aged under 13

and 39% for rape of a child aged between 13 and 16 (Kelly & Kersna, 2017). These disparities in court outcome for different types of rape suggest that some victims are less likely to receive justice than others. Therefore, it is important to identify the factors that are related to case outcome (conviction and acquittal) so as to inform policy and practice to improve the chances of guilty defendants being convicted, identify the situations that child victims are likely to face, and maximise the potential for justice for these young victims and their advocates.

Predictors of Jury Conviction in Child Stranger Rape Cases

We examined how a number of child-, accused-, and offense-related factors were related to conviction in child stranger rape. Only two of the 19 factors examined were statistically significant *predictors* of case outcome, and these were both offense-related factors. Therefore, in the present study, none of the accused-related factors and none of the child-related factors were significant predictors of convictions for child stranger rape.

The lack of significant findings regarding accused-related factors is in line with Hill (2008) who also found no significant relationships with accused age or ethnicity. The few past studies that have examined child-related factors have yielded mixed results. Whereas we did not find a significant relationship between child age and conviction, De Jong and Rose (1991) did. This difference may be explained by sample differences. De Jong and Rose's sample of cases included not only jury trials, but also waiver trials and guilty pleas. However, our findings are in line with other studies who have found no such relationship between age and case outcome (Blackwell & Seymour, 2013; Bradshaw & Marks, 1990). We also found no significant relationship between delayed reporting and case outcome. This is in line with the one previous study that has examined this factor (Bradshaw and Marks, 1990). Our findings, coupled with those of past research on CSA more broadly, suggest that juries may not be influenced by

accused- and child-related factors to the extent that they are for other types of CSA (Powell, Hlavka & Mulla, 2017). Rather, it appears that in (stranger) rape cases i.e., those rarer but more serious offenses, juries are more influenced offense-related factors.

The two offense-related factors that were found to be significant predictors of conviction in child stranger rape cases were weapon use (either actual or implied) and offense location. Neither of these factors were significantly correlated with each other. It is not possible to compare these findings directly with past research because, to-date, surprisingly, no-one has examined any of these two factors. Below, we summarize and discuss each finding in turn.

First we found that a case involving a weapon had a 412% *greater* likelihood of conviction than one without. In our study, 30% of perpetrators either used or implied a weapon of some kind. Where specified, a knife was the weapon of choice in 52% of cases. There are a number of possible explanations for the present finding. Carrying or use of a weapon is an offense in itself and this may help convince a jury of the criminality of an accused. However, we found that theft from a victim, which is also a separate offense was not related to conviction. It may also be that, for jurors, a weapon acts as a proxy for evidential factors such as injury or use of force. However, the use of physical violence was neither correlated with the use of a weapon nor predictive of conviction in our study. Another possible explanation is that a weapon which is recovered may carry important evidential weight in terms of reinforcing the idea that an offense occurred. Unfortunately, we were unable to test this explanation because the database did not include information on the evidence presented at trial.

Second, we also found that an outdoors offense location *increased* the likelihood of conviction by 360% compared to cases where the rape was committed indoors. In our study, 52.9% of offenses were committed outdoors. One possible explanation for the present finding

may be the influence of stereotypical beliefs that juries might have about the most likely circumstances of stranger rape (e.g., Hildebrand & Najdowski, 2015; McKimmie, Masser & Bongiorno, 2014; Tetreault, 1989; Tetreault & Barnett, 1987). In particular, researchers have proposed the existence of a 'real' rape stereotype that describes an offense where an attack takes place in an outdoors location by an unknown perpetrator often with a weapon and/or violence (e.g., Estrich, 1987; Munro & Kelly, 2009; Myhill & Allen, 2002; Temkin & Krahe, 2008; see also Lundrigan, Dhami & Agudelo, 2019). It is argued that rape cases which most closely correspond to this stereotype are more likely to result in conviction, whereas cases that deviate from the 'real' rape stereotype are less likely to be convicted. This argument is typically applied to rape involving adult victims. The present findings suggest that there may be some relevance of the 'real' rape stereotype to those involving child victims too as both an outdoors offense location and weapon use are central characteristics of the stereotype. Another possible explanation may be that offenses which occur outdoors could also be more likely to be witnessed thus adding evidential weight to the prosecution case. Blackwell and Seymour (2013) found that witness evidence increased the likelihood of conviction in CSA cases.

It is positive that we found no evidence for extra-legal factors relating to either the victim or the perpetrator influencing jury verdicts. Specifically, in our sample, it appeared that juries were not biased against the child victims in terms of their gender, age or ethnicity. Furthermore, neither a delay in a child's report nor a child's use of alcohol or drugs appeared to negatively impact their chances of securing a conviction. Similarly, it appeared that juries were not biased against the accused's age and ethnicity. We also found no relationship between the accused's previous convictions and case outcome, despite a change in the law in 2004 whereby juries can be informed of any related past crime or misconduct in the case of defendants charged with CSA.

It may be that this effect will take longer to become evident, and so future research ought to investigate how juries respond to knowledge of a defendant's criminal background.

Finally, in an attempt to provide more meaning to the victim-offender dynamics in child stranger rape, we examined the difference in age (measured in years) between a child and the accused and whether they were the same ethnicity or not. A number of previous scholars have recommended this as potentially a more effective approach than examining victim and offender age independently (e.g., Daly & Bouhors, 2010). However, we found neither age difference nor ethnic match were significantly related to conviction in child stranger rape cases.

Strengths and Potential Limitations

The present study has several strengths but also some potential limitations. Perhaps most notably, the study focused only on factors available in the police database. Although we were able to explain 21% (cross-validated) of the variation in outcomes for child stranger rape cases, much of the variance remains unexplained. Unfortunately, it is not possible to establish how similar/dissimilar this figure is to previous studies as it the figure is rarely reported. There are likely to be other legal and potentially extra-legal factors that are predictive of case outcomes that were not included in the present study due to the constraints of the data source. In particular, factors relating to various types of evidence (Blackwell & Seymour, 2013), juror attitudes (Nightingale, 1993) and victim behavior/demeanor during the trial (Regan & Baker, 1998) have been said to be relevant in CSA cases. In addition, we did not study interactions among variables because of the lack of past evidence suggesting any that would be fruitful, and because interaction effects can be difficult to replicate. Future research ought to consider matching police datasets with court records to produce a more comprehensive dataset, although the analysis of

some factors such as juror attitudes may still remain outside the scope of studies involving real

case outcomes.

However, as we mentioned, the present study also has several strengths. These include

precision of definition of key variables. Specifically, we used a more precise definition of

conviction (i.e., where a jury decided the outcome) compared to some past studies which

included both guilty pleas and guilty verdicts. It is important to examine these two routes to a

conviction separately as they involve quite different decisions and decision-makers. Ours was the

the first study to focus exclusively on outcomes of *stranger rape* cases of children and so enables

identification of some of the factors predictive of conviction and acquittal for this specific type

of CSA. Unfortunately, past studies have grouped different types of CSA together. Examining

different types of CSA cases together may introduce variability into the data that makes it

difficult to identify factors associated with conviction for one type of offense over another.

Another strength of the present study was the effort to span a range of factors and

timeframe. We examined a variety of accused-, child- and offense-related factors, including

those not previously examined such as offense location, theft from child, and accused-child age

gap. Juries have a wide range of factors available to them, and studying their relative effects is

theoretically useful. The present dataset spans a 15-year period up to 2015 and thus represents

the most up-to-date analysis of conviction data in any jurisdiction since Lewis et al. (2014) who

examined conviction of CSA cases in data from 1998 to 2010 in Australia. Social attitudes can

change in response to social movements, legal policy reforms or public awareness campaigns.

This makes it important to update research findings and test the relevance of factors over time.

Finally, whereas previous research has typically measured either association or prediction

between factors and case outcomes, we measured both. In addition, we cross-validated our

regression model – thereby providing an assessment of how well our results would generalize to an independent child stranger rape dataset.

Potential Implications for Policy and Practice

The present findings have potential implications for prosecution case building. We show that in arriving at a verdict, juries may focus less on the characteristics of the victim and defendant and more on the characteristics of the offense including the behavior of a perpetrator during the offense. Thus, prosecutors could gather and present as much information as possible from victims about the factors found to be of importance to juries (i.e., offense-related factors), and pay less attention to those factors of lesser importance such as the victim's behavior during the offense – which may cause additional distress to victims.

The present findings also have potential implications for courtroom policy. The current policy on the prosecution of CSA states "It is very important that prosecutors use their best endeavours to ensure that 'myths and stereotypes' about child sexual abuse are challenged in court. If they are left unchallenged, it may lead to members of the jury approaching the victim's evidence with unwarranted scepticism" (Child Sexual Abuse: Guidelines on Prosecuting Cases of Child Sexual Abuse, 2017, annex C). This policy relates specifically to the characteristics and behavior of the victim. Our findings suggest that in stranger rape cases, the focus might need to be elsewhere. Specifically, it may be necessary to instruct juries on assumptions about the characteristics of the offense – including the circumstances of the offense and the behavior of the perpetrator during the offense in order to challenge incorrect beliefs and stereotypes about child stranger rape. In other words, it should not be assumed that stranger rape trials involving children are immune to the effect of stereotypical, pre-conceived beliefs about what happens in a rape.

Acknowledgments

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Table 1: Past studies examining conviction in CSA

Authors	Sample characteristics	Case outcome	Factors studied	Statistically significant findings
Bradshaw & Marks (1990)	Jurisdiction: Odessa, Texas, USA Source: Prosecution files Timeframe: 1975 - 87 N = 350 cases Age range: 0 - 17 yrs Type of abuse: All	Conviction	**Child-related**: Age, time delay in reporting **Accused-related: -** **Offense-related**: Relationship to offender, seriousness of offense **Evidential**: Medical evidence, statement from accused	Medical evidence > conviction Statement from accused > conviction Shorter time delay > conviction
De Jong & Rose (1991)	Jurisdiction: USA Source: Legal case files Timeframe: 1987 - 1988 N = 115 Age range: 4 - 18 yrs Type of abuse: Penetrative only	Conviction	**Child-related:** Age **Accused-related: -** **Offense-related: -** **Evidential**: Physical evidence, verbal evidence	Youngest children (< 7 years) < conviction
Cashmore (1995)	Jurisdiction: NSW, Australia Source: Survey of solicitors Timeframe: 1991 - 92 N = 263 cases Age range: 0 -18 yrs Type of abuse: All	Conviction	**Child-related:** Gender, age **Accused-related: -** **Offense-related:** Relationship to offender **Evidential:** -	No significant findings
Hill (2008)	Jurisdiction: St Louis, MO, USA Source: Prosecutor files Timeframe: 2003 N = 203 Age range: 2 - 19 yrs Type of abuse: penetrative and non-penetrative	Conviction	**Child-related**: Child disability, race, gender, parental marital status, family legal action pending, inter-personal violence present in family, employed caregiver **Accused-related**: Age, race **Offense-related**: Coercive tactics, duration of abuse, types of sexual contact, offender as relative non-caregiver, offender as non-relative in position of authority	Child disability < conviction Inter-personal violence in family < conviction Caregiver support > conviction Child forced to masturbate > conviction Police as referral source > conviction

			Evidential: Victim disclosure, medical report, report of other victims **Other:** Actions of non-offending caregiver; referral source	
Blackwell & Seymour (2013)	Jurisdiction: New Zealand Source: Crown prosecutor's survey Timeframe: Unknown N = 137 Age range: 0 - 17 yrs Type of abuse: All	Conviction	**Child-related**: Age **Accused-related: -** **Offense-related**: Penile penetration, **Evidential**: similar fact evidence, recent complaint evidence, witness, more than one complainant, partial acknowledgment, medical evidence, more than four charges against accused	Similar fact evidence > conviction Witness evidence > conviction Medical evidence > conviction
Lewis, Klettke, & Day (2014)	Jurisdiction: Australia Source: Trial transcripts Timeframe: 1998 - 2010 N = 113 Age range: Unknown Type of abuse: All	Verdict	**Child-related: -** **Accused-related: -** **Offense-related: -** **Evidential**: Medical evidence and behavioral evidence (i.e., sleeping, withdrawal, acting out, depression)	Presence of behavioral evidence (acting out) > not guilty verdict
Stolzenberg & Lyon (2014)	Jurisdiction: California, USA Source: Closing arguments Timeframe: 1997 - 2001 N = 189 Age range: 4 - 18 yrs Type of abuse: All	Acquittal	**Child-related:** Post abuse behavior **Accused-related**: Defendant behaviors post abuse **Offense-related**: Defendant behaviors to induce victim compliance **Evidential:** Physical evidence, evidence of other acts of abuse by defendant, eyewitness to abuse, hearsay, character evidence	Not charged with force > acquittal Child continued to have contact with defendant after alleged abuse occurred > acquittal Defence hearsay witness regarding child's statement > acquittal Child character witness > acquittal Witness character witness > acquittal

Table 2: Factors in the present study and their descriptive statistics

Factor	% (N)	Mean (*SD*)	Range
Accused			
Age (years): Accused's age at time of offense		22.12 *(9.84)*	14 - 71
Ethnicity: Ethnic group recorded as:			
White:	23.26 (20)		
Black:	67.44 (58)		
Asian:	9.30 (8)		
Previous convictions: Accused had previous convictions	62.64 (57)		
Child			
Gender: Child was female	*92.98 (65)*		
Age (years): Child's age at time of offence		13.34 *(2.22)*	3 – 15
Ethnicity: Ethnic group identified with:			
White:	55.71 (39)		
Black:	37.14 (26)		
Asian:	4.28 (3)		
Chinese:	2.86 (2)		
Alcohol/Drugs: Child had consumed alcohol/drugs prior to offense	7.14 (5)		
Time taken to report: Number of days taken to report offense		*2.99 (10.80)*	0- 69
Offense			

Age gap (years): Accused's age less child's age   8.70 *(9.68)*   0-56

Ethnic match: Child and accused same ethnicity   43.33 (39)

Approach style:

  Conversational: Perpetrator spoke to victim

    prior to attack   67.14 (47)

  Surprise: No speech prior to attack   30.00 (21)

Number of perpetrators: Number of

perpetrators involved in offense   *2.07 (2.04)*   1 – 10

  Offense location:

  Outdoors: Offense took place outdoors (i.e. a

    park or walkway)   52.85 (37)

  Indoors: Offense took place indoors (i.e.

    child's, accused's or other private dwelling,

    public building)   47.14 (33)

  Penetrative sexual contact: Number of

penetrative sexual acts committed (i.e. vaginal,

oral, anal, digital and/or attempted penetration)   *1.24 (0.77)*   1 – 4

  Non-penetrative sexual contact: Number of

non-penetrative sexual acts committed (i.e. kissing,

sexual touching, cunnilingus)   *14 (39)*   0 – 2

  Physical violence: Perpetrator used any type of

violence during the offense (e.g., hitting/punching,

dragging, hair pulling, strangulation, gagging)   27.14 (19)

Verbal violence: Perpetrator used verbal threats

of violence towards victim   18.57 (13)

Weapon: Perpetrator implied or used a weapon

during offense   30.00 (21)

Theft of property: Perpetrator stole from victim   11.43 (8)

Table 3. Logistic regression model predicting jury conviction in child stranger rape cases

Factor	B	SE	Wald χ^2	Odds Ratio	95% CI Lower	95% CI Upper
Weapon	1.42	0.70	3.56*	4.12	-.02	20.74
Victim age	-.23	0.19	1.41	0.79	-.85	0.18
Outdoors location	1.28	0.56	5,19*	3.60	1.31	2.83
Constant	2.67	2.72	.96	14.47		

Note. *p <.05. Overall model: χ^2 (3, $N = 70$) = 15.86, $p \leq .001$, R^2 Nagelkerke = .28.