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I Knew It All Along: The Sexual Grooming Behaviors of Child Molesters and the Hindsight Bias

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ABSTRACT

Recent high profile cases of child sexual abuse have increased interest in the grooming behaviors of child molesters and why these offenders are not identified sooner. This study examined one possible explanation—the hindsight bias. Five hundred and twenty-six undergraduates were randomly assigned to read one of six vignettes and asked to rate the likelihood the person in the story is a child molester. Results supported the presence of the hindsight bias, with participants who were given outcome information overestimating the likelihood they would have predicted that the person was a child molester. Also, participants were able to recognize sexual grooming behaviors when the potential child molester was a relative and nonrelative. Findings indicated that sexual grooming behaviors may be more easily identified than previously proposed, but individuals greatly overestimate the likelihood they would have predicted a person was a child molester once they are given outcome information.

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On November 5, 2011, the nation was shocked by the arrest of Jerry Sandusky in connection with 40 counts of sexual abuse against young boys (Gladwell, 2012). In the days that followed, investigators revealed details of how the former Pennsylvania State University assistant football coach accessed and lured his victims into sexual abuse. As the evidence piled up against Sandusky, the nation was left wondering how such a pervasive sexual predator was not identified sooner.

Cases of child sex abuse, like those brought to light in the Sandusky scandal, have sparked an interest in the sexual grooming behaviors of the offenders that commit such crimes. Child sexual abuse (CSA) is a significant problem in society with detrimental consequences. Studies have shown that approximately 20–33% of females and 5–17% of males are sexually abused in childhood (Briere & Elliott, 2003; Douglas & Finkelhor, 2005; Finkelhor, 1994). Importantly, CSA can have long-lasting, debilitating effects for the victims, including mental health issues (e.g., depression, suicidal ideation), behavioral

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problems (e.g., substance use, inappropriate sexual behavior), and interpersonal difficulties (Roberts, O'Connor, Dunn, & Golding, 2004; Tyler, 2002; Wurtele & Kenny, 2010). With over 130,000 reported cases of CSA in the United States annually (Sedlak et al., 2010), understanding and recognizing the grooming behaviors of child molesters are important steps in making communities safer.

Sexual grooming refers to the behaviors that an offender employs in preparation for sexually abusing a child (McAlinden, 2006). Specifically, this involves the child molester's attempt to gain the trust of his or her victims and their guardians in order for the abuse to be perpetrated without detection. Child molesters who engage in grooming behaviors often appear to those around them to be kind individuals who enjoy the company of children. They infiltrate families and institutions in a community, all the while grooming children for sexual abuse. Grooming is typically a long-term process, requiring planning and strategy to cloak the child molester's deviant intentions (McAlinden, 2006; van Dam, 2001). While the research examining grooming behaviors has increased in recent years (Craven, Brown, & Gilchrist, 2006), there is still much to be learned and understood about the sexual grooming behaviors of child molesters.

Description of child molesters

For many years, public perceptions were that child abuse is a product of "stranger danger" and that child molesters are lurking, menacing males ready to snatch a child up off the streets (van Dam, 2001). However, research has shown that the majority of child sexual abuse is perpetrated by someone known to the victim, with as many as 80–90% of victims having known their abuser (Douglas & Finkelhor, 2005; Dubé & Hébert, 1988). It has been suggested that children are more likely to be abused by those with whom they have a close relationship, where the process of grooming can take place more easily without detection (Grubin, 1998).

In general, sex offenders are a largely heterogeneous group, thus making identification of a specific sex offender profile impossible (van Dam, 2001). Even among those who abuse children, there are several profiles that describe the behaviors. One study of 97 child sexual abuse offenses found that 44% of the offenders in the sample were identified as intimate offenders (i.e., groomers) who used strategies such as affection, reassurance, gift-giving, and touch desensitization (Canter, Hughes, & Kirby, 1998). The authors highlight that this number is likely an underestimate of the true number of intimate or grooming sex offenders because, as a consequence of the strategies they employ in the grooming process, their abuse often goes undetected or unreported.

Sexual grooming behaviors of child molesters

Researchers have identified behaviors typically employed by child molesters during the grooming process. When selecting a victim to groom, offenders indicated they selected children who lacked confidence (49%), were “pretty” (42%), were young or small (17%), and were innocent or trusting (13%) (Elliott, Browne, & Kilcoyne, 1995). Once a victim is selected, the child molester attempts to gain access to the child, with the goal of isolating him or her both physically and psychologically (Olson, Daggs, Ellevold, & Rogers, 2007). The child molester may offer to babysit (Lang & Frenzel, 1988) or drive the child home (Elliott et al., 1995) as a means of being alone with the victim. It is argued that most important step of the grooming process is the establishment and subsequent betrayal of trust (McAlinden, 2006; Salter, 1995). The offender may establish trust by showering the child with attention, affection, recognition, and emotional support (Lanning, 2010).

A groomer may engage in childlike activities (e.g., games, wrestling, tickling, reading bedtime stories) to befriend the victim and more easily manipulate him or her (Campbell, 2009). Giving gifts, financial incentives, privileges, or allowing victims to break rules are also common tactics used by grooming child molesters (Campbell, 2009; Lang & Frenzel, 1988; Lanning, 2010). After trust is established through these various strategies, the offender may desensitize the child to touch to prepare him or her for abuse (Berliner & Conte, 1990; Christiansen & Blake, 1990; Leclerc, Proulx, & Beaugard, 2009). This can begin with seemingly innocent affection such as a hug, kiss on the cheek, or pat on the back, that later escalates to sexual abuse (Lanning, 2010). Importantly, 84% of convicted child molesters in one study reported they consistently used a series of grooming behaviors, especially if they had gone undetected in the past using these tactics (Elliott et al., 1995).

The hindsight bias

Given that many of the behaviors child molesters employ appear seemingly normal and the sexual motivation is masked, often these behaviors are not recognized until the sexual abuse has already occurred. Craven and colleagues (2006) suggested that retrospective identification of sexual grooming is much easier than identifying it before the sexual offense occurs. The idea that a child molester’s pre-abuse behavior should have been recognized sooner can be explained by the social psychological phenomenon known as the hindsight bias. The hindsight bias, also known as the “I knew it all along” phenomenon, has been shown to apply across a number of settings and situations (Arkes, Faust, Guilmette, & Hart, 2009; Hastie, Schkade, & Payne, 1999; LaBine & LaBine, 1996).

The hindsight bias has been defined as the “tendency for individuals with outcome knowledge (hindsight) to claim that they would have estimated a probability of occurrence for the reported outcome that is higher than they would have estimated in foresight (without the outcome information)” (Hawkins & Hastie, 1990, p. 311). In other words, the hindsight bias refers to the effect that occurs when those who are given outcome information exaggerate the likelihood that they would have predicted the event (Arkes et al., 2009). Fischhoff (1975) conducted one of the pioneering studies that demonstrated that outcome information significantly influenced participants’ likelihood ratings of an event. The results indicated that students who were presented with outcome information about an unfamiliar historical event (i.e., conflict between Gurkas and the British in the 1800s) rated the probability of occurrence higher than those without the outcome information. Since this early study, meta-analyses have revealed that the hindsight bias is a robust effect that can be found across a variety of domains and is difficult to minimize (Christensen-Szalanski & Willham, 1991; Guilbault, Bryant, Brockway, & Prosavac, 2004).

A number of studies have applied the hindsight bias to facets of the criminal justice system, including punitive damages in civil cases (Hastie et al., 1999), negligence in civil cases (Kamin & Rachlinski, 1995), civil liability judgments (LaBine & LaBine, 1996), stereotyped offenders in criminal cases (Bodenhausen, 1990), judgments about felony-murder (Evelo & Greene, 2013), police searches (Casper, Benedict, & Perry, 1989), and police deception in confessions (Wasioleski, Whatley, & Murphy, 2009). However, no study to date has looked at the effects of outcome information on the identification of grooming behaviors of child sexual abusers. High-profile cases of child sexual abuse, such as the Jerry Sandusky trial, raised questions of why a child molester is not identified sooner. Hindsight bias suggests that after we know a person is a child molester, we believe we would have predicted that outcome.

Should the hindsight bias be present for situations involving sexual grooming, it would be important to consider the effect of the offender’s relationship to the victim in relation to the level of bias. Schkade and Kilbourne (1991) found that bias was increased when there were high expectations for an employee and the outcome was negative, which they termed the “disappointment effect”. In other words, the hindsight bias will be greater when outcomes are inconsistent with expectations. This effect may apply to child molesters and their relationship to the victim. One would expect that individuals will have higher expectations around maintaining an appropriate relationship with their children for blood relatives compared to nonrelatives. Thus, the hindsight bias may increase when the abuser is a family member as opposed to a nonrelative.

The current study

In order to examine the hindsight bias in the detection of grooming behaviors, this study will explore whether people who learn about the outcome of a child sexual abuse case will believe that they would have predicted it beforehand. Furthermore, we will study whether in fact people can identify sexual grooming behaviors. As such, there are five goals of the present study. The first is to examine whether the hindsight bias exists in a scenario where a child molester is sexually grooming a child. Second, the study will examine if the abuser's relationship to the child affects the extent of the hindsight bias. The third purpose of this study is to see whether individuals can recognize sexual grooming behaviors that many child molesters employ. The study will also explore whether there is a difference in participants' ability to recognize sexual grooming behaviors when the person is a relative or not. Last, we will examine what behaviors participants found inappropriate in the situations involving sexual grooming. It is hypothesized that: (a) the hindsight bias will be present across conditions, (b) the magnitude of hindsight bias will be greater in the relative condition compared to the nonrelative condition, (c) participants will be better able to recognize grooming behaviors in a nonrelative condition compared to the relative condition, and (d) participants will be most able to recognize sexual grooming behaviors involving physical touch with the child.

Method

Participants

Five hundred and twenty six undergraduate students (159 males, 367 females) from a large urban university participated in the study to partially fulfill course research requirements. Participants ranged in age from 18 to 46, with a mean age of 20.31 (SD = 3.7). The sample was racially diverse, comprising 219 Hispanic/Latino (41.6%), 103 white/Caucasian (19.6%), 87 black/African-American (16.5%), 60 Asian (11.4%), 24 biracial (4.6%), and 33 identified as "other" (6.3%).

Materials and procedure

Sexual grooming vignettes

Using a random number generator, participants were randomly assigned to read one of six conditions in which they read a one and a half page, double-spaced vignette. The six conditions were: (a) Grooming Foresight Relative, (b) Grooming Foresight Nonrelative (c) Grooming Hindsight Relative, (d) Grooming Hindsight Nonrelative, (e) Nongrooming relative, and (f) Nongrooming Nonrelative. Each vignette featured a teacher named John who was a baseball coach for a young boy named Robbie. The vignettes

were developed following a thorough review of the literature, including empirical articles and books, and the scenario presented included the most common elements of child molesters' grooming behaviors (Berliner & Conte, 1990; Campbell, 2009; Christiansen & Blake, 1990; Craven et al., 2006; Elliott et al., 1995; Lang & Frenzel, 1988; Lanning, 2010; Leclerc et al., 2009; McAlinden, 2006; Olson et al., 2007; Salter, 1995; van Dam, 2001, 2006). Experts in field of sex offenders reviewed the vignettes for accuracy.

In the Grooming Foresight vignettes (i.e., no outcome information was provided), John employed various behaviors commonly used by child molesters throughout the grooming process (e.g., selecting a vulnerable victim, gaining access, trust development, and desensitizing child to touch). The grooming behaviors employed by John were both targeting the primary victim, Robbie, and other children, because child molesters who groom may engage in these behaviors with multiple potential victims (Lanning, 2010). Some examples of grooming behaviors include: John surrounds himself in volunteer and work situations involving children, he hugs the players on his team, he engages in horseplay with the children, he accompanies players to the bathroom, he always offers to give Robbie a ride home, and he has Robbie sit on his lap. The Grooming Hindsight conditions consisted of the identical Grooming Foresight vignette but with an additional paragraph at the end stating that John was convicted for molesting 20 children, including Robbie. Last, the Nongrooming conditions mirrored the Grooming Foresight vignette but with all of the grooming behaviors removed. Some examples of nongrooming behaviors include: John volunteers for organizations helping the elderly and the homeless, he high-fives the players on his team, he stops the children when they engage in horseplay, he has players use the buddy system when using the bathroom, he sometimes gives Robbie a ride home when asked by Robbie's mother, and he sits next to Robbie. Half the participants had vignettes stating that John was Robbie's uncle (relative condition), while the other half did not (nonrelative condition).

Likelihood Ratings

Participants in the Grooming Foresight and Nongrooming conditions were asked, "Estimate the likelihood that the following statements are true about John" (0 = definitely not true, 100 = definitely true). The rating of interest was "John is a child molester," though the list also contained 10 "filler" items (e.g., John is an alcoholic, John is a father, John is a domestic abuser). Participants were also asked, "Estimate the likelihood of the following scenarios happening in the future" (0 = definitely not true, 100 = definitely true). The rating of interest was "John will sexually abuse Robbie," with an additional eleven "filler" items (e.g., John will win the lottery, John will get divorced, John will lead his baseball team to a winning season).

For the Grooming Hindsight conditions, participants provided the likelihood ratings only on the filler items and then were asked, “Ignoring the outcome information you were given, what would you have estimated the likelihood of John being child molester?” (0 = definitely not true, 100 = definitely true). Last, they were asked, “Ignoring the outcome information you were given, what would you have estimated the likelihood of John sexually abusing Robbie?” (0 = definitely will not occur, 100 = definitely will occur).

Inappropriate behaviors

Participants were asked to select yes/no to the question, “Did any of John’s behaviors seem inappropriate?” If the person answered yes, they were asked to list which behaviors they found to be inappropriate. A coding system was devised to include 26 categories based on the behaviors presented in the vignette. Only responses for the Grooming Foresight and Grooming Hindsight conditions were coded, since the nongrooming conditions did not contain any grooming behaviors. Two coders first coded the responses separately, with an overall agreement of 89.94%. Subsequently, the two researchers discussed any disagreements in the coding to reach a final consensus.

Demographic questionnaire

Students were asked to complete a brief demographic survey in which they were asked to provide information on their gender, age, and ethnic/racial origin. In addition, participants were asked whether they have taken psychology or criminology courses and whether they themselves had been a victim of CSA.

Procedure

Participants completed the study via an online survey site. Upon signing up, each participant was randomly assigned to one of six conditions and emailed the appropriate survey link. First, participants read the informed consent and, if they agreed to participate, they were asked to print a copy for their records. Participants were informed the study was examining college student’s perceptions of an individual based on a short description. The participant was then presented with one of the six vignettes and subsequently asked to answer the series of likelihood ratings. Next, participants were asked whether any of John’s behaviors seemed inappropriate. Finally, participants were asked to complete the demographic questionnaire and read a debriefing form. Completing the study took approximately 30 minutes for which students received one credit toward their course research requirement.

Results

Means and standard deviations for all measures are presented in Table 1 and Table 2. A series of MANOVAs revealed the demographic variables were not significantly related to the two dependent variables (John is a child molester, John will sexually abuse Robbie), including gender ($F[2, 520] = 1.44, p = .238$, partial eta squared = .006), age ($F[44, 996] = 1.12, p = .275$, partial eta squared = .047), race/ethnicity ($F[2, 515] = 1.73, p = .070$, partial eta squared = .016), psychology courses taken ($F[2, 519] = 2.15, p = .117$, partial eta squared = .008), criminology courses taken ($F[4, 1018] = 1.82, p = .122$, partial eta squared = .007), or CSA victimization ($F[2, 517] = 2.46, p = .086$, partial eta squared = .009). Therefore, these variables were not included in further analyses.

The hindsight bias and recognition of grooming behaviors

A 2 (Relationship to Victim) x 3 (Grooming) between-subjects MANOVA was performed on the two continuous dependent variables (John is a child molester, John will sexually abuse Robbie). The independent variables were Relationship to Victim (Relative, Nonrelative) and Grooming (Foresight Grooming, Hindsight Grooming, Nongrooming).

The results of the factorial MANOVA indicated there was a significant main effect for Grooming, $F(4, 1036) = 43.36, p < .001$, partial eta squared = .143, but that the main effect for Relationship was not significant, $F(2, 518) = 2.91, p = .056$, partial eta squared = .011. Furthermore, the

Table 1. Means and Standard Deviations for Condition by Relationship for the Child Molester Variable.

Condition	<i>n</i>	Relative		Non-Relative		Total	
		<i>M</i> (<i>SD</i>)	<i>n</i>	<i>M</i> (<i>SD</i>)	<i>n</i>	<i>M</i> (<i>SD</i>)	
Foresight	86	28.01(29.46)	94	33.67(35.31)	180	30.97(32.69)	
Hindsight	83	56.98(33.99)	87	64.11(32.59)	170	60.63(33.37)	
Nongrooming	90	14.04(22.87)	85	20.07(26.10)	175	16.97(24.61)	
Total	259	32.44(33.95)	266	39.28(36.47)	525	35.91(35.38)	

Table 2. Means and Standard Deviations for Condition by Relationship for the Sexually Abuse Robbie Variable.

Condition	<i>n</i>	Relative		Non-Relative		Total	
		<i>M</i> (<i>SD</i>)	<i>n</i>	<i>M</i> (<i>SD</i>)	<i>n</i>	<i>M</i> (<i>SD</i>)	
Foresight	86	29.05(31.68)	94	37.59(35.47)	180	33.51(33.98)	
Hindsight	83	56.17(34.32)	87	60.28(33.24)	170	58.27(33.74)	
Nongrooming	90	16.37(26.93)	85	21.52(28.17)	175	18.87(27.58)	
Total	259	33.33(35.38)	266	39.87(36.03)	525	36.65(35.67)	

interaction between Relationship and Grooming was not significant, $F(4, 1036) = .45, p = .77$, partial eta squared = .002.

Since there was a main effect for Grooming, ANOVA post-hoc follow-up tests were performed to test the hypothesis that there was an overall hindsight bias and the ability to recognize grooming behaviors. The effect for Grooming (i.e., Foresight Grooming, Hindsight Grooming, and Nongrooming) was significant for both dependent variables, Child Molester, $F(2, 519) = 91.90, p < .001$, partial eta squared = .262, and Sexually Abuse Robbie, $F(2, 519) = 67.15, p < .001$, partial eta squared = .206. Tukey honest significant difference post-hocs revealed all three conditions significantly differed from one another, with Grooming Hindsight being the highest, followed by Grooming Foresight, and then Nongrooming. See Figure 1.

Four planned comparisons were conducted in order to examine differences in the hindsight bias and ability to recognize grooming behaviors based on the offender's relationship to the child. The first contrast compared the Relative Grooming Foresight to Relative Grooming Hindsight to explore whether there is a hindsight bias for a relative. Results indicated there was a significant effect, $F(2, 518) = 19.86, p < .001$. Second, the Nonrelative Foresight was compared to Nonrelative Hindsight to examine the hindsight bias for a nonrelative, which also revealed a significant effect, $F(2, 518) = 22.80, p < .001$. These hindsight bias results indicated that the effect was present for both relationship conditions, as seen in higher means for the Grooming Hindsight conditions compared to the Grooming Foresight conditions. The third planned comparison was conducted to see if individuals can recognize grooming behaviors for a relative by comparing Relative Grooming Foresight to Relative Nongrooming, and this comparison was significant, $F(2, 518) = 4.74, p = .009$. Last, to see if individuals can recognize

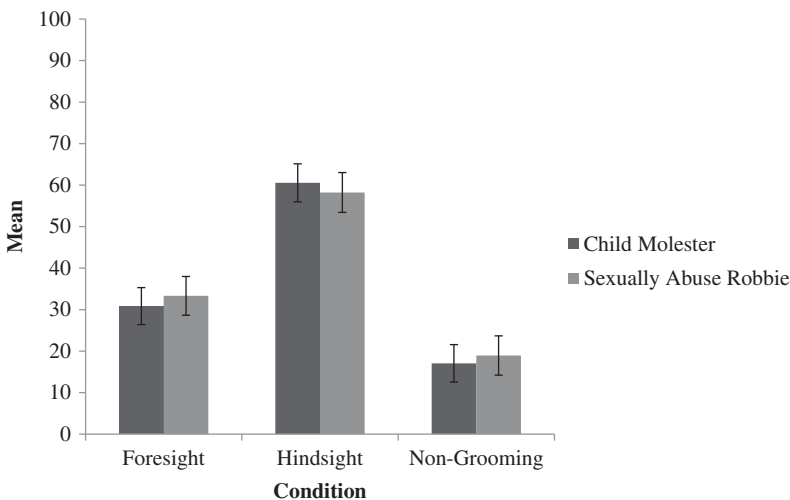


Figure 1. Mean likelihood ratings for child molester and sexually abuse Robbie as a function of condition.

grooming behaviors in a nonrelative, the Nonrelative Foresight was compared to the Nonrelative Nongrooming, which again resulted in significance, $F(2, 518) = 5.87, p = .003$. These results revealed that individuals in the study were able to recognize grooming behaviors, as demonstrated by the higher means for the Grooming Foresight conditions compared to the Nongrooming conditions. See [Table 1](#) and [Table 2](#) for means and standard deviations.

We hypothesized that the hindsight bias would be greater for a relative compared to a nonrelative. To investigate this, effect sizes for the hindsight bias analyses for both a relative and nonrelative were calculated. Results indicated that for the Child Molester variable, the effect sizes for relative (Cohen's $d = .91, 95\% \text{ CI}[0.59-1.22]$) and nonrelative (Cohen's $d = .90, 95\% \text{ CI}[0.06-1.20]$) were not statistically different. For Sexually Abuse Robbie likelihood ratings, the effect size for relative (Cohen's $d = .82, 95\% \text{ CI}[0.50-1.13]$) was slightly larger than that of a nonrelative (Cohen's $d = .66, 95\% \text{ CI}[0.36-0.96]$), but this difference was not statistically significant. We predicted that individuals would be better able to recognize grooming behaviors in a nonrelative compared to a relative. Calculations revealed the effect sizes for the relative (Cohen's $d = .53, 95\% \text{ CI}[0.23-0.83]$) and nonrelative (Cohen's $d = .44, 95\% \text{ CI}[0.14-0.73]$) conditions on the Child Molester variable were not significantly different. For the Sexually Abuse Robbie variable, there was no statistical difference between the effect sizes for relative (Cohen's $d = .43, 95\% \text{ CI}[0.13-0.73]$) compared to nonrelative (Cohen's $d = .50, 95\% \text{ CI}[0.20-0.79]$).

Inappropriate behaviors

After reading the vignette, participants were asked if any of John's behaviors seemed inappropriate, and if so, which ones. These open-ended responses were coded and analyzed for the Grooming Foresight and Grooming Hindsight conditions for both the Relative and Nonrelative conditions ($n = 351$). Results indicated that overall, 63.25% ($n = 222$) of participants listed at least one behavior they felt was inappropriate. A chi-square analysis revealed a significant relationship between the conditions and whether or not participants reported behaviors as inappropriate ($\chi^2(3, N = 351) = 25.32, p < .001$), with the Nonrelative Hindsight condition (80.7%) eliciting the highest number of inappropriate behavior reports, followed by Relative Hindsight (68.7%), Nonrelative Foresight (58.5%), and Relative Foresight (45.3%). The most reported responses for the Relative Foresight condition were: Robbie sits on John's lap (Lap), John accompanies children to the bathroom (Bathroom), John horseplays with the children (Horseplay), John takes some children to ice cream (Ice cream), John greets children with hugs (Hugs), and John spends overall too much time with children (Too much time). The top responses for the Nonrelative Foresight condition were: Lap,

Table 3. Top Inappropriate Behaviors Responses for Relative Foresight, Nonrelative Foresight, Relative Hindsight, and Nonrelative conditions.

Relative Foresight	Nonrelative Foresight	Relative Hindsight	Nonrelative Hindsight
Bathroom (<i>n</i> = 15, 17.4%)	Lap (<i>n</i> = 36, 38.3%)	Lap (<i>n</i> = 38, 45.8%)	Lap (<i>n</i> = 44, 50.0%)
Horseplay (<i>n</i> = 9, 10.5%)	Bathroom (<i>n</i> = 20, 21.3%)	Bathroom (<i>n</i> = 19, 22.9%)	Bathroom (<i>n</i> = 18, 20.5%)
Ice cream (<i>n</i> = 8, 9.3%)	Horseplay (<i>n</i> = 14, 14.9%)	Ice cream (<i>n</i> = 13, 15.7%)	Ice cream (<i>n</i> = 17, 19.3%)
Hugs (<i>n</i> = 5, 5.8%)	Ice cream (<i>n</i> = 11, 11.7%)	Too much time (<i>n</i> = 10, 12.0%)	Too much time (<i>n</i> = 15, 17.0%)
Too much time (<i>n</i> = 5, 5.8%)	Ride home (<i>n</i> = 8, 8.5%), hugs (<i>n</i> = 8, 8.5%), too much time (<i>n</i> = 8, 8.5%)	Horseplay (<i>n</i> = 8, 9.6%)	Horseplay (<i>n</i> = 12, 13.6%)

Bathroom, Horseplay, Ice cream, Giving Robbie a ride home, Hugs, and Too much time. The top five responses for the both the Relative and Nonrelative Hindsight conditions were: Lap, Bathroom, Ice cream, Too much time, and Horseplay. See Table 3 for percentages.

Discussion

With numerous cases of sexual abuse in the headlines, the public is left with questions of why these offenders were not recognized sooner. This study is the first to examine the hindsight bias and its implications for situations involving sexual grooming by child molesters. The study also sought to explore whether participants could recognize the sexual grooming behaviors of child molesters. Overall, findings suggest that there was a hindsight bias in a situation where a child molester was grooming a victim. Furthermore, we found that in general, participants were able to identify sexual grooming behaviors.

As hypothesized, we found that there was a hindsight bias present. Specifically, participants who had outcome information (i.e., John is a child molester) rated the likelihood they would have known that John was a child molester and would sexually abuse Robbie significantly higher than those who did not have the outcome information. These findings support past hindsight bias literature that has demonstrated that this effect is very robust and has been found in a variety of subject areas (Christensen-Szalanski & Willham, 1991; Guilbault et al., 2004), including those involving aspects of the criminal justice system (Bodenhausen, 1990; Casper et al., 1989; Evelo & Greene, 2013; Hastie et al., 1999; Kamin & Rachlinski, 1995; LaBine & LaBine, 1996; Wasieleski et al., 2009). This suggests that regardless of whether it was possible or not, individuals will likely believe that grooming behaviors were detectable before the abuser was caught. Grooming behaviors of child molesters often appear innocent, but the underlying intentions of these actions are deviant. Identifying a person grooming a child may be difficult to differentiate from

normal adult—child relationships, especially if the individual has a close relationship with the family or is a relative. Therefore, the hindsight bias, thus, may in fact be counterproductive, as it might incite blaming of the victim's family and community for not recognizing the abuse sooner, when in reality many of these behaviors are in and of themselves relatively innocuous and not overtly worrisome.

Contrary to expectation, the findings of this study showed that the hindsight bias was present to the same degree when the perpetrator was related to the victim as when he was not related. Research has shown that the hindsight bias is augmented when an individual has high expectations for a person and the outcome is negative, which has been termed the “disappointment effect” (Schkade & Kilbourne, 1991). Therefore, we had expected that the effect size for the hindsight bias would be greater for the relative condition versus the nonrelative, since people generally have higher expectations for those close to them. It may be that individuals have equally high expectations for any adults that spend time near children, rather than just having higher expectations for family members. In order to protect the children in the community from predators, people may have developed these high expectations for anyone who interacts with children on a regular basis. As a result, the disappointment effect may not be influencing the size of the hindsight bias for sexual grooming if the expectations are equivalent for both relatives and nonrelatives.

It has been previously suggested that sexual grooming behaviors are not easily identified (Canter et al., 1998; Craven et al., 2006; Lanning, 2010), yet no study to date has empirically examined this hypothesis. Thus, we explored whether participants in the study were able to identify these grooming behaviors that many child molesters employ. Our findings showed that, overall, participants in the study were able to recognize grooming behaviors, with those in grooming conditions reporting higher likelihood ratings than the nongrooming conditions for situations where the potential predator was both a relative and a nonrelative. Contrary to what has been proposed by the sexual grooming literature, this study found that people are actually able to spot potentially dangerous behaviors that appeared out of the ordinary for an adult—child relationship.

One possible explanation for this finding could be that the sample was drawn from a college that has a large emphasis on criminal justice studies, with 37.6% reporting having taken criminal justice courses. Therefore, it may be that these students are more informed about the behaviors of certain criminals, such as sex offenders, and were more able to recognize sexual grooming as compared to the general public. However, it should also be noted that the majority of the students were freshmen and enrolled in introductory psychology courses and, thus, many of them may not have had specialized criminal justice coursework yet. Furthermore, with the increased media attention paid to child sexual abuse, particularly after the Sandusky

scandal, there may be heightened awareness of the existence of grooming behaviors. The public may be more educated on sexual grooming behaviors and the offenders who commit such crimes through exposure to fiction and nonfiction television shows, news reports, Internet sites, and more.

It is also important to consider that although the results were statistically significant, when examining the means of the Foresight condition compared to the Nongrooming condition, they are both on the lower half of the scale (less than 50%), which was labeled “definitely not true.” These lower scores imply that participants were not very certain that John was a child molester or that he would sexually abuse Robbie. Therefore, even though the Foresight and Nongrooming conditions significantly differed, overall participants in the Foresight group still had ratings that would imply they did not feel the statements about John being a sexual offender were definitely true, indicating these participants did not find the behaviors overtly alarming. It may be that the sexual grooming process often appears inconspicuous, making it difficult at times to identify these potentially worrisome actions. In addition, if individuals are unaware that these behaviors exist or what constitutes sexual grooming, it would further impede early recognition of sexual grooming behaviors. Future studies should continue to explore people’s ability to recognize sexual grooming behaviors using different stimuli and measures.

Furthermore, we had predicted that participants would more easily recognize sexual grooming behaviors for the nonrelative scenario compared to the relative, since many grooming behaviors are not unlike normal family interactions (e.g., driving child home, babysitting, hugging). However, the effect sizes suggest that individuals were able to identify sexual grooming when the potential predator was a relative just as easily as when he was not related to the child. It is plausible that with the increased media exposure of these types of offenses, people may be more familiar with sexual grooming and statistics about CSA, but more research is needed to better understand this phenomenon.

The study also examined what types of potential grooming behaviors were viewed as inappropriate. Overall, more participants in the hindsight conditions mentioned behaviors as inappropriate, which is not surprising, given that these individuals knew the person was a child molester and could then search their memory and report behaviors they believe supported this outcome. The results suggested that the behaviors that were most easily recognized as alarming were having a child sit on an adult’s lap and accompanying children to the restroom. This was consistent with our prediction that the behaviors involving physical touch would be recognized as grooming behaviors. The most recognized behaviors did not greatly differ depending on whether the person had a relative or nonrelative vignette or whether the participant received outcome information or not. Behaviors involving physical touch and isolation were more easily recognizable than some of the covert

grooming techniques, such as selecting a vulnerable victim, working and volunteering with kids, and behaving in an excessively kind and charming manner. It is logical that the more obvious, physical actions were more easily identified by participants given that some of the other behaviors in the vignettes were more covert in nature. No study, to our knowledge, has empirically explored what behaviors are more easily identified, so these results should help guide further research in this area. These findings suggest that there may be a gap in public knowledge about certain stages of the grooming process, particularly victim selection and trust development. This information can be used to help guide policy and primary prevention efforts to put a stop to sexual abuse before it occurs.

There are several limitations to the current study. First, participants in the sample were undergraduates at an urban university with a focus on criminal justice studies, who may have had prior knowledge of sexual grooming and the child molester population. Future studies should attempt to replicate the findings from the current study in other populations, such as community adults and parents. Despite the unique sample, these findings are encouraging because they reveal that it is indeed possible to recognize sexual grooming. Further studies can explore what populations are better able to identify these potential child molesters compared to others. Second, the vignettes used in this study had not been previously validated as this was the first study to investigate grooming using an experimental design. However, in order to increase the validity of the measures, a thorough review of the literature was used to carefully create these stories and reviewed by experts in the sex offender field for accuracy. It is also important to note that the vignette featured one of many potential scenarios of sexual grooming, so future research should seek to replicate the findings for other situations (e.g., teacher, camp counselor, stepparent). In addition, researchers should seek to examine whether there are demographic or cultural characteristics that may impact the hindsight bias or individual's ability to recognize sexual grooming.

Although further work is needed to gain a more complete understanding of the hindsight bias in a scenario where sexual grooming is taking place, the results of this study can help explain why we often feel that sexual predators should have been recognized sooner. There appears to be a collective overconfidence that people should have predicted the abuse before it occurs, which places a large amount of blame on those who did not prevent the abuse. The public may blame the victim's family and community for not recognizing a potential predator in the child's life. The findings could potentially assist in mitigating the blame placed on those in the community who may be unable to spot potential sexual grooming prior to the commission of the abuse. The impact of the hindsight bias also has the potential to enter the courtroom, in that attorneys may question the validity of witness accounts should the hindsight bias influence retrospective reports of a sexual abuse scenario. If people

are overconfident once they receive hindsight knowledge, this raises the question of whether their recollections may be biased in some form. Further research into the role of the hindsight bias involving sexual grooming within the legal context is warranted.

It should also be noted that while our study focuses on an instance where these grooming behaviors were indeed predatory, it is important to understand that these behaviors can be, and often are, innocent in nature. An individual may display these types of behaviors (e.g., hugging a child, offering to babysit) in a typical, caring interaction between a child and adult. Furthermore, there may be differences between cultures on the acceptability and normality of these behaviors. Behaviors associated with sexual grooming do not automatically signify a person is a child molester but rather should be recognized as possibly worrisome should these behaviors form a systematic pattern.

The study also sheds light on whether individuals can recognize sexual grooming behaviors of child molesters. Our findings suggest that the participants in our sample were able to identify some of these grooming behaviors, in particular those involving physically touching or isolating the child. While this has significant implications, it is still unclear at what point, if at all, recognition of these behaviors would result in action. The results are encouraging, because we can conclude that it is indeed possible to recognize sexual groomers in some circumstances, though more research needs to be conducted investigating how recognition would result in prevention. Future studies should build off of these findings so that prevention efforts can take form. For example, further research should seek to identify the particular behaviors or stages of the grooming process that are more identifiable so we can begin educating community members on the components of grooming that are unfamiliar to them. Research on sexual grooming behaviors can help guide communities and policymakers as to what interventions should be implemented to help keep our communities safer from child molesters who groom.

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