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Telling a trusted adult: Factors associated with the likelihood of disclosing child sexual abuse prior to and during a forensic interview

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Abstract

Background: Many child sexual abuse (CSA) survivors delay or withhold disclosure of their abuse, even when presenting for formal investigation interviews. *Objective:* This study examined factors that relate to the CSA disclosure process. *Participants and Settings:* Participants were CSA victims ($N = 1,732$) presenting to a Child Advocacy Center (CAC) for a forensic interview. *Method:* We tested a structural model to predict disclosure before and during a forensic interview using secondary data analysis. *Results:* Youth were less likely to disclose before a forensic interview if they witnessed domestic violence ($\beta = -.233, p < .05$). Caregivers were less likely to believe the abuse allegation if the alleged perpetrator resided in the home ($\beta = -.386, p < .05$) and more likely to believe if the youth made a prior disclosure ($\beta = .286, p < .05$). Youth were more likely to disclose during the forensic interview if they were older ($\beta = .388, p < .05$), if the alleged perpetrator resided in their home ($\beta = .209, p$

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< .05), if they disclosed prior ($\beta=.254, p < .05$), and if their caregiver believed the allegation ($\beta=.213, p < .05$). The alleged perpetrator residing in the youth's home ($\beta=-0.082, p < .05$) and making a prior disclosure ($\beta=0.060, p < .05$) were both indirectly associated with forensic interview disclosure through caregiver belief. *Conclusions:* Findings highlight the importance of the family context and caregiver belief in the disclosure process for youth involved in formal CSA investigations.

Keywords: Sexual abuse, Disclosure, Forensic interview, Abuse discovery, Caregiver belief, Structural equation model

Childhood sexual abuse (CSA) is a wide-spread problem (Briere & Elliott, 2003; Pereda et al., 2009; Putnam, 2003), although limits in identifying youth victims preclude a true understanding of its scope. In a United States population-based study of over 34,000 adults, 10% of respondents (24.8% who were men and 75.2% who were women) reported experiencing sexual abuse before the age of 18 (Pérez-Fuentes et al., 2013). However, only a minority of CSA victims disclose their abuse to adults or authorities (Lahtinen, Laitila, Korkman, & Ellonen, 2018) and between 55 and 69% of victims do not disclose at all during childhood (London et al., 2008). Identifying youth victims is a necessary step towards youth protection (e.g., Paine & Hansen, 2002) and forensic investigations are a key setting where youth victims have the opportunity to disclose their abuse.

In the 1980s, the Child Advocacy Center (CAC) model was introduced in the United States to reduce burdens associated with forensic investigations on suspected youth CSA victims (Cross et al., 2008). CACs implement specific interviewing techniques and provide a child-friendly atmosphere to enhance likelihood of CSA disclosure and to aid in the collection of evidence (Cross et al., 2008). The CAC model is suspected to increase active disclosures of sexual abuse during forensic interviews; however, empirical investigations have not supported this (Cross et al., 2008; Lippert et al., 2009). Thus, the issue of non-disclosure remains a concern and a barrier to prosecuting child and adolescent sexual abuse cases, affirming youth safety, and helping youth heal post-abuse because a significant portion of victims still do not disclose their abuse at forensic interviews. For example, Lippert and colleagues (2009) found that disclosure rates ranged from 61 to 89% across CACs in four regions of the United States. Furthermore, Cross and colleagues (2008) found that, of CSA victims that investigators concluded had experienced abuse, a significant portion did

not disclose their abuse during forensic interviews conducted at CACs (29%). These rates, coupled with low rates of spontaneous disclosure to trusted others following abuse (e.g., Smith et al., 2000) suggests that further work is needed to understand the barriers and facilitators that impact CSA disclosure for youth seen at CACs.

1. The problem of delayed and non-disclosure

Retrospective research designs have been instrumental in identifying the issue of non-disclosure, showing that less than a quarter of youth victims disclose immediately following their assault (McElvaney, 2015). Further, a majority of youth victims do not disclose their victimization until adulthood, if at all (Smith et al., 2000). Similar retrospective studies suggest that if a youth does disclose during childhood or adolescence, this typically occurs months or years post victimization (see London et al., 2008 for a review). Indeed, among youth who disclose their abuse and present for formal investigation at a CAC, 43% delay disclosure months after the last abuse incident (Lippert et al., 2009).

Disclosure is a key avenue—in some cases, the only avenue—through which abuse is discovered and through which adults may take action to stop ongoing victimization (Alaggia, 2004). Thus, youth who do not disclose are at substantial risk for ongoing abuse (Collings et al., 2005). Disclosure during formal investigations, like those at CACs, serves as key judicial evidence, without which perpetrators may continue to have access to and potentially harm children (Elliott & Briere, 1994; Paine & Hansen, 2002). Further, children and adolescents who delay or fail to disclose may not receive mental health services to prevent or ameliorate symptomatology stemming from abusive experiences (Collings et al., 2005). Therefore, it is critically important to understand the disclosure process for youth seen at CACs in order to target barriers and facilitate prompt abuse disclosure.

2. Disclosure as a process

Although advancements in investigative procedures implemented by CACs have attempted to improve the disclosure experience for

youth (Cross et al., 2007; Newman et al., 2005), youth are still required to disclose their abuse multiple times and in multiple settings throughout an investigation. For example, youth may initiate a primary disclosure of abuse to a trusted individual such as a peer, who then encourages them to talk to a caregiver or teacher. Following this, they may be prompted to disclose to professionals involved in formal investigations. Therefore, rather than measuring disclosure as a single occurrence, calls have been made for empirical investigations to define disclosure as a process occurring across different contexts (Alnock & Miller, 2013). Extant literature, however, typically focuses on disclosure to either formal (e.g., police) or informal (e.g., caregivers) supports (Reitsema & Grietens, 2016), thus reducing disclosure to a single-time occurrence.

For children and adolescents presenting at CACs, the disclosure process typically consists of (a) abuse discovery (e.g., youth self disclosure, witness to abuse) followed by (b) disclosure to authorities (Lippert et al., 2009). Indeed, youth are most likely to disclose during a CAC forensic interview when they have made a prior disclosure (Cross et al., 2008). In order to promote abuse discovery and successful investigations, then, we must identify factors that either promote or impede youth's telling of their abuse at both stages of the disclosure process.

2.1. Individual, family, and abuse specific characteristics impacting disclosure

2.1.1. Individual factors

Youth's disclosure to both informal and formal responders is likely influenced by a number of factors. The child's sex, for example, may impact disclosure to authorities, as girls may be slightly more likely than boys to formally disclose (Hershkowitz et al., 2007). Younger children may also be less likely to disclose their abuse to authorities compared to older youth (McElvaney, 2015). This has been attributed to younger children not understanding the wrongfulness of their abuse (Pipe et al., 2007; Goodman-Brown et al., 2003). Younger children may also be more likely than older youth to delay initial disclosure to a member of their social network (e.g., Jonzon & Lindblad, 2004). Some studies, however, have failed to replicate this. For example, Tashjian,

Goldfarb, Goodman, Quas, and Edelstein (2016) did not find that child age predicted time to disclosure.

2.1.2. Family factors

Unfortunately, many CSA victims live in homes with additional forms of family violence (Kellogg & Mernard, 2003), which may influence CSA disclosure. There is evidence that youth delay disclosure to members of their social network when youth are in dysfunctional family environments, such as family environments with drugs or alcohol, criminality, or child abuse and maltreatment (Leclerc & Wortley, 2015). Emotional abuse by a non-offending family member has also been shown to relate to delayed CSA disclosure to formal responders (Tashjian et al., 2016). A secure parent-child relationship and safe environment are likely important in regard to disclosure (e.g., Tashjian et al., 2016), and youth may not feel safe disclosing their abuse while living in an unstable environment.

2.1.3. Abuse factors

Specific aspects of the abusive experience, such as severity, frequency, and duration of the abuse, have been reported to extend the time between abuse and disclosure to a non-offending caregiver (Hershkowitz et al., 2007). The youth's relationship with the perpetrator may also impact disclosure. For example, those with intrafamilial perpetrators report longer delays in CSA disclosure to authorities compared to youth with extrafamilial perpetrators (Tashjian et al., 2016). Additionally, Hershkowitz and colleagues (2007) found that 78% of children who were familiar with the abuse perpetrator delayed disclosing to a non-offending caregiver. Unfortunately, these factors have been examined either cross-sectionally, using small samples of youth, or from the perspective of adult sex offenders (e.g., Hershkowitz et al., 2007; Leclerc & Wortley, 2015; Tashjian et al., 2016) and should therefore be replicated with larger samples of youth.

2.2. Caregiver belief and its role in the disclosure process

Each disclosure occurrence prompts a reaction from the disclosure recipient, and the specific manner in which the recipient reacts, or is

anticipated to react, may impact subsequent disclosures (Reitsema & Grietens, 2016). Studies including adult sexual assault victims have found that disclosure behaviors may cease altogether following negative social reactions (e.g., Ahrens, 2006)—like a lack of belief—while positive reactions may lead survivors to feel optimistic about future disclosures (Dworkin & Allen, 2018). CSA survivors who are not believed when they disclose may be less willing to disclose in the future; indeed, CSA victims have cited fears of not being believed by a friend or family member as a reason for delaying or failing to disclose (McElvaney et al., 2014). In formal disclosure settings, this interactive process has most frequently been examined through the caregiver-child dyad, showing that the absence of caregiver support has predicted nondisclosure (Elliott & Briere, 1994; Lawson & Chaffin, 1992) and recantation (Malloy et al., 2007). Non-offending caregiver belief in the abuse allegation may have a particularly potent influence on disclosure, with prior studies suggesting that 69–84% of non-offending caregivers indicate some level of belief in the abuse allegations (see Elliott & Carnes, 2001 for a review)

Caregiver belief is an important aspect of the disclosure process and promoting youth protection among youth seen at CACs. Further, caregiver belief is an aspect of this process that may be malleable through intervention (Malloy & Lyon, 2006). As such, identifying child, abuse, or family characteristics that influence caregiver belief is imperative when attempting to promote youth disclosures. Although research on correlates of caregiver belief is limited, several correlates have been identified. Specifically, prior research has found that youth who are abused by familial perpetrators and who experience severe forms of abuse are more likely to have unsupportive caregiver reactions compared to those who are abused by non-familial perpetrators and who are victims of less severe abuse (Hershkowitz et al., 2007; Ullman, 2007). Further, caregivers more frequently display unsupportive reactions when children delay their initial disclosure (Hershkowitz et al., 2007). Although we are not aware of any studies to date that have examined the effects of domestic violence (DV) or a history of CSA in the family as they predict caregiver belief following abuse allegations, there is emerging evidence for the theory that proximity to interpersonal violence influences one's belief in allegations of child sexual abuse. Recently, Miller and Cromer (2015) found that college students with a history of exposure to interpersonal trauma were more likely to

rate a CSA disclosure vignette as believable. More research is needed to confirm these findings and identify other correlates of caregiver belief, especially among children and adolescents reporting to CACs.

3. The present study

The present study provides a unique contribution to the literature by examining the disclosure process for youth presenting to CACs, tracing the path from disclosure prior to the forensic interview through caregiver belief and ultimately to disclosure during a forensic interview. Although pre-interview disclosure and caregiver reactions have been examined as predictors of disclosure during a forensic interview (Cross et al., 2008), these constructs have not been examined as key factors within the disclosure process. These factors likely have their own barriers and facilitators, and clarity on the role of these factors within the disclosure process for youth presenting to CACs is imperative. Further, the combined influence of individual and contextual factors on disclosure has seldom been examined, and prior literature typically focuses on a single disclosure time point (e.g., Lemaigre et al., 2017; Pipe et al., 2007). Thus, there is a need for detailed analysis of the mechanisms underlying the CSA disclosure process (Lemaigre et al., 2017). The current study seeks to fill this gap by examining how child, abuse, and familial characteristics are associated with the disclosure process for youth presenting to a CAC. This study utilizes administrative data from a CAC to examine factors associated with disclosure at the time of the abuse investigation. Using this methodology, we sought to overcome a number of challenges present in the extant literature employing retrospective, self-report methodology, such as forgetting or distorting events when attempting to recall information (Alaggia, 2004).

Based on past theory and research, we explored the associations of demographic, family, and abuse perpetrator characteristics with (a) informal disclosure to a member of the child's social network, (b) caregiver belief of abuse allegations, and ultimately (c) disclosure during a CAC-based forensic interview. Specifically, we hypothesized that:

- 1) pre-interview disclosure would be less likely for younger youth and those who have witnessed family violence, had a close

- familial relationship with the perpetrator, or cohabitated with the perpetrator;
- 2) caregivers would be less likely to believe the abuse allegation for youth who have failed to make a pre-interview disclosure, had a close familial relationship with the perpetrator, cohabitated with the perpetrator, or in the absence of prior reports of CSA in the family; and,
 - 3) forensic interview disclosure would be less likely in the absence of caregiver belief and/or a pre-interview disclosure.

4. Method

4.1. Procedures

Data used in this study were collected from closed case files at a CAC in Nebraska. The data included here were part of a larger study examining archival records of 1992 youth presenting for an initial abuse episode between 2002 and 2009 (Pittenger et al., 2018). The CAC maintains a case record for each child and adolescent who presented to the facility, which may include demographic and family characteristics, details of the abuse and disclosure, medical history and examination, documentation of forensic interview, outcomes of juvenile and prosecution cases, and authorizations for exchange of information. Once sexual abuse was reported or suspected, an intake interview was scheduled at the CAC. Upon arrival at the CAC, a child advocate completed an intake interview with any of the youth's present supportive caretakers. During their visit, the child or adolescent met with a trained forensic interviewer to obtain information about the abuse allegation. Information of interest in this present study was documented in forms specific to the intake and forensic interview(s). Researchers extracted data from closed CAC files. Data checking procedures for the parent study included randomly selecting 30% of the case files for independent coding. There was over 98% agreement between raters. The University of Nebraska Lincoln's Institutional Review Board approved all procedures.

4.2. Participants

Archival reports coded in this study were from youths who presented to the CAC for an allegation of sexual abuse, whose case files were closed at the time of the study, and who underwent an intake and forensic interview ($n=1732$). Cases were considered closed when all investigations and court proceedings had been completed. All allegations of abuse, except those with suspicion of false reporting, were included regardless of substantiation status, as a failure to substantiate abuse cases often reflects issues with the investigation (e.g., lack of resources available for investigation) rather than an indication that abuse did not occur (Lewit, 1994).

Youths were ages three to 18 years with a mean age of 9.4 years ($SD=4.2$). Of the participants, 1317 were female (76%) and 413 were male (24%). The majority of the sample was European American ($n=1,363$, 81%), 136 children were African American (8%), 121 were Hispanic (7%), 37 were Native American (2%), and 17 were Asian (1%). A total of 15 youth identified as “other” or “multiracial” (1%). The racial and ethnic representation of this sample is similar to that of Nebraska’s overall population (e.g., 88.3% of Nebraska residents report being European American; United States Census Bureau, 2018).

4.3. Data sources

4.3.1. Intake

The intake form, completed by the child advocate, detailed the youth’s demographic information, family information, abuse allegations, and services provided by the CAC. Variables of interest in this study were (a) youth age; (b) whether youth witnessed DV in the home; (c) whether there was a history of sexual abuse in the family; (d) whether the youth made a disclosure prior to visiting the CAC; (e) how the non-offending parent/caregiver reacted to the abuse discovery, categorized as: “indicates belief,” “does not indicate belief”; (f) perpetrator relationship to the youth, categorized as familial or extra-familial; and (g) where the perpetrator was living at the time of abuse in relation to the youth, categorized as either within or outside of the child’s home.

4.3.2. Forensic interview

The forensic interview record was completed by the forensic interviewer to document their formal interview with the child or adolescent. These interviews are used for safety assessment and legal purposes; information collected may be used in criminal investigations. Information of interest in this study was whether or not the youth disclosed during the interview. The interviewer also recorded to what extent the youth disclosed in the interview, categorized as: “no disclosure,” “recanted,” “moderate disclosure,” or “high disclosure.” For the present study, disclosure was transformed into a binary variable with the youth either disclosing during the interview (“moderate” or “high disclosure”) or not disclosing during the interview (“no disclosure” or “recanting abuse statement”).

4.4. Analyses

We used structural equation modeling to generate a path model depicting the disclosure process. Missing data were addressed using multiple imputation in Mplus version 7.4 (Muthén & Muthén, 2015); imputed datasets were used to run bivariate and multivariate analyses; descriptive analyses are reported for complete data only. Multiple imputation is a method of missing data analysis that reduces bias associated with information missing not-at-random and restoring power lost by reductions in sample size (Graham, 2009). Endogenous variables (those predicted by other variables in the model) included disclosure prior to presentation at the CAC (informal disclosure, or “ID”), caregiver belief regarding the abuse allegation, and disclosure during a forensic interview (formal disclosure, or “FD”). All endogenous variables were coded as binary (*yes/no*). Descriptive and bivariate analyses were calculated using SPSS version 23.0 (IBM, 2013) and the structural model was estimated using Mplus. When outcomes are designated as categorical, Mplus defaults to using the mean- and variance-adjusted weighted least squares (WLSMV) estimator to compute model parameters. This estimator provides optimal results when used with larger sample sizes (i.e., 200 or more; Muthén et al., 1997). Mplus also allows for the inclusion of binary exogenous variables (those variables that are not predicted by any others in the model), which, in this model, included sex (0 = *male*, 1 = *female*); ethnicity (0 =

non-white; 1 = *white*); witness to DV in the home, prior sexual abuse of a family member, perpetrator living in the home at the time of the abuse, and having an intrafamilial perpetrator (all coded 0 = *no*; 1 = *yes*). Youth age, measured in years, was the only continuous variable included in the model. Large sample sizes often yield a significant chi-square test statistic, potentially incorrectly suggesting poor model fit (Kline, 1998). As such, the comparative fit index (CFI) and root mean squared error of approximation (RMSEA) were used instead of the chi-square test statistic to evaluate model fit. $CFI \geq .90$ and $RMSEA \leq .05$ were used as cutoffs to indicate good model fit (Kline, 2016).

5. Results

5.1. Descriptive analyses

Most youth ($n = 1294$; 86%) made an ID prior to presentation at the CAC and 1326 (80%) youth made a FD at the CAC. Of those who made an ID prior to the CAC, 986 were female (76%), and of those who made a FD at the CAC, 1031 were female (78%). Most caregivers ($n = 704$; 81%) indicated belief that the abuse occurred. IDs were most frequently made to a parent ($n=754$; 60%), a non-parent family member ($n = 117$; 9%), school personnel ($n = 114$; 9%), or the child's therapist ($n = 88$; 7%). One-hundred ninety youth (15%) told another person (e.g., a friend, doctor, babysitter, or law enforcement officer). For youth who did not make an ID, abuse was discovered because the child was identified at risk (e.g., a sibling was abused in the same household, the child had been with a known perpetrator) ($n=87$; 41%), a third party reported witnessing the abuse ($n=40$, 19%), the youth engaged in sexualized behaviors ($n=13$; 6%), the youth had suspicious marks ($n=2$, 1%), or signs of abuse were discovered during a routine medical exam ($n=2$, 1%). The reason for presentation to the CAC was unknown for 294 youth (17%). Of the cases providing information, over one-third were reported to have witnessed domestic violence ($n = 420$; 36%) and 58% had known prior sexual abuse of a family member ($n = 711$). Over half ($n = 973$; 57%) of the alleged perpetrators were in the youth's immediate or extended family and 33% ($n = 570$) lived in the youth's home at the time of abuse.

Table 1 Bivariate Correlations using Multiple Imputation.

	1	2	3	4	5	6	7	8	9
Pearson Product-Moment Correlation Coefficients									
1. Age	-	0.210**	0.017	-0.204***	-0.005	-0.024	0.047	0.051*	0.305***
Phi Coefficients									
2. Child's sex (female)	-								
3. Child witness to DV	-0.031	-							
4. Intrafamilial Perpetrator	-0.043+	0.067*	-						
5. Perpetrator in Home	-0.012	0.103**	0.362***	-					
6. Prior Sexual Abuse in Family	-0.051+	0.245***	0.154***	0.103***	-				
7. Caregiver Belief	-0.013	-0.110**	-0.096**	-0.170***	-0.009	-			
8. Informal Disclosure	-0.027	-0.049	-0.066*	-0.062*	0.024	0.145**	-		
9. Formal Disclosure	0.077**	-0.036	-0.065**	0.024	0.004	0.165***	0.179***	-	

Note: Child sex is coded 0 = male, 1 = female; Variables 3–9 are dummy coded such that an affirmative response=1.
+ $p < .1$; * $p < 0.05$; ** $p < 0.01$; *** $p < .001$.

5.2. Bivariate analyses

Pearson product-moment correlations (for continuous-binary variable pairings) and Phi coefficients (for binary-binary variable pairings) run with imputed data sets are presented in **Table 1**. Having made an ID was positively related to youth age and negatively related to having an intrafamilial perpetrator and a perpetrator living in the home. Caregiver belief in the abuse allegation was positively related to the youth making an ID and negatively related to domestic violence in the home, having an intrafamilial perpetrator, and having a perpetrator living in the home. Finally, having made a FD was positively related to being young, being female, caregiver belief, and having made an ID. FD was negative related to having a perpetrator in the family.

5.3. Structural equation model

To test the hypothesis that FD is a product of multiple pre-existing factors and reactions during the disclosure process, we used a structural model fit to the imputed data. This model examined the association of demographic, familial, and abuse perpetrator characteristics with (a) ID, (b) caregiver belief in the abuse allegations, and (c) FD. This model, displayed in **Fig. 1**, fit the data well, $X^2(7)=27.84$, $p < .001$, CFI=.94, RMSEA=.04 (confidence interval not computed due

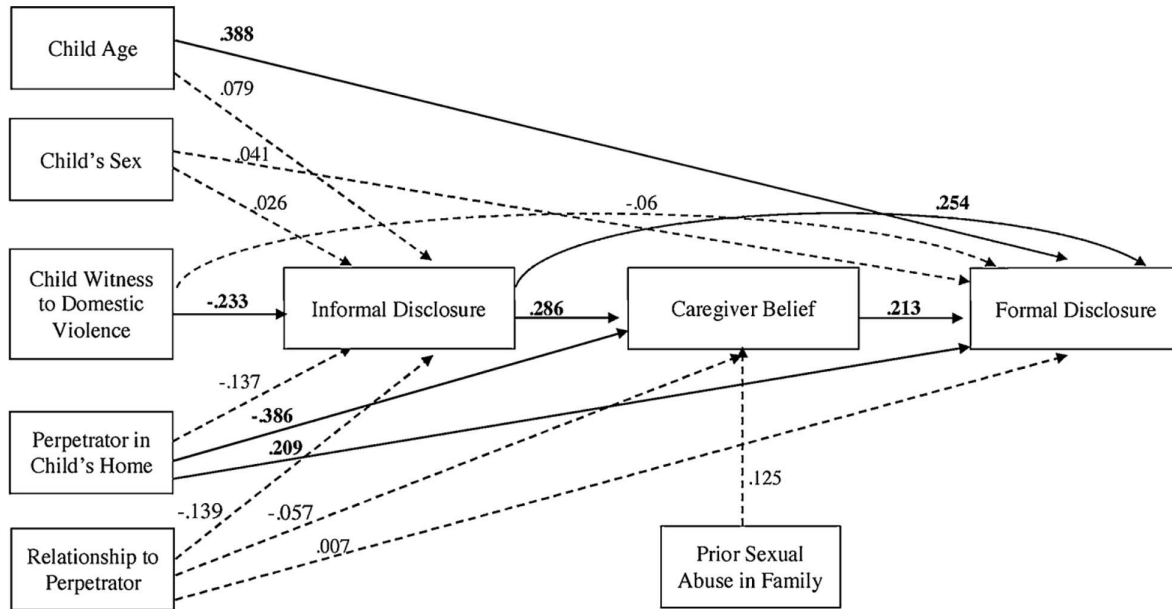


Fig. 1. Standardized solution (β s) for the hypothesized structural equation model of informal and formal disclosure. Solid lines indicate significant pathways at the $p < .05$ level. Dashed lines indicate nonsignificant pathways.

to use of MI). FD was more likely to occur for older youth and those with a perpetrator living in the home, when youth had made an ID, and when caregivers indicated belief in the allegation. Further, the path model provided evidence for the association of various familial and abuse-related factors with disclosure prior to the forensic interview and caregiver belief. Youth who did not make an ID were more likely to have witnessed DV in their home. Finally, caregivers were less likely to indicate belief in the abuse allegation if there was an intrafamilial perpetrator and more likely to indicate belief if the youth made an ID to them or someone else.

Based on the bivariate and multivariate analyses, we also used this model to test the indirect effects of the youth having witnessed DV in the home, having a perpetrator in the youth's home, and ID on FD. Having witnessed domestic violence did not exhibit an indirect effect on FD ($\beta = -0.059$, $SE=0.031$, $p<.01$). Having a perpetrator in the youth's home did indirectly effect FD through caregiver belief ($\beta = -0.082$, $SE=0.036$, $p<.05$). Finally, ID indirectly predicted FD through caregiver belief ($\beta=0.060$, $SE=0.026$, $p<.05$).

6. Discussion

This study explored the interactive, ongoing process of CSA disclosure for youth presenting to a CAC, highlighting barriers and facilitators associated with pre-interview disclosure, caregiver belief regarding abuse allegations, and disclosure during a forensic interview. Key findings suggest that youth presenting to CACs are more likely to disclose during a forensic interview if they have made a pre-interview disclosure and their caregiver indicates belief in the abuse allegation. Consistent with prior studies, older age at the time of the forensic interview also predicted disclosure. Further, results provide evidence that caregivers are more likely to believe allegations when youth have made a pre-interview disclosure and less likely to believe if the alleged perpetrator resides in the home. Of note, youth were less likely to have made a pre-interview disclosure if they reported witnessing domestic violence in their homes. Indirect effects of pre-interview disclosure and perpetrator living in the home emphasize the importance of caregiver belief as a mechanism that may interfere with the disclosure process.

A common early step in the disclosure process is an initial disclosure to a member of the youth's social network, and our results suggest that the likelihood of CAC-presenting youth making this type of disclosure may be decreased if they have witnessed DV in the home. This finding is consistent with hypotheses and noteworthy given the frequency with which CSA victims witness DV. Prior studies show that between 52% and 54% of child sexual assault victims live in homes with DV (Bowen, 2000; Kellogg & Menard, 2003), and over one-third of the present sample reported witnessing DV. Youth presenting to forensic interviews who witness DV and do not make a prior statement likely had their abuse discovered in another manner (e.g., someone witnessed the abuse). Indeed, youth may fear disclosing their abuse to trusted friends and family members because perpetrators often threaten harm to children or their family members to maintain secrecy. These threats may be particularly salient for youth who have witnessed violence in their own home, especially if said violence was perpetrated by the individual who abused them. Indeed, Kellogg and Menard (2003) interviewed child and adolescent sexual abuse victims and found that 34% of their participants cited fear of the perpetrator as a reason for delayed disclosure. Among youth who reported DV

in their home, this number rose to 41%. Thus, DV in the home may prevent abuse reports and therefore the identification and support of CSA victims.

Caregiver belief also appeared to be a key component of CAC-presenting youth's disclosure process, as youth whose caregivers indicated belief about the abuse allegations were more likely to disclose during the forensic interview. This finding supports an emerging picture within the literature recognizing the importance of the interactional context through which disclosure occurs (Reitsema & Grietens, 2016), and it is thus critically important to understand the mechanisms through which caregivers lend support. In this study, caregivers were more likely to believe the abuse allegation if the child or adolescent made an informal disclosure prior to presenting to the CAC and if the perpetrator was someone who lived outside of the home. Our findings are consistent with prior research showing that caregivers are less likely to display belief when a child does not immediately tell a trusted individual about their abuse (Hershkowitz et al., 2007). CSA allegations have major implications for a family, and so it is understandable that caregivers may not want to believe an allegation if they have not heard it directly from their child. Further, anticipated reactions to disclosure may impact youth's behavior. For example, youth may avoid or delay disclosure because they anticipate negative reactions from their parents or engage in other behaviors that contribute to caregiver disbelief, such as avoiding their parents or disclosing to individuals other than their parents (Hershkowitz et al., 2007). It may also be the case that emotional reactions contribute to nonbelief when perpetrators live within the home or are members of the family, as it may be difficult for the non-offending caregiver to comprehend that someone they know and trust could commit such an act (Elliott & Carnes, 2001). Inconsistent with hypotheses, our findings did not support Miller and Cromer's (2015) theory of interpersonal proximity, which argues that people are more likely to believe a CSA disclosure if someone close to them has experienced interpersonal victimization.

The present findings also lend novel empirical evidence for the mediating effect of caregiver belief on disclosure during the forensic interview. That is, although making a prior statement often leads to disclosure during a forensic interview, the response of caregivers may be associated with this process. A child or adolescent's failure to

disclose prior to a forensic interview may initiate a negative feedback loop. Specifically, youth may fear a negative reaction from their caregiver, such as not being believed (De Francis, 1969), and fail to seek help from a trusted adult. Then, when abuse is discovered in some other fashion (e.g., third-party statement), caregivers may be skeptical, as their child has not spoken to them about such an important experience. Finally, youth may be discouraged from further discussion of the abuse because of this skepticism (Hershkowitz et al., 2007). This is noteworthy given the high rates of delayed and non-disclosure among CSA victims.

Older youth were significantly more likely to disclose during the interview. As noted previously, younger children may fail to disclose due to not fully understanding that abuse is a violation of their rights and that it should be brought to a trusted adult's attention (London et al., 2005). Additionally, younger children's less-developed linguistic skills may prevent them from explaining their experiences, ultimately hindering them from disclosing their abuse (London et al., 2005). The latter of these is well known to CSA investigators and is often overcome with specific interview techniques for young children (e.g., Sternberg et al., 2001) while the former may be addressed by sexual abuse education and prevention programs (see Walsh, Zi, Woolfenden, & Shlonsky, 2015 for review).

6.1. Strengths and limitations

The current study had a number of strengths. By utilizing closed CAC files, we were able to create a model predicting CSA disclosure to trusted others, caregiver belief regarding abuse allegations, and ultimate disclosure during forensic interviews. Our model helps build a theoretical and empirical picture detailing a youth's disclosure process. This is imperative given the recent calls to expand the empirical literature to view disclosure as a process instead of a single time occurrence (e.g., Reitsema & Grietens, 2016). Additionally, our use of closed case files of youth who presented to a CAC allowed for the documentation of abuse and disclosure factors at the time of abuse discovery. This helped overcome a number of methodological limitations present in prior studies (e.g., retrospective self-report of abusive experiences) and strengthens our findings. Finally, the use of a large, CAC-involved sample increases the generalizability of these findings

to the 200,000+ youth presenting to CACs nationwide for CSA allegations each year (National Children's Alliance, 2017).

Although the present work has a number of strengths, there are also limitations. While the present findings may generalize to other youth presenting to CACs for sexual abuse allegations, these findings may not generalize to youth victims who do not present to CACs. There may be important differences between the population we intended to study and youth victims who do not present to CAC's (e.g., severity of abuse allegations; Cross et al., 2007), and these differences could impact disclosure (e.g., Hershkowitz et al., 2007). Given these differences, it is unclear if our results generalize to the larger CSA victim population. Next, the use of archival data precluded examination of additional variables related to disclosure (e.g., age of onset of abuse, child perceptions of anticipated caregiver reaction, and abuse severity) which may have impacted disclosure. Additionally, the high rate of pre-interview disclosure found in this sample likely hindered exploration of additional factors that are associated with initial abuse disclosure. Nonetheless, the pre-interview disclosure rate observed here is consistent with other samples presenting to forensic investigation (e.g., Lippert et al., 2009). Finally, this sample lacks ethnic diversity. This limitation may be attributed to the setting of this study, where an estimated 88.3% of the population is White (United States Census Bureau, 2018). Ethnic differences have been observed in relation to CSA disclosure (Ullman & Filipas, 2005); thus, a more ethnically diverse sample would benefit future research.

6.2. Implications

These findings provide valuable insight into how child, abuse, and familial factors are associated with the process of CSA disclosure for youth presenting to CACs. These results suggest that information impacting disclosure be collected at intake with CACs, law enforcement, and child protection agencies and used to tailor interactions with the child and their family members during the investigation. Pertinent information includes: family history of DV, family member victimization histories, proximity of the alleged perpetrator at the time of abuse, and caregiver reactions to hearing of the abuse allegation(s). Investigators would benefit from being conscious that CSA victims with these risk factors may have a reduced likelihood to disclose their

sexual assault. Continuing efforts to understand why children disclose and why they may be reluctant to disclose will help protection and safety efforts, connection with mental health services as needed, and investigational and criminal proceedings. Furthermore, it is imperative that future efforts acknowledge disclosure as a process involving multiple occasions where a child must retell their abuse to initiate support and prevent ongoing abuse.

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References

- Ahrens, C. (2006). Being silenced: The impact of negative social reactions on the disclosure of rape. *American Journal of Community Psychology*, *38*, 263–274. <https://doi.org/10.1007/s10464-006-9069-9>.
- Alaggia, R. (2004). Many ways of telling: Expanding conceptualizations of child sexual abuse disclosure. *Child Abuse & Neglect*, *28*, 1213–1227. <https://doi.org/10.1016/j.chiabu.2004.03.016>.
- Alnock, D., & Miller, P. (2013). *No one noticed, no one heard: A study of disclosures of childhood abuse*. London, England: NSPCC.
- Bowen, K. (2000). Child abuse and DV in families of children seen for suspected sexual abuse. *Clinical Pediatric*, *39*, 33–40. <https://doi.org/10.1177/000992280003900104>.
- Briere, J., & Elliott, D. M. (2003). Prevalence and psychological sequelae of self-reported childhood physical and sexual abuse in a general population sample of men and women. *Child Abuse & Neglect*, *27*, 1205–1222. <https://doi.org/10.1016/j.chiabu.2003.09.008>.
- Collings, S. J., Griffiths, S., & Kumalo, M. (2005). Patterns of disclosure in child sexual abuse. *South African Journal of Psychology*, *35*, 270–285. <https://doi.org/10.1177/008124630503500207>.
- Cross, T. P., Jones, L. M., Walsh, W. A., Simone, M., & Kolko, D. (2007). Child forensic interviewing in Children's Advocacy Centers: Empirical data on a practice model. *Child Abuse & Neglect*, *31*, 1031–1052. <https://doi.org/10.1016/j.chiabu.2007.04.007>.

- Cross, T. P., Jones, L. M., Walsh, W. A., Simone, M., Kolko, D., Sczepanski, J., ... Shadoin, A. L. (2008). Evaluating children's advocacy centers' response to child sexual abuse. *Juvenile Justice Bulletin*. Retrieved from <https://www.ncjrs.gov/pdffiles1/ojdp/218530.pdf>.
- De Francis, V. (1969). *Protecting the child victim of sex Crimes committed by adults*. Denver, CO: American Humane Association.
- Dworkin, E. R., & Allen, N. (2018). Correlates of disclosure cessation after sexual assault. *Violence Against Women, 24*, 85-100. <https://doi.org/10.1177/1077801216675743>.
- Elliott, D. M., & Briere, J. (1994). Forensic sexual abuse evaluations of older children: Disclosures and symptomatology. *Behavioral Sciences & the Law, 12*, 261-277. <https://doi.org/10.1002/bsl.2370120306>.
- Elliott, A. N., & Carnes, C. N. (2001). Reactions of nonoffending parents to the sexual abuse of their child: A review of the literature. *Child Maltreatment, 6*, 314-331. <https://doi.org/10.1177/1077559501006004005>.
- Goodman-Brown, T. B., Edelstein, R. S., Goodman, G. S., Jones, D. P., & Gordon, D. S. (2003). Why children tell: A model of children's disclosure of sexual abuse. *Child Abuse & Neglect, 27*, 525-540. [https://doi.org/10.1016/S0145-2134\(03\)00037-1](https://doi.org/10.1016/S0145-2134(03)00037-1).
- Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of Psychology, 60*, 549-576. <https://doi.org/10.1146/annurev.psych.58.110405.085530>.
- Hershkovitz, I., Lanes, O., & Lamb, M. E. (2007). Exploring the disclosure of child sexual abuse with alleged victims and their parents. *Child Abuse & Neglect, 31*, 111-123. <https://doi.org/10.1016/j.chiabu.2006.09.004>.
- Jonzon, E., & Lindblad, F. (2004). Disclosure, reactions, and social support: Findings from a sample of adult victims of child sexual abuse. *Child Maltreatment, 9*, 190-200. <https://doi.org/10.1177/1077559504264263>.
- Kellogg, N. D., & Menard, S. W. (2003). Violence among family members of children and adolescents evaluated for sexual abuse. *Child Abuse & Neglect, 27*, 1367-1376. <https://doi.org/10.1016/j.chiabu.2003.10.008>.
- Kline, R. B. (1998). *Principles and practice of structural equation modeling*. New York, NY: Guilford Press.
- Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). New York, NY: Guilford Press.
- Lahtinen, H. M., Laitila, A., Korkman, J., & Ellonen, N. (2018). Children's disclosures of sexual abuse in a population-based sample. *Child Abuse & Neglect, 76*, 84-94. <https://doi.org/10.1016/j.chiabu.2017.10.011>.
- Lawson, L., & Chaffin, M. (1992). False negatives in sexual abuse disclosure interviews. *Journal of Interpersonal Violence, 7*, 532-542. <https://doi.org/10.1177/088626092007004008>.
- Leclerc, B., & Wortley, R. (2015). Predictors of victim disclosure in child sexual abuse: Additional evidence from a sample of incarcerated adult sex offenders. *Child Abuse & Neglect, 43*, 104-111. <https://doi.org/10.1016/j.chiabu.2015.03.003>.

- Lemaigre, C., Taylor, E. P., & Gittoes, C. (2017). Barriers and facilitators to disclosing sexual abuse in childhood and adolescence: A systematic review. *Child Abuse & Neglect*, *70*, 39–52. <https://doi.org/10.1016/j.chiabu.2017.05.009>.
- Lewit, E. M. (1994). Reported child abuse and neglect. *The Future of Children*, *4*, 233–242. <https://doi.org/10.2307/1602533>.
- Lippert, T., Cross, T. P., Jones, L., & Walsh, W. (2009). Telling interviewers about sexual abuse: Predictors of child disclosure at forensic interviews. *Child Maltreatment*, *14*, 100–113. <https://doi.org/10.1177/1077559508318398>.
- London, K., Bruck, M., Ceci, S. J., & Shuman, D. W. (2005). Disclosure of child sexual abuse: What does the research tell us about the ways that children tell? *Psychology Public Policy and Law*, *11*, 194–226. <https://doi.org/10.1037/10764-8971.11.1.19>.
- London, K., Bruck, M., Wright, D. B., & Ceci, S. J. (2008). Review of the contemporary literature on how children report sexual abuse to others: Findings, methodological issues, and implications for forensic interviewers. *Memory*, *16*, 29–47. <https://doi.org/10.1080/09658210701725732>.
- Malloy, L. C., & Lyon, T. D. (2006). Caregiver support and child sexual abuse: Why does it matter? *Journal of Child Sexual Abuse*, *15*, 97–103. https://doi.org/10.1300/J070v15n04_06.
- Malloy, L. C., Lyon, T. D., & Quas, J. A. (2007). Filial dependency and recantation of child sexual abuse allegations. *Journal of the American Academy of Child and Adolescent Psychiatry*, *46*, 162–170. <https://doi.org/10.1097/01.chi.0000246067.77953.f7>.
- McElvaney, R. (2015). Disclosure of child sexual abuse: Delays, non-disclosure and partial disclosure. What the research tells us and implications for practice. *Child Abuse Review*, *24*, 159–169. <https://doi.org/10.1002/car.2280>.
- McElvaney, R., Greene, S., & Hogan, D. (2014). To tell or not to tell? Factors influencing young people's informal disclosures of child sexual abuse. *Journal of Interpersonal Violence*, *29*, 928–947. <https://doi.org/10.1177/0886260513506281>.
- Miller, K. E., & Cromer, L. D. (2015). Beyond gender: Proximity to interpersonal trauma in examining differences in believing child abuse disclosures. *Journal of Trauma & Dissociation*, *16*, 211–223. <https://doi.org/10.1080/15299732.2014.985863>.
- Muthén, B., du Toit, S. H. C., & Spisic, D. (1997). *Robust inference using weighted least squared and quadratic estimating equations in latent variable modeling with categorical and continuous outcomes* Unpublished technical report. Los Angeles, CA: Muthén & Muthén.
- Muthén, L. K., & Muthén, B. O. (2015). *Mplus (Version 7.4)*. Los Angeles, CA: Muthén & Muthén.
- National Children's Alliance (2017). *Annual report 2017* Washington, DC: National Children's Alliance.

- Newman, B. S., Dannenfelser, P. L., & Pendleton, D. (2005). Child abuse investigations: Reasons for using child advocacy centers and suggestions for improvement. *Child and Adolescent Social Work Journal*, 22, 165–181. <https://doi.org/10.1007/s10560-005-3416-9>.
- Paine, M. L., & Hansen, D. J. (2002). Factors influencing children to self-disclose sexual abuse. *Clinical Psychology Review*, 22, 271–295. [https://doi.org/10.1016/S0272-7358\(01\)00091-5](https://doi.org/10.1016/S0272-7358(01)00091-5).
- Pereda, N., Guilera, G., Forns, M., & Gómez-Benito, J. (2009). The prevalence of child sexual abuse in community and student samples: A meta-analysis. *Clinical Psychology Review*, 29, 328–338. <https://doi.org/10.1016/j.cpr.2009.02.007>.
- Pérez-Fuentes, G., Olfson, M., Villegas, L., Morcillo, C., Wang, S., & Blanco, C. (2013). Prevalence and correlates of child sexual abuse: A national study. *Comprehensive Psychiatry*, 54, 16–27.
- Pipe, M. E., Lamb, M. E., Orbach, Y., Stewart, H., Sternberg, K. J., & Esplin, P. (2007). Factors associated with nondisclosure of suspected abuse during forensic interviews. In M. E. Pipe, M. E. Lamb, Y. Obach, & A. C. Cederborg (Eds.). *Child sexual abuse: Disclosure, delay and denial* (pp. 77–96). New York, NY: Routledge.
- Pittenger, S. L., Pogue, J. K., & Hansen, D. J. (2018). Predicting sexual revictimization in childhood and adolescence: A longitudinal examination using ecological systems theory. *Child Maltreatment*, 23, 137–146.
- Putnam, F. W. (2003). Ten-year research update review: Child sexual abuse. *Journal of the American Academy of Child and Adolescent Psychiatry*, 42, 269–278. <https://doi.org/10.1097/00004583-200303000-00006>.
- Reitsema, A. M., & Grietens, H. (2016). Is anybody listening? The literature on the dialogical process of child sexual abuse disclosure reviewed. *Trauma, Violence & Abuse*, 17, 330–340. <https://doi.org/10.1177/1524838015584368>.
- Smith, D. W., Letourneau, E. J., Saunders, B. E., Kilpatrick, D. G., Resnick, H. S., & Best, C. L. (2000). Delay in disclosure of childhood rape: Results from a national survey. *Child Abuse & Neglect*, 24, 273–287. [https://doi.org/10.1016/S0145-2134\(99\)00130-1](https://doi.org/10.1016/S0145-2134(99)00130-1).
- Sternberg, K. J., Lamb, M. E., Orbach, Y., Esplin, P. W., & Mitchell, S. (2001). Use of a structured investigative protocol enhances young children's responses to free recall prompts in the course of forensic interviews. *The Journal of Applied Psychology*, 86, 997–1005. <https://doi.org/10.1037/0021-9010.86.5.997>.
- Tashjian, S. M., Goldfarb, D., Goodman, G. S., Quas, J. A., & Edelstein, R. (2016). Delay in disclosure of non-parental child sexual abuse in the context of emotional and physical maltreatment: A pilot study. *Child Abuse & Neglect*, 58, 149–159. <https://doi.org/10.1016/j.chiabu.2016.06.020>.
- Ullman, S. (2007). Relationship to perpetrator, disclosure, social reactions, and PTSD symptoms in child sexual abuse survivors. *Journal of Child Sexual Abuse*, 16, 19–36. https://doi.org/10.1300/Jo70v16n01_02.

- Ullman, S. E., & Filipas, H. H. (2005). Ethnicity and child sexual abuse experiences of female college students. *Journal of Child Sexual Abuse, 14*, 67-89. https://doi.org/10.1300/J070v14n03_04.
- United States Census Bureau (2018). *QuickFacts: Nebraska*. Retrieved from <https://www.census.gov/quickfacts/table/PST045215/31#headnote-js-a>.
- Walsh, K., Zwi, K., Woolfenden, S., & Shlonsky, A. (2015). School-based education programmes for the prevention of child sexual abuse. *Cochrane Database of Systematic Reviews, Issue, 4*, 1-121. <https://doi.org/10.1002/14651858.CD004380.pub3>.