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68. Increasing maltreated and nonmaltreated children's recall disclosures of a minor transgression: The effects of back-channel utterances, a promise to tell the truth and a post-recall putative confession.

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Author's Note

Abstract

Background: Children are often hesitant to disclose transgressions, particularly when they feel implicated, and frequently remain reluctant until confronted with direct questions. Given the risks associated with direct questions, an important issue is how interviewers can encourage honesty through recall questions. **Objective:** The present study examined the use of three truth induction strategies for increasing the accuracy and productivity of children's reports about a transgression. **Participants:** A total of 285 4-to-9-year-old maltreated and nonmaltreated children. **Methods:** Each child took part in a play session with a stranger during which the child appeared to break some toys. A research assistant interviewed the child with narrative practice rapport building and recall questions. The study included manipulations of back-channel utterances (brief expressions used to communicate attention and interest), whether (and when) the child was asked to promise to tell the truth, and the use of a post-recall putative confession. **Results:** Back-channel utterances failed to increase disclosure (OR = .79 [95% CI: .48, 1.31]) but increased the productivity of children's reports about broken ($p = .04$, $\eta_p = 0.02$) and unbroken toys ($p = .004$, $\eta_p = 0.03$). A promise to tell the truth significantly increased children's disclosures, but only among nonmaltreated children (OR = 3.65 [95% CI: 1.23, 10.90]). The post-recall putative confession elicited new disclosures from about half of children who had failed to disclose. **Conclusions:** The findings highlight the difficulties of eliciting honest responses from children about suspected transgressions and the need for flexible questioning strategies.

Increasing maltreated and nonmaltreated children's recall disclosures of a minor transgression: The effects of back-channel utterances, a promise to tell the truth, and a post-recall putative confession

Observational research has found that children routinely fail to disclose sexual abuse (Alaggia, Collin-Vezina, & Lateef, 2017). Nationally representative surveys of adults who report having been sexually abused as children find substantial percentages never disclosed in childhood (Laumann, Gagnon, Michael, & Michaels, 1994; Smith, Letorneau, Saunders, Kilpatrick, Resnick, & Best, 2000). When asked why they failed to disclose, adults mention embarrassment, shame and expectations that they would be blamed for the abuse (Martin et al., 1993, Fleming, 1997). Children disclosing sexual abuse mention similar deterrents to disclosure (Hershkowitz, Lanes, & Lamb, 2007; Malloy, Brubacher, & Lamb, 2011; Schonbucher, Maier, Mohler-Kuo, Schnyder, & Landolt, 2012). Similar reluctance has been observed in victims of child physical abuse (Ghetti, Goodman, Eisen, & Davis, 2002; Hershkowitz & Elul, 1999).

Of course, from a legal and moral standpoint abuse victims are never responsible for their abuse. Nevertheless, victims often feel partially complicit, or anticipate that they will be viewed as complicit by others. Experimental work examining minor transgressions has consistently found that young children routinely conceal their transgressions (Polak & Harris, 1999; Talwar & Lee, 2002; 2008), the transgressions of adults close to them (Bottoms, Goodman, Schwartz-Kenney, & Thomas, 2002; Gordon, Lyon, & Lee, 2014; Talwar, Lee, Bala, & Lindsay, 2004), and transgressions in which they feel jointly implicated (Lyon et al., 2014; Ahern, Stolzenberg, McWilliams & Lyon, 2016; Stolzenberg, McWilliams & Lyon, 2017). Although the transgressions studied in the lab are far less serious than abuse, the experimental work provides a means of better understanding the dynamics of secrecy and disclosure.

CHILDREN'S RECALL

An important question is how best to encourage honesty in children who have experienced wrongdoing. Both observational research examining abuse disclosure (Lemaigre, Taylor, & Gittoes, 2017) and experimental work examining transgression disclosure (Ahern et al., 2016) have shown that children are more likely to disclose wrongdoing if they are asked directly whether a transgression occurred, such as through yes/no or recognition questions that explicitly mention the transgression. However, yes/no questions have two drawbacks. First, compared to recall questions, experimental work has found that yes/no questions increase the risk of false allegations, particularly if they are phrased suggestively (e.g., Cassel, Roebers, & Bjorklund, 1996) and combined with coercive methods (e.g., Garven, Wood, Malpass, & Shaw, 1998). Second, they increase the risk of false denials, because yes/no questions require an overt denial whereas recall questions enable children to merely omit information they do not wish to disclose. Indeed, abused children asked directly for the first time often deny abuse (Hershkowitz, Lamb, & Katz, 2014; Lawson & Chaffin, 1992), and these denials may undermine their subsequent credibility. Practitioners are thus eager to find methods for uncovering truth without undermining the quality and credibility of children's reports.

In this study, we examined several techniques designed to increase maltreated and nonmaltreated 4- to 9-year-old's willingness to disclose a minor transgression in response to recall questions, including the use of back-channel utterances during rapport building and recall, a promise to tell the truth (either before rapport building or immediately before recall), and a post-recall putative confession. Back-channel utterances (also known as "response tokens" or "facilitators"; Gardner, 2001; Hershkowitz, 2002; McCarthy, 2003) are brief expressions (e.g., mm-hmm) used in conversation by a listener to communicate attention and interest to a speaker (Peterson & McCabe, 1999). The putative confession is an instruction by the interviewer to the

child that the suspect "told me everything that happened and wants you to tell the truth." We sought to explore whether back-channel utterances would influence the likelihood of disclosure or the productivity (i.e., amount of information provided) of children's reports, and to assess whether the timing of the promise and the putative confession might affect disclosure. In what follows, we review research examining the ways in which researchers have attempted to increase disclosure in response to recall questions, and discuss the relevance of maltreatment and age in understanding disclosure.

Recall Enhancement

Interviewing guidelines recommend that interviewers maximize the use of recall questions when investigating abuse allegations, and suggest that before discussing the allegation, they should ask recall questions about a recent positive event in order to build rapport and to encourage the child to provide narrative responses (American Professional Society on the Abuse of Children (APSAC), 2012). Narrative practice has been found to increase the productivity of both children's abuse reports in the field (Sternberg et al., 1997) and children's disclosures of transgressions in the lab (Lyon et al., 2014; Yi & Lamb, 2018). However, narrative practice has not been found to affect the likelihood that children disclose (Lyon et al., 2014; Yi & Lamb, 2018). That is, narrative practice increases the productivity of disclosure, but does not induce disclosure.

Another technique for enhancing children's recall is the use of back-channel utterances. Observational research has shown a relation between back-channel utterances and the productivity of children's abuse disclosures (Hershkowitz, 2002; Lamb, Hershkowitz, Sternberg, Boat, & Everson, 1996). As with the work on narrative practice, the observational work suggests that back-channel utterances increase the productivity of disclosure, but this work often does not

address the likelihood of disclosure. Furthermore, because the observational work is correlational, it is possible that the relation merely means that more productive children elicit more use of back-channel utterances. Cleveland, Quas and Lyon (2018) experimentally manipulated interviewers' use of "implicit encouragement" (back-channel utterances and vocatives, i.e., use of the child's name) when questioning 3- to 8-year-olds about their memory for a target event, and found that implicit encouragement increased productivity without undermining accuracy. However, children did not appear reluctant to disclose the target event, and the effects of implicit encouragement on disclosure itself was not assessed. The unanswered question is whether back-channel utterances can overcome children's reluctance, both to disclose transgressions to begin with, and to elaborate on the details of the transgression.

Promise To Tell the Truth

Interviewing guidelines recommend that interviewers ask children to promise to tell the truth (APSAC, 2012) and experimental work has found that a promise both increases children's willingness to disclose transgressions (Evans & Lee, 2010; Talwar, Lee, Bala, & Lindsay, 2004; Lyon & Dorado, 2008; Quas et al., 2018, and decreases the likelihood that they provide a coached false report (Lyon et al., 2008). The promise to tell the truth appeals to children's recognition that a promise is a binding commitment (Lyon & Evans, 2014) and that truth-telling is a morally positive act (Bussey, 1999).

Recently, a number of studies have found that promising may be ineffective with younger children, particularly as the challenges of complying with the promise increase. In a study examining children's promise to refrain from cheating, which entailed peeking at a playing card in order to guess its value, 4-year-olds (in contrast to 5- to 7-year-olds) were uninfluenced by a promise to refrain from peeking (Heyman, Fu, Lin, Qian, & Lee, 2015). Similarly, Bender and

colleagues (Bender, O'Connor, & Evans, 2018) found that 3- and 4-year-olds who had peeked at a toy in order to guess its identity (i.e., the temptation resistance paradigm) were uninfluenced by a promise to tell the truth, usually lying when asked if they had peeked. In contrast, Kanngiesser and colleagues (Kanngiesser, Köymen, & Tomasello, 2017) found that even 3-year-olds spent longer cleaning up a mishap in the face of a distraction after promising to do so. Most relevant to the current study, in the broken toy paradigm studied here, Quas and colleagues (2018) found that although a promise to tell the truth increased 4- to 9-year-old maltreated and nonmaltreated children's honesty when asked recall questions, the effect was weaker among younger children. Hence, it appears that younger children can be influenced by a promise, but that their resilience in the face of competing reasons for acting can falter.

An untested aspect of the promise to tell the truth is timing. In the lab, the promise has always been obtained from children immediately prior to questioning about the target event (e.g., Talwar et al., 2002). In the field, however, children are often asked to promise to tell the truth as part of the interview instructions, and in some protocols, these are administered prior to narrative practice rapport building (Lyon, 2014). The efficacy of the promise may depend on whether the child keeps it in mind when answering questions. Therefore, the promise may be more effective if it is elicited immediately before recall questions about the target event.

Putative Confession

A more recently devised method for eliciting disclosures of transgressions is the putative confession. Without mentioning a transgression, the interviewer tells the child that a suspect "told me everything that happened and s/he wants you to tell the truth." The instruction has been shown to increase true disclosures of transgressions (Lyon et al., 2014; Quas et al., 2018; Rush et al., 2017; Stolzenberg, McWilliams, & Lyon, 2017) and to decrease false claims (Rush et al.,

2017). Furthermore, the putative confession has not been found to increase false reports among children who have been suggestively questioned (Cleveland et al., 2018; Rush et al., 2017). Because the interviewer does not specify what "everything" or "the truth" entails, the instruction conveys different meanings to children who have and have not experienced a transgression. And, in failing to provide any specific details about the suspect's statements, the instruction can avoid the suggestive effects of providing children with explicit information regarding other witnesses' reports (Garven et al., 1998).

The rationale underlying the putative confession is that children may fail to disclose transgressions because they fear disclosure will trigger punishment, both from the disclosure recipient and from the adult implicated in the transgression. Indeed, as noted above, abuse victims often refer to these types of fears when explaining nondisclosure. If the child believes that both the disclosure recipient and the suspect are already aware of the transgression, this may reduce fears of disclosure.

A recent between-subjects comparison of the putative confession and the promise to tell the truth found them to be equally effective in eliciting transgression disclosures in response to recall questions (Quas et al., 2018). However, as noted above, the promise was less effective with younger children (Quas et al., 2018); the putative confession, in contrast, was equally effective across age. This finding suggests that the putative confession may have incremental value if used in addition to the promise.

The Effects of Maltreatment and Age

Some research suggests that maltreated children may be more likely to conceal transgressions than nonmaltreated children. Maltreated children have been shown to expect that adults will behave in unsupportive, rejecting, or punitive ways (Shields, Ryan, & Cicchetti, 2001;

Shipman & Zeman, 2001), and this could increase their fears of the consequences of disclosing

transgressions. Using the temptation resistance paradigm, Talwar and Lee (2011) found that

preschool children attending a school in which corporal punishment (including hitting with a

stick) was routine were more likely to lie than children attending a school utilizing other forms of

discipline. Other experimental work examining transgressions using the broken toy paradigm has

failed to find significant differences in disclosure rates between maltreated and nonmaltreated

children (Ahern et al., 2016; Lyon et al., 2014; Stolzenberg et al. 2017), although Ahern and

colleagues found that "maltreated children exhibited some nonsignificant tendencies toward less

disclosure" (p. 799).

Similarly, some research has found that younger children are more likely to conceal

transgressions than older children. Pipe and Wilson (1994) found that 6-year-olds were more

likely than 10-year-olds to conceal the fact that an adult had spilled ink on some gloves, and

Heyman and colleagues (Heyman, Loke, & Lee, 2016) found that 4- to 7-year-olds were more

likely than 8- to 11-year-olds to conceal the fact that an adult had ripped a page out of a library

book. Older children may fear punishment for disclosing less than younger children, and may

place greater value on the importance of telling the truth. Studying 4- to 11-year-old children's

evaluation of vignettes depicting children lying or telling the truth about wrongdoing, Bussey

(1992) found that younger but not older children evaluated vignettes more negatively if the child

was punished for the transgression, and that younger children were less likely than older children

to ascribe feelings of pride to a child who disclosed.

Age differences are not always apparent. In the temptation resistance paradigm, in which

children are instructed not to peek at a toy and subsequently asked whether they did so, the

youngest preschoolers are less likely to lie, but children quickly reach near-ceiling levels of lying

by four years of age, and lie at consistently high rates thereafter (Talwar & Lee, 2002; 2008). In the broken toy paradigm, about 70% of children fail to disclose the transgression in response to free recall questions, and this percentage has not been found to vary among 4- to 9-year-olds. Even here, however, there are hints of age differences: older children were less likely to conceal the transgression when asked directly (Lyon et al., 2014).

Present Study

The present study examined the effects of back-channel utterances, a promise to tell the truth, and a post-recall putative confession on maltreated and nonmaltreated children's disclosure of a minor transgression. Each child engaged in a play session with a stranger, during which two toys appeared to break in the child's hands, and the stranger warned the child that they might get in trouble and asked the child to keep the breakage a secret. Next, an interviewer questioned the child using an approach modelled after the National Institute of Child Health and Development (NICHD) structured protocol. For half of the children, the interviewer used back-channel responses to encourage responsiveness during both narrative practice and recall. Children were assigned to either the promise-before (before rapport), promise-after (after rapport /before recall), or no-promise condition. Half of the children received the putative confession after recall.

The study was novel in several respects: It examined the effects of back-channel utterances on transgression disclosure, the timing of the promise to tell the truth, and the potential for the putative confession to elicit transgression disclosures from children for whom a promise to tell the truth fails. Because of the inclusion of maltreated children and a wide age range we were also able to assess maltreatment and age differences.

Based on previous research, we made several predictions. First, we hypothesized that back-channel utterances would increase children's productivity (i.e., the number of details)

without increasing error (Cleveland et al., 2018; Yi & Lamb, 2018). Because of lacking evidence that back-channels overcome reluctance, we did not make any prediction regarding its effects on disclosure. Second, we hypothesized that the promise to tell the truth would increase children's willingness to disclose the transgression overall (Lyon & Dorado, 2008; Talwar et al., 2004). Third, we hypothesized that the promise would be most effective if it occurred after rapport building, and thus immediately before recall, because this would maximize the likelihood that the child would have the promise in mind when answering questions about his or her interaction with the stranger. Fourth, we hypothesized that a post-recall putative confession would elicit disclosures even among children for whom back-channel utterances and the promise had proven ineffective. As a result, children who fail to disclose in the face of being punished for disclosing (by the stranger, the interviewer, or both) should be less likely to fear punishment if they learn that the transgression has already been disclosed. Given the uneven pattern of results across studies examining maltreatment and age effects, we did not predict specific differences, but conducted exploratory analyses of these factors.

Methods

Participants

The sample included 283 4-9-year-old maltreated ($N = 145$) and nonmaltreated children ($N = 138$; $M = 6$ years, 7 months, $SD = 1$ year, 7 months, 53% female). Seventy-seven percent of the children were Latino, 15% were African-American, 4% were Caucasian, and 4% were mixed ethnicity. Children in the maltreated sample had substantiated histories of neglect, and/or physical or sexual abuse and had been removed from the custody of their parents or guardians. Consent was obtained from the Presiding Judge of Juvenile Court and the children's attorneys. Children in the nonmaltreated sample were recruited from schools serving predominantly ethnic

minority families in neighborhoods comparable to those from which most maltreated children were removed. Consent was obtained from children's parents. All children gave their assent and procedures were reviewed and approved by the supervising university's Institutional Review Board.

Materials and Procedures

Each child completed several preliminary measures with an interviewer which ended with the interviewer telling the child that she forgot some papers in her office and needed to retrieve them. A few minutes after she left, a female confederate (hereinafter "the stranger") entered and pointed out boxes of toys on a bookshelf. There were eight boxes of toys on two sets of shelves with each box containing two of the same toy. Toy by toy, the stranger retrieved a box, removed one of the toys, described it, and demonstrated how to play with it. She then removed the second toy and gave it to the child. The stranger then placed the toys back in the box and returned the box to the shelf, turning the box to reveal a picture of the toy (thus facilitating the child's subsequent recall of play). The stranger played with six of the eight toys (three per shelf), turning the boxes on the two unplayed toys so that their pictures were also visible.

During the play session two of the toys broke in the child's hands. When the toys broke, the stranger followed a scripted response for toy breakage, including labeling the child's actions leading to the breakage, expressing concern about breakage, and attempting to conceal breakage. Upon leaving the room, the stranger asked the child not to disclose the breakage, stating that "We might get in trouble if she finds out that the toys broke."

The interviewer re-entered shortly thereafter and then engaged the child in up to five minutes of rapport building, which constituted narrative practice modeled after the NICHD

structured protocol (Sternberg et al., 1997). The interviewer asked the child about things the child liked to do and did not like to do, and then asked the child to describe the child's last birthday and the day before the interview. The interviewer requested elaboration using recall questions (also known as cued invitations, Lamb et al., 2008), and continued until the child indicated that the subject was exhausted.

The interviewer then inquired about the child's interaction with the stranger, starting with a free recall question (i.e., "Tell me everything that happened when the lady came in while I was gone"). For children who were initially unresponsive, the interviewer used an additional prompt ("It is really important that I know what happened when the lady came in. Tell me everything that happened"). Follow-up was with cued invitations (e.g., "What happened next?" "You said you played with the [toy], tell me everything you did with the [toy]"). The interviewer continued asking questions until the child mentioned the stranger leaving the room. There were three experimental manipulations: 1) back-channel utterances 2) promise, and 3) post-recall putative confession. There were two conditions for back-channel use. In the *back-channel* condition, the interviewer provided back-channel utterances (e.g., uh-huh, hmm-mm) at the end of clauses in the child's recall throughout narrative practice rapport building and recall. In the *no-back-channel* condition, the interviewer refrained from back-channel utterances. There were three conditions for promise use. In the *promise before* condition, the promise was induced before narrative practice rapport building, and in the *promise after* condition, the promise was induced after narrative practice rapport building/before recall. The promise was worded as follows: "It's really important that you tell me the truth. Do you *promise* that you *will* tell me the truth?" In the *no-promise* condition the interviewer did not administer the promise. There were two putative confession conditions. In the *post-recall putative confession* condition, the interviewer

said to the child at the end of recall regarding interaction with the stranger: "The lady who came in here told me everything that happened and she wants you to tell the truth. So tell me everything that happened while I was gone." In the *no-putative confession* condition, the interviewer did not administer the putative confession.

Debriefing. All participants were debriefed at the conclusion of their interview. The stranger re-entered the room, and the interviewer explained to the child that she knew that the stranger would come in and play with the child and that the toys would break. The interviewer reassured the child that sometimes the toys would break, but that it was okay and all of the broken toys could be fixed. The interviewer emphasized the importance of always telling the truth. The stranger then left the room, and the interviewer asked the child several questions about his or her thoughts and feelings during the toy play interaction, when the toys broke, the subsequent interview, and about being in the study.

Coding. Interviews were transcribed and coded by trained research assistants who achieved reliability on all variables (kappa > .80 for categorical codes, intraclass correlation coefficients > .90 for continuous detail codes) on 20% of the sample (across age, gender, and manipulations). Children's free and cued recall and putative confessions responses were coded dichotomously for disclosure of breakage. Additionally children's free recall responses were coded for the details generated. A detail was defined as a substantive word. Details were then coded for accuracy, each detail was categorized as: 1) True, 2) False, 3) Subjective (e.g. "I had fun playing with the toys"), or 4) Indeterminate (events occurring before or after the experimental interaction).

Results

We conducted a series of analyses examining the effects of maltreatment, age, back-channel utterances, and the promise to tell the truth on both children's disclosures of toy breakage and the productivity (i.e., number of details) of children's reports. We then assessed whether the post-recall putative confession elicited additional disclosures of breakage, and whether its effect was influenced by the other factors. Finally, we examined children's responses to the debriefing.

Preliminary Analyses

Preliminary analyses revealed that child gender, ethnicity, stranger identity, and interviewer identity were unrelated to children's responses and therefore are not considered further. Additionally, preliminary analyses revealed that there were no significant differences between the two promise conditions (i.e., *promise before* and *promise after*) for disclosure patterns, X^2 (1, N = 188) = .02, p = .88 (*promise before*: 35%, n = 33, *promise after:* 30%, n = 29). Nor were there significant differences based on number of true details provided regarding broken toys, t (185) = 0.63, p = .53 (*promise before: M* = 38.50, SD = 40.57, promise *after: M* = 34.95, SD = 37.15), or unbroken toys, t (185) = 1.02, p = .31 (*promise before: M*= 60.00, SD = 44.71, *promise after: M* = 55.67, SD = 42.27), therefore, subsequent analyses compared promising to no promising.

Disclosures of Breakage

We first examined whether children's disclosure of toy breakage during recall varied depending on the use of back-channel utterances and a promise to tell the truth (Table 1).We conducted a binomial logistic regression examining a dichotomous disclosure variable (*disclosure, no disclosure*), with maltreatment (*maltreated, nonmaltreated*), age (*in years*), back-

channel utterances (*back-channel utterances, no back-channel utterances*), and promise

(*promise, no-promise*). Additionally, all possible two-way interactions were entered into the

model.

The model was significant, $X^2(4, N = 283) = 15.49, p = .004$. There were significant

main effects for maltreatment (Wald = 9.99, $p = .002$, OR = 2.27 [95% CI: 1.37, 3.77]), and age

(Wald = 4.09, $p = .04$, OR = 1.18 [95% CI: 1.01, 1.38]), but no significant main effects for back-

channel utterances (Wald = .81, $p = .37$, OR = .79 [95% CI: .48, 1.31]) or a promise to tell the

truth (Wald = 0.41, $p = .52$, OR = 1.19 [95% CI: .70, 2.05]). The effect of maltreatment was

qualified by a significant interaction with promise (Wald = 5.40, $p = .02$, OR = 3.65 [95% CI:

1.23, 10.90]). There were no other significant interactions. The interaction of maltreatment and

the promise reflected a difference in promise conditions for the nonmaltreated children but not

the maltreated children. Specifically, nonmaltreated children who promised to tell the truth

disclosed at a significantly higher rate (50%, $n = 46$) than nonmaltreated children who did not

promise to tell the truth (31%, $n = 14$). But, for maltreated children, promising to tell the truth

resulted in a non-significantly lower disclosure rate (*promise*: 22%, $n = 21$, *no-promise*: 32%, n

= 16). The main effect for age reflected an increase in disclosure with age. The oldest children

(*8- to 9-year-olds*: 43%, $n = 41$) disclosed at a significantly higher rate than younger children (*6-

to 7-year-olds*: 31%, $n = 29$, *4- to 5-year-olds*: 29%, $n = 27$).

Next, we examined disclosure rates for the post-recall putative confession (Table 2). The

post-recall putative confession elicited new disclosures of breakage from 45% ($n = 40$) of

children who failed to disclose during recall. In order to determine if disclosure in response to

the putative confession varied by maltreatment, age, back-channel utterances, or a promise to tell

the truth, we conducted a binary logistic regression examining the children who had not

disclosed toy breakage by the end of recall ($n = 89$). The model was not significant, $X^2(4, N = 89) = 7.46$, $p = .11$. Age emerged as the only significant predictor, (Wald = 4.92, $p = .03$, OR = 1.42 [95% CI: 1.04, 1.94]), such that disclosure rates significant increased with age (*4- to 5-year-olds*: 30%, $n = 9$, *6- to 7-year-olds*: 45%, $n = 14$, *8- to 9-year-olds*: 61%, $n = 17$). Disclosure rates did not significantly vary by maltreatment status, use of the promise, or back-channel utterances

Productivity of recall

In order to determine if maltreatment, age, back-channel utterances, or the promise affected the productivity of children's recall (Table 3) we conducted a series of univariate generalized linear models (GLMs) on the number of true details about broken and unbroken toy play during recall (because the putative confession was only administered at the end of recall we did not include it in these analyses).

Broken toy details. For the number of true details about broken toys significant main effects of age, $F(1, 281) = 32.02$, $p < .001$, $\eta_p = 0.11$, and back-channel utterances, $F(1, 281) = 4.13$, $p = .04$, $\eta_p = 0.02$) emerged. Older children produced more details ($r = .32$, $p < .001$). Children exposed to back-channel utterances provided significantly more true details ($M = 39.08$, SD = 32.10) about broken toy play than children who did not received back-channel utterances ($M = 32.02$, SD = 37.55). There were no effects due to maltreatment or the promise. False details were rare, with means of less than one false detail about broken toys across conditions (Table 3).

Unbroken toy details. For the number of true details about unbroken toys (Table 3), age, $F(1, 285) = 26.69$, $p < .001$, $\eta_p = 0.09$) and back-channel utterances, $F(1, 285) = 8.34$, $p = .004$, $\eta_p = 0.03$, again emerged as the only significant predictors. Older children produced more

details (r = .26, p < .001). Children exposed to back-channel utterances provided more details (*back-channel*: M = 66.94, SD = 41.50, *no back-channel*: M = 55.13, SD = 40.57). There were no effects due to maltreatment or the promise.

Although slightly more common than false details about broken toys, false details about unbroken toys were also quite rare (Table 3). The number of false details about unbroken toys was significantly correlated with age (r = -.17, p = .005), such that younger children provided more false details than older children. The number of errors did not significantly differ by maltreatment, the promise or back-channel utterances.

Responses to debriefing

Children's responses to the debriefing questions about their reactions to the transgression were examined to assess the ecological validity of the interaction with the stranger (i.e., children took the toy breakage seriously). When children were asked how they felt when the toys broke, 82% (n = 168) reported at least one emotional reaction, with the majority of those emotions being negative (83%, e.g., "I felt scared"), and a small number being neutral (8%, e.g., "nothing") or positive (9%, e.g., "Only two. Still happy"). Some children's reactions included concerns about potential consequences for the breakage (11%, e.g., "I feel like I was going to get in trouble"). A small number (6%) answered "I don't know" or were off-task. Children were also asked how they felt about participating in the study, in order to address possible concerns that they were adversely affected by the negative emotions aroused by the study or by the deception involved. Eighty-two percent reported positive feelings (e.g. "I felt happy"), 11% expressed a neutral reaction (e.g., "Fine"), and 2% reported negative emotions (e.g. "Sad."). Additionally, 5% answered "I don't know" or were off-task. Children thus reacted negatively to the breakage but positively to their participation in the study.

Discussion

This study examined the efficacy of three truth induction strategies with 4- to 9-year-old maltreated and nonmaltreated children. We explored whether back-channel utterances, the timing of the promise and the post-recall putative confession would influence children's willingness to disclose a minor transgression when asked recall questions. Back-channel utterances failed to increase disclosures, but they increased the productivity of disclosures. Eliciting a promise (whether before rapport building or before recall) increased children's disclosures, but only among nonmaltreated children. The post-recall putative confession increased disclosure over and above the effects of the promise and was equally effective across age and maltreatment. The pattern of findings suggests the need to utilize truth induction techniques in tandem based on the unique needs of the specific interview.

The results suggest a distinction between truth induction and recall enhancement. The promise may have appealed to children's appreciation of the morality of truth-telling and keeping a promise. The post-recall putative confession aimed to reduce the child's fears that a truthful response would evoke negative reactions by the interviewer and the stranger. The promise increased disclosures among nonmaltreated children, and the post-recall putative confession increased disclosures among all children. Hence, both techniques induced truth among significant numbers of children.

Conversely, consistent with previous research (Cleveland et al., 2018, Hershkowitz, 2002; Lamb, Hershkowitz, Sternberg, Boat, & Everson, 1996), back-channel utterances increased the productivity of disclosures but not disclosures themselves, and thus could be characterized as recall enhancement. Similarly, narrative practice rapport building has been found to increase the productivity of disclosures (Sternberg et al., 1997), but had not been found

to increase the likelihood that transgressions will be disclosed (Lyon et al., 2014; Yi & Lamb, 2018). Back-channel utterances connote interest and encouragement, and appear to prompt children to expand on their reports rather than overcome children's resistance to disclose. Similarly, narrative practice teaches children to provide elaborative reports to open-ended questions. However, neither technique specifically encourages truth-telling, and both may fail to address the underlying fears and concerns that deter children from disclosing wrongdoing.

The promise's failure to increase disclosures among maltreated children was an unexpected finding. However, it is arguably consistent with recent findings suggesting that the promise is less effective with children as the challenge of keeping the promise increases. As noted in the introduction, some studies have found that younger children are more likely to conceal transgressions (Heyman et al., 2016; Pipe & Wilson, 1994), and less responsive to the promise to tell the truth (Bender et al., 2018; Quas et al., 2018). Similarly, some research has found that maltreated children are more likely to conceal transgressions (Talwar & Lee, 2011), and prior research using the broken toy paradigm has found small (albeit non-significant) decreases in disclosure among maltreated children (Ahern et al., 2016). It seems likely that the more motivated the child is to conceal the transgression the less effective the promise will be.

The post-recall putative confession elicited disclosures in almost half of children who had kept the secret a promise throughout recall questioning, and was equally effective across maltreatment status, age, and whether a promise had been elicited or back-channel utterances had been used. This is clear evidence that the putative confession has incremental value in eliciting disclosures from children who would otherwise remain silent. Moreover, the finding provides insight into the possible reasons for children's continued reluctance to disclose transgressions even after promising to tell the truth. In particular, it suggests that children's fear of the

consequences of disclosing can outweigh the promise's effects on honesty. The putative confession implies that the interviewer already knows that the transgression has occurred and that the suspect does not expect the child to keep the transgression a secret.

Limitations and Future Directions

An obvious limitation of the study was that the transgression was minor. Although virtually all children reported having negative feelings when toy breakage occurred, this obviously pales in comparison to their reactions to abuse and to their concerns about the consequences of disclosing abuse. Abused children have stronger motivations both to report and to conceal abuse, and the ultimate test of any interviewing manipulation is in forensic interviews. Before innovations are tested in the field, however, it is important to assess their effects in experimental work in which ground truth is known and causality can be determined. In particular, experimental work helps in ensuring that interview techniques designed to increase disclosures do not increase false allegations.

Because the finding that promise failed to increase disclosures among maltreated children was unexpected, it should be further tested. It appears inconsistent with prior studies finding that the promise increased maltreated children's honesty (Lyon et al., 2008; Lyon & Dorado, 2008). Examination of the studies suggests that the promise may be most effective when combined with more direct questioning, such as repeated recall (in which the interview elicits a promise after the first recall attempt and before a second recall attempt), or recognition questions directly asking whether the transgression had occurred (Lyon et al., 2008; Lyon & Dorado, 2008). Hence, future research should compare the efficacy of the promise in combination with different types of questioning in eliciting honesty from maltreated children. Furthermore, this study did not assess one of the benefits of the promise found in prior research: maltreated children were less likely to

repeat a coached false report after promising to tell the truth (Lyon et al., 2008). It therefore seems premature to recommend abandoning the promise to tell the truth, which has been incorporated into structured interviews (Lyon, 2014) and recommended by practice guides (APSAC, 2012). Rather, interviewers should be mindful of the likelihood that children will be reluctant to disclose even with the use of the promise.

Future research should also explore how other factors may influence the efficacy of the promise, back-channel utterances, and the putative confession. First, age is obviously an important factor. Although age did not interact with the effects of the interview manipulations in this study, it is likely to matter if one examines children either younger or older than those tested here (4- to 9-year-olds). As noted in the introduction, there is some evidence that younger children are less influenced by the promise (e.g., Quas et al., 2018). We suspect that older children may be less influenced by the putative confession. The efficacy of the putative confession depends on its ambiguity: when the interviewer says that the suspect revealed "everything that happened" the child who has experienced a transgression assumes that this includes the transgression. Children become more aware of referential ambiguity as they mature (Beal & Flavell, 1984), and older children are therefore more likely to see through the putative confession and realize that the suspect may not have told the truth.

Second, delay may also be important. We questioned children immediately after their interaction with the stranger in order to provide a clean test of the effects of the interview manipulations on children's honesty; there was virtually no chance that children who failed to disclose the transgression had forgotten that it occurred. If children are questioned about events that occurred long ago, memory failure may have a negative effect on the efficacy of the interview manipulations. Back-channel utterances might encourage children to elaborate on poor

memories, and thus increase error. The putative confession's reference to "everything that happened" may not clearly refer to a remote transgression, and thus be less effective.

Future work is also needed to identify other means of overcoming children's reluctance to disclose transgressions. In the maltreated group, 38% (27/71) of the children kept the transgression a secret, even after receiving the putative confession. A number of interventions have had only limited success, highlighting the difficulty of overcoming children's reluctance. Ahern and colleagues (2016) found that encouraging the disclosure of "bad secrets" elicited disclosures of a minor transgression from some children, but did not increase the overall rate of disclosure once additional recall questions were asked. Talwar and colleagues (2015) found that telling children a story about the positive qualities of truth-telling increased honesty, but only in response to recognition (and not recall) questions. It may be particularly helpful to find ways to reduce children's fears of the negative consequences of disclosure. Reassuring children that the interviewer would not be angry if a transgression ("something bad") occurred has increased disclosures without increasing false allegations (as long as the interviewer did not explicitly mention the transgression) (Lyon & Dorado, 2008; Lyon et al., 2008). This approach has limited real-world utility, however, because children's fears obviously extend to the reactions of others, including the suspect. Future work can assess reassurance that the interviewer and people with whom she works will do everything they can to keep the child safe.

An important issue is whether and when interviewers feel comfortable using the putative confession. If the suspect has clearly confessed, then telling the child that the suspect "told everything" and wants the child to do the same seems uncontroversial, and certainly preferable to providing the child with specific details of the confession, which could taint the child's report.

Similarly, if the suspect denied abuse, and is in fact innocent, then the instruction seems similarly uncontroversial, and preferable to explicitly telling the child what the suspect has said.

If the suspect has told the truth, and either confessed or denied the abuse, then the putative confession is not misleading. In those cases, the putative confession seems preferable to direct questions asking about wrongdoing, particularly yes/no questions. Researchers highlighting the dangers of suggestibility have argued that yes/no questions about wrongdoing imply that wrongdoing has occurred (Ceci & Friedman, 2000). Note that yes/no questions about wrongdoing imply something false when the suspect is innocent, whereas the putative confession implies something false when the suspect is guilty and is lying about his or her guilt.

However, it is when the suspect is guilty and has lied about it that the putative confession raises ethical issues. Suspects could be asked "have you told us everything and do you want the child to tell the truth?" (Lyon et al., 2014). Furthermore, the interviewer could rephrase the putative confession as a hypothetical; "what if I told you that…" (Stolzenberg, McWilliams, & Lyon, 2017). Even if those steps are taken, the putative confession (and, at least among younger children, the hypothetical putative confession) are likely to be misinterpreted by the child as asserting that the guilty suspect confessed, and are thus misleading.

Although interviewers will debate the ethics, researchers can test some of the empirical assumptions underlying the ethical concerns. First, research can assess the extent to which children view the putative confession as immoral. Children experiencing the putative confession can be fully debriefed about the deception involved and ask for their reaction, and vignette studies can explore children's attitudes about the putative confession when the transgressions are more serious. Children show some appreciation of the moral distinction between self-serving and altruistic lies (lies told to protect another person) at a young age (Peterson, Peterson, & Seeto,

1983), and how they view the putative confession is a critical question. Forensic interviewers' attitudes can be probed in a similar fashion. Second, research can explore whether children's trust in authority figures is undermined if they learn that they were misled by the putative confession.

In sum, this study documented the benefits and limitations of different approaches to encouraging children to disclose transgressions. If children are willing to disclose, then back-channel utterances increase the productivity of recall questions. This finding contributes to a growing literature encouraging forensic interviewers to maximize their use of recall questions in eliciting children's reports. If children are not willing to disclose, however, then interviewers' work clearly becomes much more difficult. A major challenge for future research is how interviewers can overcome children's reluctance to disclose wrongdoing without compromising children's accuracy and trust.

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Table 1

Disclosure rates during recall by maltreatment status, promise condition and back-channel utterance condition

	Maltreated (*n* = 145)	Nonmaltreated (*n* = 138)	Overall (*N* = 283)
	n (%)	*n* (%)	*n* (%)
Promise (*n* = 188)	21 (22%)	46 (50%)	67 (36%)
No-Promise (*n* = 95)	16 (32 %)	14 (31%)	30 (32%)
Back-channels (*n* = 141)	17 (24%)	28 (41%)	45 (32%)
No Back-channels (*n* = 142)	20 (28%)	32 (47%)	52 (37%)
Overall (*N* = 283)	37 (26%)	60 (44%)	

Table 2

Disclosure rates (among recall non-disclosers) following the putative confession by maltreatment status, promise condition and back-channel utterance condition

	Maltreated ($n = 40$)	Nonmaltreated ($n = 49$)	Overall ($N = 89$)
	n (%)	*n* (%)	*n* (%)
Promise ($n = 59$)	13 (39%)	12 (46%)	25 (42%)
No-Promise ($n = 30$)	9 (56 %)	6 (43%)	15 (50%)
Back-channels ($n = 49$)	9 (35%)	10 (44%)	19 (39%)
No Back-channels ($n = 40$)	13 (57%)	8 (47%)	21 (53%)
Overall ($N = 89$)	22 (45%)	18 (45%)	

CHILDREN'S RECALL

Table 3

Mean number of new details provided during recall by maltreatment status, promise condition, and back-channel utterance condition

	True Details					
	Maltreated		Nonmaltreated		Overall	
	Broken	Unbroken	Broken	Unbroken	Broken	Unbroken
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Promise	32.94	60.95	40.41	57.41	36.70	59.15
	(29.97)	(37.45)	(45.77)	(45.51)	(38.81)	(41.66)
No Promise	34.64	71.74	31.49	56.44	33.1	64.49
	(18.71)	(37.33)	(32.89)	(43.34)	5(26.29)	(40.80)
Back-channels	37.62	71.93	40.60	61.87	39.08	66.94
	(31.58)	(42.52)	(32.79)	(40.10)	(32.10)	(41.50)
No Back-channels	29.50	57.76	34.58	52.46	32.02	55.13
	(19.76)	(30.90)	(49.51)	(48.53)	(37.55)	(40.57)
Overall	33.53	64.75	37.53	57.10		
	(26.53)	(37.63)	(42.12)	(44.67)		

False Details

	Maltreated		Nonmaltreated		Overall	
	Broken	Unbroken	Broken	Unbroken	Broken	Unbroken
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Promise	0.59	3.08	0.96	2.19	0.78	2.62
	(2.22)	(8.99)	(3.64)	(4.99)	(3.05)	(7.21)
No Promise	0.56	2.28	0.18	1.31	0.38	1.82
	(1.75)	(4.30)	(0.83)	(3.61)	(1.40)	(399)
Back-channels	0.86	2.39	0.49	2.41	0.67	2.40
	(2.58)	(6.37)	(1.90)	(5.15)	(2.25)	(5.77)
No Back-channels	0.32	3.18	0.92	1.42	0.62	2.30
	(1.40)	(8.73)	(3.86)	(3.95)	(2.90)	(6.81)
Overall	0.58	2.79	0.71	1.91		
	(2.06)	(7.64)	(3.05)	(4.59)		