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The Effects of Promising to Tell the Truth, the Putative Confession, and Recall and Recognition Questions on Maltreated and Non-Maltreated Children's Disclosure of a Minor Transgression

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Abstract

This study examined the utility of two interview instructions designed to overcome children's reluctance to disclose transgressions: eliciting a promise from children to tell the truth and the putative confession (telling children that a suspect "told me everything that happened and wants you to tell the truth"). The key questions were whether the instructions increased disclosure in response to recall questions and in response to recognition questions that were less or more explicit about transgressions, and whether instructions were differentially effective with age. Two-hundred and seventeen 4- to 9-year-old maltreated and comparable non-maltreated children played with a stranger. This included playing with a set of toys. For half of the children within each group, two of the toys appeared to break while they were playing. The stranger admonished secrecy. Shortly thereafter, children were questioned about what happened in one of the three interview conditions. Some children were asked to promise to tell the truth. Others were given the putative confession, and still others received no interview instructions. When coupled with recall questions, the promise was only effective at increasing disclosures among older children, whereas the putative confession was effective regardless of age. Across interview instruction conditions, recognition questions that did not suggest wrongdoing elicited few additional transgression disclosures; recognition questions that explicitly mentioned wrongdoing elicited some true reports but also some false alarms. No differences in disclosure emerged between maltreated and non-maltreated children. Results highlight the potential benefits and limitations of different interviewing approaches when questioning reluctant children.

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Keywords

disclosure; promise; putative confession; reluctance; forensic interview

In light of increasing recognition of the extent to which abused children fail to disclose abuse when first questioned (Hershkowitz, Lamb & Katz, 2014; Lawson & Chaffin, 1992; Lyon, 2007), researchers have turned greater attention toward identifying methods of increasing children's willingness to disclose. Experimental work has confirmed that children are often reluctant to disclose transgressions committed by themselves or others when asked recall questions, and more likely to disclose if asked recognition (i.e., yes/no) questions that explicitly mention the transgression (Bottoms, Goodman, Schwartz-Kenney, & Thomas, 2002; Pipe & Wilson, 1994; Talwar, Yachison, & Leduc, 2015). However, interviewers are warned to attempt to avoid recognition questions, because they elicit both false positive and false negative responses (Lamb, Hershkowitz, Orbach, & Esplin, 2008), and because a small but worrisome percentage of children false alarm to recognition questions that explicitly mention transgressions (Stolzenberg, McWilliams, & Lyon, 2017). Therefore, researchers have sought to identify new methods of questioning that encourage truthful disclosures without increasing false allegations.

Two types of interview instructions have received some support. One involves eliciting a promise from children that they will tell the truth (Evans & Lee, 2010; Lyon & Dorado, 2008; Lyon, Malloy, Quas, & Talwar, 2008; Talwar, Lee, Bala, & Lindsay, 2002, 2004), and the other, called the putative confession, involves telling children that a suspect disclosed "everything that happened" and wants children to tell the truth (Lyon, Wandrey, Ahern, Licht, Sims, & Quas, 2014; Rush, Stolzenberg, Quas, & Lyon, 2017; Stolzenberg, et al., 2017). Despite this support, critical issues remain about the efficacy of these instructions when combined with different types of questions, including recall and recognition questions, and whether the instructions' effectiveness varies with age.

We addressed these issues in the present study. We compared the effects of a child-friendly version of the oath and the putative confession. Specifically, children interacted with a friendly stranger during which half were led to believe that they had broken two toys and were admonished to keep the breakage a secret. Children were then asked about the interaction in one of three instruction conditions: promise, putative confession, or control (i.e., no instructions). The interview moved from recall questions (invitations and cued invitations) to recognition (yes/no) questions about children's interactions, ultimately explicitly inquiring about wrongdoing. We included a wide age range, 4- to 9-year-olds, and interviewed maltreated and comparable non-maltreated children.

This design allowed us to investigate how the instructions affected children's reports of wrongdoing, in response to recall and recognition questions, and as a function of age and maltreatment status. The work is relevant to developmental theory concerning children's understanding of promising, their awareness of referential ambiguity, and the explicitness of questions required to elicit honesty; and to legal settings in which practitioners seek non-leading approaches to questioning children about transgressions, especially when children may be reluctant to disclose.

Maltreated Children and Transgression Disclosure

Research examining corroborated cases of child abuse has shown that unless children previously disclosed, they are unlikely to disclose when first formally questioned (Hershkowitz et al., 2014; Lawson & Chaffin, 1992; Lyon, 2007). Children often feel partially responsible for abuse (Quas, Goodman & Jones, 2003), fear negative consequences for disclosing to themselves, their family, or the perpetrator (Goodman-Brown, Edelstein, Goodman, Jones, & Gordon, 2003; Hershkowitz, Lanes & Lamb, 2007; Malloy, Brubacher & Lamb, 2011), and often have been admonished by the perpetrator not to disclose (Conte, Wolf, & Smith, 1989; Elliott, Browne, & Kilcoyne, 1995).

Whether maltreated children will respond differently to adults' attempts to elicit disclosures of wrongdoing is not clear. On the one hand, their willingness to confide may be undermined by their tendency to anticipate that adults will behave in unsupportive, rejecting, or punitive ways (Shields, Ryan, & Cicchetti, 2001; Shipman & Zeman, 2001; Toth, Cicchetti, Macfie, Rogosch, & Maughan, 2000). Indeed, when asked about whether they should (or would) disclose an adult's transgressions, younger maltreated children are less inclined to agree and endorse disclosure than their non-maltreated age-mates, whereas older maltreated children are more inclined to endorse disclosure (Lyon, Ahern, Malloy, & Quas, 2010; Malloy, Quas, Lyon, & Ahern, 2014). On the other hand, research comparing maltreated and non-maltreated children's actual disclosures of transgressions has, for the most part, not uncovered differences between the groups (Lyon et al., 2014; Stolzenberg et al., 2017). Overall, because maltreated children are more likely to be asked about adult transgressions in the field, continued investigations of their patterns of disclosure are important in their own right.

Promising to Tell the Truth

Researchers have identified a number of means of encouraging children to reveal transgressions, the benefits of which seem to vary depending on the nature of the strategies employed. One potentially useful tool for overcoming reluctance is interview instructions that encourage children to reveal truthful information without suggesting potentially false information. Reassuring children that they will not "get in trouble" for disclosing that "something bad" happened, for instance, increases true disclosures without increasing false alarms, but only if the suspected transgression is not explicitly mentioned (Lyon & Dorado, 2008; Lyon et al., 2008; Talwar, Arruda, & Yachison, 2015). Unfortunately, however, in actual abuse investigations, interviewers have to be circumspect in reassuring children about the consequences of disclosure, because disclosure may in fact lead to negative outcomes. Moreover, references to "trouble" and "something bad" might prove suggestive if the child is aware of the suspected transgression through other sources.

Discussing the moral virtues of truth-telling has been found to have a truth inducing effect, and such discussions need not be linked to statements about the consequences of disclosure (Huffman, Warren, & Larsen, 1999; Lee et al., 2014; London & Nunez, 2002; Talwar, Arruda et al, 2015; Talwar, Yachison et al., 2015). Even more effective is eliciting an explicit promise to tell the truth (Talwar, Lee, Bala, & Lindsay, 2002), and this approach has been

supported in research examining a wide age range and in both non-maltreated and maltreated children (Evans & Lee, 2010; Lyon & Dorado, 2008; Lyon et al., 2008; Talwar et al., 2002, 2004). Explicit promises may be more effective than discussions about the morality of truth-telling because children may view promises as binding commitments (Lyon & Evans, 2014). Moreover, references to “the truth” are less suggestive than explicit references to transgressions, because the former are unlikely to suggest wrongdoing to children who have not experienced wrongdoing.

Although the positive findings for promising to tell the truth have led to its incorporation into practice recommendations for forensic interviewers (APSAC, 2012; Lyon, 2014), key questions remain about its efficacy. The first is whether the promise is equally effective across age. Hints in prior work suggest that younger children, who may have limited understanding of the binding obligations imposed by promising (Lyon & Evans, 2014; Rotenberg, 1980), may not be more honest about transgressions after promising to tell the truth. Lyon and colleagues (2008) found that among children coached to keep transgressive toy play a secret, 4- to 5-year-old children’s accuracy in response to yes/no questions about play was virtually identical in the control (28%) and promise conditions (32%). Similarly, Talwar et al. (2002) found that lying rates in a transgression paradigm were nearly identical in 3- and 4-year-olds whether they were asked to promise to tell the truth or not. These potential age differences were overlooked by the researchers, either because they failed to test for the interaction between age and promising or they included a broad range of ages within their age groups, making the inferior performance among the youngest children difficult to detect.

Research examining the influence of promising on other types of behavior has produced mixed results in young children: Heyman, Fu, Lin, Qian, and Lee (2015) found that, although 5-year-old and older children were less likely to peek at a card (in order to win a game) after promising not to do so, 4-year-olds were uninfluenced by the promise. Conversely, Kanngiesser, Koymen, and Tomasello (2017) found some evidence that even 3-year-olds were sensitive to a promise to continue cleaning up a mishap in the face of an attractive distraction. Taken together, the varied findings across studies, combined with some suggestions that the promise may not be effective with young children, highlight the need for continued work focused on age differences in the promise’s effectiveness.

A second question concerns whether a promise to tell the truth is effective in eliciting transgression disclosures during recall. Most research supporting the promise has tested its effects following recognition questions that directly ask about transgressions (Evans & Lee, 2010; Lyon & Dorado, 2008; Talwar et al., 2002). However, given the emphasis on recall rather than recognition questions in legal settings with suspected victims, determining the promise’s effects on recall is critical. Findings to date are unclear. For instance, although not a study specifically testing the efficacy of promising, Talwar, Yachison et al. (2015) found that telling 4- to 7-year-old children a story about the positive qualities of truth-telling increased honesty in response to recognition but not recall questions. Only two studies to date have examined the effects of promising on recall, although both studies used a within-subject design, precluding interpretations about the promise’s influence per se (Lyon et al., 2008; Talwar et al., 2004). That is, children in the studies were asked recall questions, then

asked to promise to tell the truth, and then re-asked recall questions. The promise, which came after the initial recall request, may have acted as a suggestion that children's original disclosure was untrue or at least incomplete, prompting them to alter their responses, in the same way that skepticism, provided after children answer a question, often leads young children to change their answer (Garven, Wood, Malpass, & Shaw, 1998).

Lyon and colleagues (2008) found that the promise increased younger (4–5 year olds) but not older (6–7 year olds) children's tendency to disclose during the second recall attempt, a trend that appears inconsistent with other evidence of 4–5 year olds' insensitivity to the promise when asked recognition questions. Talwar et al. (2004) did not find a difference between children who had promised to tell the truth and those who had not, but instead found an effect when within-child comparisons were made between children's disclosures before and after the promise. As mentioned, however, the meaning of the within-child comparisons is difficult to interpret because of potential repetition effects. Talwar did not test for whether the promise was differentially effective with age.

Practically speaking, the fact that a promise to tell the truth might work less well with younger children, and when asking recall rather than recognition questions, is significant because of its implications for interviewing children about transgressions. As noted above, interviewers are taught to try and avoid recognition questions explicitly mentioning transgressions, particularly with younger children, because they may be suggestive. Theoretically, the potential limits of a promise to tell the truth suggests that the efficacy of instructions in increasing honesty may depend on the extent to which the instruction and questions are sufficiently explicit so that the child understands the relevance of the instruction to the questions that follow.

The Putative Confession

The putative confession involves telling the child that the suspect told the interviewer "everything that happened" and wants the child to "tell the truth" without mentioning a specific transgression. Several studies have found that the putative confession increases children's willingness to disclose transgressions without increasing false reports, even when combined with questions explicitly mentioning transgressions or when parents suggest that transgressions occurred (Lyon et al., 2014; Rush, Stolzenberg, Quas, & Lyon, 2017; Stolzenberg et al., 2017).

Unlike a promise to tell the truth, the putative confession has been tested and found effective in conjunction with recall questions (Lyon et al., 2014; Rush et al., 2017; Stolzenberg et al., 2017). Moreover, when the research has tested for age effects, it has not found diminished efficacy of the putative confession in younger children (Lyon et al., 2014). The fact that the putative confession has been demonstrated to work in conjunction with recall questions and across a broad age range suggests that it may be superior to eliciting a promise to tell the truth, particularly in the recall phases of an interview. This possibility needs to be tested directly.

The efficacy of the putative confession may lie in its combination of an ambiguous reference to what occurred with an explicit reference to the suspect. That is, the phrase, “everything that happened” is referentially ambiguous, and likely implies a transgression to children who have experienced a transgression, but does not imply anything untoward per se to children who have nothing untoward to report. The phrase “[name of suspect] told me everything that happened” makes explicit the interactions in which the interviewer is interested and the source of the interviewer’s information. For children who interpret “everything that happened” as a transgression, the statement suggests that the suspect disclosed the transgression. This may increase children’s willingness to disclose in two respects: it may reduce their fears of both the suspect’s reactions and the interviewer’s reactions to their disclosure.

Recognition (Yes/No) Questions

Recognition questions explicitly mentioning the suspected transgression have been found to elicit disclosures among a large proportion of children who fail to disclose in response to recall questions, with or without interview instructions (Rush et al., 2017; Stolzenberg et al., 2017). However, as noted, interviewers hope to avoid explicit mention of the suspected transgression in order to reduce suggestiveness.

One possible means of avoiding the potentially suggestive effects of recognition questions is to make them less explicit, and to pair them with follow-up recall questions that ask children to elaborate. In the broken toy paradigm, for example, asking recognition questions about specific toys (e.g., “Did you play with the [toy]?”) and following up affirmative responses with a request to elaborate (e.g., “Tell me about that”) might make it more difficult for children, particularly young children with limited executive functioning skills, to keep negative events a secret (Gordon, Lyon, & Lee, 2014). Lyon and colleagues (2014) found that a small percentage of children who had failed to disclose breakage did so when asked yes/no questions about play with individual toys (8%), but the researchers did not assess the potential for the questions to elicit false alarms. What is needed is a test of the effects of recognition questions paired with recall questions on children who either have or have not experienced a transgression.

Present Study

In the current investigation, we examined the efficacy of the promise and the putative confession on 4- to 9-year-old maltreated and non-maltreated children’s true and false disclosure of a minor transgression. Children individually interacted with a stranger during which they played with several toys. They were randomly assigned to a transgression or no transgression condition. In the transgression condition, two toys appeared to break in the child’s hands while playing, and the stranger asked the child to keep the breakage a secret. For children in the no transgression condition, no toys broke. Shortly after the interaction ended, an interviewer questioned children following one of three interview instructions: control (no instruction), promise to tell the truth, or the putative confession. The interviewer asked all children recall and recognition questions about their interaction with the stranger,

and the recognition questions moved from questions that did not explicitly mention a transgression to questions that did.

We predicted that both the promise and the putative confession would increase true disclosures of breakage in response to recall questions without increasing false reports. We tested for possible age differences in these effects because of hints in the literature that the promise may be differentially effective with age. With respect to the recognition questions, we anticipated that recognition questions about individual toy play would elicit additional true disclosures without increasing false disclosures, but that recognition questions that explicitly mentioned a transgression would elicit additional true disclosures but some false disclosures. We did not anticipate any differences between maltreated and non-maltreated children, consistent with prior work (Lyon et al., 2014; Stolzenberg et al., 2017).

Method

Participants

Two-hundred and seventeen maltreated ($N = 108$) and non-maltreated children ($N = 109$) (48% girls) served as participants. The children ranged in age from 4 to 9 years of age ($M = 6:8$, $SD = 19$ months). The mean ages of the maltreated ($M = 6:8$, $SD = 20$ months) and non-maltreated children ($M = 6:8$, $SD = 18$ months) were comparable. The maltreated sample consisted of children substantiated as suffering from neglect and/or physical or sexual abuse who had been removed from the custody of their parents or guardians. Children gave their assent to participate, and consent was obtained from the Presiding Judge of Juvenile Court. Maltreated children were not eligible if they were awaiting a hearing at which they might testify or if they were not English-speaking. Children in the non-maltreated sample were recruited from seven elementary schools serving predominantly ethnic minority families in neighborhoods comparable to those from which most maltreated children were removed. Children in the non-maltreated sample who were not in the custody of one or both parents were excluded because of the potential that they had been removed due to maltreatment.

Race and ethnicity were comparable between the maltreated and non-maltreated samples. In the maltreated sample, 58% were Latino/a ($N = 63$), 29% were African-American ($N = 32$), 9% were Caucasian ($N = 10$), 1% were Asian ($N = 1$), and 3% were biracial or unknown ($N = 3$). In the non-maltreated sample, 63% were Latino/a ($N = 68$), 32% were African-American ($N = 35$), 0% were Caucasian, 1% were Asian ($N = 1$), and 4% were biracial or unknown ($N = 4$).

Materials and Procedure

To preview, the study conformed to a 2 (transgression condition: two toys broke or no toys broke) \times 3 (interview condition: promise, putative confession, or control) \times 2 (maltreatment condition: maltreated v. non-maltreated) between-subjects design. Within the maltreated and non-maltreated samples, children were randomly assigned to a transgression condition and interview condition, with the exception that boys and girls were approximately evenly distributed, as were children across age.

A female interviewer first obtained assent from the child and administered some executive functioning tasks (which are not discussed further); she then told the child that she forgot some papers and needed to retrieve them from her office.

Shortly thereafter, a stranger (male for 2/3 of the children) entered the room and expressed interest in playing with toys located on shelves facing the child. There were eight boxes of toys on two sets of shelves; four on the child's left and four on the child's right. Each box contained two of the same type of toy. The stranger retrieved a box, removed a toy, described it, and demonstrated how it could be played with. He then removed the other toy and gave it to the child so that the child could play. 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 that was visible to the child, thus facilitating the child's subsequent recall of play. Together, they played with six of the eight toys (three per shelf). The stranger turned the boxes on the two remaining toys during the course of play so that their pictures were visible.

Approximately half of the children ($n = 108$, evenly distributed across age, maltreatment status, and gender) were assigned to the transgression condition. In the transgression condition, two toys from one of the shelves (a car and a Rubic's cube) appeared to break while the child was playing with them. The stranger described what occurred (e.g. "When you pushed the car, the wheel broke off"), expressed concern ("This is not good"), and made an attempt to conceal the breakage ("Let's put these toys back in the box so that no one knows one broke"). Upon leaving the room, the stranger asked the child not to disclose that they had played with the breakable toys, stating that "We might get into trouble if she finds out." For children in the no-transgression condition ($n = 109$), the toys did not break, and the confederate merely thanked the child upon leaving.

The interviewer returned shortly thereafter and thanked the child for waiting. She then spent five minutes building rapport with the child, asking questions modeled after the NICHD protocol for interviewing children about suspected abuse (Lamb et al., 2008). Using open-ended questions, the interviewer asked the child about things she liked to do and about a prior holiday, Halloween. Children (equally across age, gender, maltreatment status, and transgression condition) were randomly assigned to one of the three interview conditions. In the promise condition, the interviewer then elicited a promise to tell the truth: "[Child's name,] it's very important that you tell me the truth. Can you promise that you will tell me the truth?" In the putative confession condition, she said, referring to the stranger, "The man/lady who came in here told me everything that happened and he/she wants you to tell the truth." In the control (i.e., "no instruction") condition, the interviewer moved directly to the interview questions.

Interview questions—The interview began with recall questions. The interviewer stated, "Tell me everything that happened when the man came in while I was gone." She asked "What happened next?" questions until the child mentioned the stranger leaving the room, and followed up any mention of play with a specific toy with cued invitations, e.g., "You said you played with the lobster. Tell me everything you did with the lobster." If the child mentioned breakage, the interviewer asked for additional information about that as well, e.g., "You said the car broke. Tell me everything about that." Following the recall questions,

the interviewer asked paired yes/no questions about toy play. She stated, “Now let me make sure I have this right,” and asked the child yes/no questions regarding whether the child had played with each of the eight toys (e.g., “Did you play with the dog?”). If the child answered affirmatively, the interviewer asked “Tell me about that” before moving to the next toy.

If the child did not disclose breakage during free recall or the yes/no questions, the interviewer asked up to two yes/no questions asking if “anything bad” had occurred. First, the interviewer asked “Did anything bad happen with any of the toys?” and followed affirmative answers with “Tell me about that.” If the child answered negatively, the interviewer said, “I talk to kids all the time about stuff that happens in here. If something bad happened and you tell me, you won’t get in trouble with me and we can fix it and make it better.” She then repeated the question, “Did anything bad happen with any of the toys?”

Debriefing—The stranger re-entered the room and the interviewer explained that she knew the stranger would come in and play with the child. She emphasized the importance of telling the truth about what happened, and, if the toys broke, the stranger reassured the child that no one was in trouble and the toys could be fixed. Further, children were educated about the study; the interviewer explained that “by talking with us and playing with us today you helped us learn a lot about how to talk to kids.”

Both the stranger and the interviewer had been trained to stop the procedure if the child exhibited serious distress (e.g., crying) and immediately debrief the child. This did not prove necessary. Children expressed concern, but were not overly distressed, and all seemed to enjoy their involvement in the study. Moreover, in a study utilizing a similar procedure (with broken toys and an admonishment to keep breakage a secret), children were asked how they felt when the toys broke and how they felt about participating in the study (Ahern, Stolzenberg, McWilliams, & Lyon, 2016). With regard to how they felt when the toys broke, 70% reported negative emotions (e.g., “bad”) and 9% reported anticipating consequences of the breakage (e.g., “I thought that no one would let me play with them no more”), 10% expressed a neutral reaction (e.g., “I didn’t feel anything”), 8% gave positive responses (e.g., “I felt good”), and 3% responded “I don’t know” or were off-task. Hence, children reported predominantly negative reactions to breakage. On the other hand, when asked how they felt about being in the study, 78% reported positive feelings (e.g., “I felt happy”), 8% expressed a neutral reaction (e.g., “Fine”), 3% reported negative emotions (e.g., “Sad.”), and 11% answered “I don’t know” or were off-task.

Coding

Sessions were videotaped and transcribed. Children’s recall and recognition responses were scored for whether they disclosed breakage of one or both of the broken toys, using a coding scheme developed in a prior study (Lyon et al. 2014). Coders who had coded the prior study and achieved .90 or higher agreement on 20% of that sample ($n = 50$ children) independently coded responses from 10% of the children in this study (randomly selected across age) for references to the toys breaking or specific reference to the wheel falling off the car or the Rubik’s cube falling apart. Proportion agreement was again over .90.

Results

Preliminary analyses revealed that children's age, gender, and ethnicity were comparable across play (transgression vs. no-transgression conditions) and instruction (promise, putative confession, control) conditions. Nine children (8%) disclosed that the toys broke before the recall questions. These early disclosers did not significantly differ by children's age, gender, or maltreatment status and were not included in subsequent analyses. Preliminary analyses also revealed that neither child gender nor ethnicity (Latino vs. non-Latino) was related to the dependent variables. These factors are not considered further.

Recall Questions and Disclosure

We examined whether children disclosed breakage in response to the recall questions and whether disclosure was related to age and instructions. Because there were zero reports of breakage among children in the no-transgression condition, we limited our analysis to the children in the transgression condition ($n = 99$). A hierarchical logistic regression was conducted with disclosure of breakage as the dependent variable and age (first step), instruction (first step, simple comparisons against the control group), maltreatment status (first step), and an interaction between age and instruction (second step) as predictors. At Step 1, the model was significant: $\chi^2(4) = 12.19$, Nagelkerke $r^2 = .15$, $p = .016$. Disclosure was significantly more likely among children who received the promise, $B = 1.38$, Wald = 6.67, $p = .010$, $OR = 3.97$, and who received the putative confession, $B = 1.36$, Wald = 6.71, $p = .010$, $OR = 3.89$, than among children who received no instructions. Sixty-one percent of children in the promise condition and 63% of children in the putative confession condition disclosed in free recall that the toys broke, whereas only 31% of children in the control (no instructions) condition did so. Maltreatment status did not affect the likelihood of disclosure (maltreated children 45%, non-maltreated children 56%).

When we tested whether the efficacy of the two forms of instruction, the promise and putative confession varied with child age, by adding the age x interview condition, the model remained significant, Step 2, $\chi^2(6) = 17.16$, Nagelkerke $r^2 = .212$, $p = .009$ (block $\chi^2 = 4.97$, $p = .083$). The age x condition interaction was significant when comparing the promise and control condition, $B = .88$, Wald = 3.88, $p = .049$, $OR = 2.40$. To interpret the interaction, we plotted regression lines predicting the likelihood of children disclosing by age separately for each condition (Figure 1). Whereas disclosure rates for the control group ($r = -.04$) and the putative confession ($r = .06$) varied little with age, the promise elicited the highest rates of disclosure among the older children ($r = .45$, $p = .012$).

Recognition (Yes/No) Questions and Disclosure

Following the recall questions, the interviewer asked children in both transgression conditions (transgression $n = 99$, non-transgression $n = 109$) eight paired yes/no questions about each of the toys, asking whether the child had played, and if so, asking for elaboration ("Tell me about that"). We anticipated comparing disclosure rates among the instruction conditions, but only three children in the transgression condition reported breakage, two of whom had previously disclosed in free recall. Among children in the no-transgression condition, none disclosed breakage. Thus, simply asking yes/no questions about play in

combination with a follow-up prompt about what happened with each played toy yielded only one additional disclosure of breakage, and did not contribute to false reports.

If children did not disclose breakage during free recall or in response to the yes/no questions about play, they were asked up to two yes/no questions referring to “anything bad” happening. The first was whether “anything bad” had happened with any of the toys, and the second, asked if children answered “no” to the first question, repeating the question after reassurance that the child would not get “in trouble” with the interviewer for disclosing. Among the 48 children in the transgression condition who had not disclosed breakage prior to these questions, 73% ($n = 35$) affirmed that something bad occurred, and 46% ($n = 22$) explicitly disclosed breakage. Because of the relatively small number of subjects, we conducted a logistic regression solely examining instruction type as a factor, and disclosure rate was not related to instruction; 36% (4/11) disclosed breakage in the promise group, 50% (6/12) in the putative confession group and 48% (12/25) in the control (no instruction) group. Among the 107 children in the non-transgression condition (none of whom had made a false claim of breakage in response to the recall or yes/no questions about play), 13% ($n = 14$) affirmed that something bad occurred, and one child (1%) reported breakage. This child was in the control group.

It is notable that when children affirmed that something bad occurred but did not then go on to disclose breakage, their responses had little diagnostic value in placing them in the transgression group: This constituted about a fourth (27%, $n = 13$) of the transgression group and 12% ($n = 13$) of the non-transgression group. When asked follow-up questions, these children failed to elaborate, provided ambiguous responses, or referred to other true aspects of play.

Discussion

We examined the extent to which a promise to tell the truth and the putative confession increased 4 to 9-year-old maltreated and comparable non-maltreated children’s willingness to disclose a minor transgression. The minor transgression involved toys breaking in the child’s hands during an otherwise positive interaction with a stranger. We found that both types of interview instructions increased disclosures of breakage when children were asked recall questions about their interactions, though the efficacy of the promise increased with age. Neither the promise nor the putative confession elicited false reports. Recognition questions asking for details about toy play were ineffective at eliciting additional disclosures of breakage in any of the instruction groups. Finally, two recognition questions that explicitly referenced something “bad” led about half of children who had kept the secret up to that point to disclose for the first time, but also elicited a small number of false reports. Consistent with prior research, maltreated and non-maltreated children exhibited similar patterns of responding.

Efficacy of a Promise to Tell the Truth

An important contribution of the study was that it addressed limitations in prior research examining the effects of promising to tell the truth on transgression disclosures across question type and across age. Most research has evaluated the promise only in combination

with yes/no questions that explicitly mention the suspected transgression. This research is problematic for forensic interviewers, who are cautioned against asking yes/no questions generally, and yes/no questions explicitly suggesting a transgression specifically. In studies that have tested the promise in conjunction with recall questions, the effects of the promise have been confounded with the effects of repeated questions, because interviewers first requested recall, then asked for a promise, and then repeated the recall request (Lyon et al., 2008; Talwar et al., 2004). In the present study, we directly examined the effects of the promise on recall, and our positive results support the use of the promise in questioning children about suspected transgressions.

Another limitation of prior research on the effects of the promise is that possible age differences have been overlooked. As noted in the introduction, Heyman and colleagues (2015) found that younger children (4 year olds compared to 5 year olds) were uninfluenced by a promise not to peek. Hints in two other studies also suggest that younger children may be uninfluenced by a promise to tell the truth (Lyon et al., 2008; Talwar et al., 2002), with the present study also showing a similar trend. Why would the promise be ineffective for younger children? In Heyman and colleagues' work, the 4-year-olds' failure might be attributable to their immature executive functioning, leading them to fail to inhibit the urge to peek after promising not to do so. Here, however, it is hard to argue that immature executive functioning explains the results: Children who failed to disclose even after promising to tell the truth were almost certainly exhibiting greater self-control, not less. Less inhibited children are more likely to disclose the transgression (Gordon et al., 2014), and were likely doing so in this study.

A more likely explanation is that the promise to tell the truth is not as meaningful for younger than older children, given the former's more limited understanding of promising. That is, the efficacy of a promise may lie in part on the promisor's sense of obligation to act in accordance with one's words, and the realization that to fail to do so undermines others' trust, both processes that appear to emerge gradually over the early to middle school years (e.g., Astington, 1990; Lyon & Evans, 2014; Rotenberg, 1980). For instance, in an early investigation, Rotenberg (1980) had 5-, 7-, and 9-year olds listen to stories about characters who kept or broke a promise. When asked which character they would trust, the 5-year-olds (in contrast to 7- and 9-year-olds) virtually never mentioned whether a promise was kept or broken as a basis for their decisions but instead focused on the positive actions of the characters (electing to trust the one who engaged in the positive action). Lyon and Evans (2014) employed an even simpler vignette-base procedure and found that children became aware that "I promise" is a stronger commitment than "I might" or "I will" between the ages of 4 and 7. In the present study, we attempted to make the promise simple and maximally understandable to even the youngest children by phrasing it as, "Do you promise that you will tell the truth?" Nevertheless, it is still likely that older children better understood the significance of the instruction. Future work should directly test whether children's understanding of promising moderates the efficacy of eliciting a promise to tell the truth.

We are hesitant to conclude that the promise never has an effect on younger children, however, because Kanngiesser and colleagues (2017) found that in one of two studies, 3-year-olds spent significantly longer continuing to clean when they had promised to do so

than when they were simply reminded of the cleaning task. Notably, the researchers assessed the efficacy of the promise by calculating the amount of time children persisted in the task, rather than whether they persisted or not, possibly providing a more sensitive measure of efficacy. Furthermore, the efficacy of the promise is probably related to the countervailing pressures inducing children to break their promise, which likely varies depending on the nature of the promised actions and/or the severity of the transgression in question. In our study, a stranger warned the child about the consequences of disclosure and asked the child to keep the breakage a secret. For the promise to tell the truth to have an effect, it had to override children's wish to protect themselves, to protect the stranger, and to keep a secret. In Kanngiesser and colleagues' (2017) study, children had only to ignore an attractive activity and keep their focus on cleaning.

It might be possible to make the promise more effective, particularly with younger children. In this study, children were asked a yes/no question ("Can you promise that you will tell the truth?") and simply had to agree. As noted in the introduction, discussions of the virtues of honesty have a positive effect on children's honesty (Huffman et al., 1999; Lee et al., 2014; London & Nunez, 2002; Talwar, Arruda et al, 2015; Talwar, Yachison et al., 2015). It might be effective to combine promises with discussions of the virtues of honesty (and the virtues of keeping promises). Analogously, research on interview instructions has found that children are more likely to follow instructions that "I don't know" and "I don't understand" responses are acceptable when they are given practice and feedback (Saywitz & Moan-Hardie, 1994; Saywitz, Snyder, & Nathanson, 1999). It is possible that asking the child to verbalize "I promise that I will tell the truth" would also help. Evans, O'Connor, and Lee (in press) found that 3- and 5-year-olds were less likely to peek at a toy if they explicitly stated "I will not turn around and peek at the toy" than if they merely agreed not to do so. However, Heyman and colleagues (2015), who found that 4-year-olds were not influenced by a promise, had children state "I promise I will not peek at the card." Overall, given theoretical interest in understanding when and why the promise's effectiveness varies with age, continued research is warranted.

Efficacy of the Putative Confession

Consistent with prior research, telling children that the suspect had told the interviewer "everything that happened and wants you to tell the truth" increased disclosures of breakage in free recall, and did not lead children in the non-transgression condition to make false reports (Lyon et al., 2014; Rush et al., 2017; Stolzenberg et al., 2017). Moreover, unlike the promise, the putative confession's efficacy did not vary with age (Lyon et al., 2014). Given school-aged children's increasing ability to recognize referential ambiguity (Beal & Flavell, 1984), one might have expected that older children would be less influenced by the putative confession, because they would see through the ambiguity of "everything that happened" and recognize that the suspect may not in fact have revealed the transgression. We suspect that this requires a level of sophistication that the older children in our study still lacked. Of course, future research can determine the age at which children recognize the ambiguity.

Based on our study, what can be concluded about the utility of the putative confession? It would be most useful in cases in which the suspect has in fact confessed. Of course, the

interviewer should not suggest details from the confession to the child, because this can taint the child's report. The value of the strategy, as well, may not be dependent upon an actual confession. An interrogator could ask the suspect if he has disclosed "everything that happened" and if he wants the child to "tell the truth." If the suspect agrees, this could be communicated to the child. Accordingly, even if the suspect has said nothing, the putative confession could still encourage disclosures from children who are afraid to disclose because of the suspect.

However, we would emphasize that interviewers considering whether to use the putative confession in cases in which the suspect has not confessed face the ethical dilemma of whether it is legitimate to mislead children in order to overcome children's reluctance to disclose. Also, the child's trust in the interviewer (or authority figures more generally) might be adversely affected if the putative confession is used and the child later finds out that the suspect did not in fact confess. Other contextual factors, such as whether the child is likely to have ongoing contact with the suspect, may also influence the value of the putative confession. On the other hand, interviewers may be able to communicate to children the need to uncover the abuse in order to protect, and the use of the putative confession may obviate the need for more leading strategies (such as recognition questions about the suspected transgression) that risk tainting children's reports. Furthermore, the putative confession could be used only in cases in which there are good reasons to believe that the child is concealing abuse, and only after eliciting a promise to tell the truth. Before being used in this manner, however, research should assess how effective the putative confession is after other approaches, including eliciting a promise to tell the truth, have failed. Moreover, research should examine the extent to which the putative confession undermines children's trust in adults. And finally, research is needed to determine how other factors inherent in the relationship between the child and suspect, such as the child's familiarity with the suspect, shape the child's disclosure and perhaps even the child's beliefs that the suspect would have confessed if asked. In combination, this research will help identify the conditions under which the putative confession is both useful and appropriate to employ.

Efficacy of Recognition (Yes/No) Questions

We suspected that recognition questions about toy play, followed by requests for elaboration, might be an effective means of eliciting additional reports of breakage without eliciting false allegations. However, only about 3% (3/99) of children in the transgression condition disclosed breakage in response to the yes/no questions, and only one of these was a new report. In contrast, asking a yes/no question specifically mentioning something bad occurring, followed by reassurance if the child denied, elicited disclosures of breakage among half of children who had not previously disclosed.

Children frequently affirmed that something bad had happened but then failed to disclose breakage when asked to elaborate, demonstrating the need to follow affirmative responses to yes/no questions with an open-ended request for additional information, a method called "pairing" by child interviewing researchers (Lamb et al., 2008). Other research has similarly found that pairing helps to discriminate between true and false yes responses about transgressions (Stolzenberg et al., 2017). Nevertheless, the non-zero rate of false

affirmations in response to yes/no questions (including one child who reported breakage in response to the follow-up questions) highlights the importance of prioritizing interviewing methods that elicit disclosures through recall questions.

Limitations

Despite the novel contributions of the work, both theoretically and practically, limitations must also be noted. An obvious one is that disclosing toy breakage after an encounter with a stranger is very different than disclosing abuse after an encounter with an adult, particularly because child abuse is so often perpetrated by adults emotionally close to the child. Both the motives to conceal and the motives to reveal transgressions are of course much greater in actual abuse cases. Clearly, the best way to test interview instructions is in actual cases. But before testing these methods in the field, it is important to establish whether they have negative effects in cases in which ground truth is known.

Another limitation is that the interview occurred immediately after the interaction with the stranger, whereas in actual abuse cases, children are questioned about events that may have occurred in the distant past. We deliberately designed the study to test whether children's reluctance to disclose transgressions can be overcome, and therefore minimized the likelihood that the child simply forgot the transgression. However, memory failure might interact with the effects of the promise, the putative confession, and both recall and recognition questions. Furthermore, if suggestive influences between the original event and the interview corrupt children's memory for the original event, none of our manipulations could undo those influences. Rush and colleagues (2017) found that intervening parental suggestiveness did not undermine the effects of the putative confession, but the suggestions and the subsequent interview occurred shortly after the interaction with the stranger, so that children's memory of the interaction was not affected.

Future work could also determine whether child characteristics other than age interact with interview instructions and question types in influencing disclosure rates. Although we were able to test for overall differences in disclosure between maltreated children and non-maltreated children, we did not have sufficient numbers of children to assess whether maltreated children and non-maltreated children were differentially affected by the manipulations. Moreover, in order to create a non-maltreated group comparable to the maltreated group, we interviewed children who were predominantly ethnic minority and from lower SES neighborhoods. It is possible that children with different ethnic backgrounds and from different neighborhoods would respond differently. We would note, however, that Rush and colleagues (2017) conducted a similarly designed study with a middle-class predominantly Caucasian 4- to 9-year-old sample. Children's recall disclosure rates in the control (35%, compared to 31% in this study) and the putative confession (57%, compared to 63% in this study) groups were quite similar.

Conclusions

In closing, results suggest that in order to encourage children to disclose transgressions without risking an increase in false reports, interviewers must proceed with caution, and consider multiple approaches. Both the promise and the putative confession were effective in

increasing children's willingness to disclose when asked recall questions. However, the promise appeared ineffective with younger children, whereas the putative confession was equally effective across age. Recognition questions had little incremental value in eliciting disclosures, unless they explicitly referred to negative events. Finding means of overcoming children's reluctance without suggestiveness remains a challenge for future researchers.

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References

- Ahern EC, Stolzenberg SN, McWilliams K, Lyon TD. The effects of secret instructions and yes/no questions on maltreated and non-maltreated children's reports of a minor transgression. *Behavioral Sciences & the Law*. 2016; 34:784–802. DOI: 10.1002/bsl.2277 [PubMed: 28229484]
- American Professional Society on the Abuse of Children. *Forensic interviewing in cases of suspected child abuse*. Chicago: Author; 2012.
- Astington, JW. Metapragmatics: Children's conception of promising. In: Conti-Ramsden, G., Snow, CE., editors. *Children's language*. Vol. 7. Hillsdale, NJ: Earlbaum; 1990. p. 223-244.
- Beal CR, Flavell JH. Development of the ability to distinguish communicative intention and literal message meaning. *Child Development*. 1984; 55:920–928. DOI: 10.2307/1130143 [PubMed: 6734326]
- Bottoms BL, Goodman GS, Schwartz-Kenney BM, Thomas SN. Understanding children's use of secrecy in the context of eyewitness reports. *Law and Human Behavior*. 2002; 26:285–313. DOI: 10.1023/A:101532404975 [PubMed: 12061620]
- Conte JR, Wolfe S, Smith T. What sexual offenders tell us about prevention strategies. *Child Abuse & Neglect*. 1989; 13:293–301. DOI: 10.1016/0145-2134(89)90016-1 [PubMed: 2743186]
- Elliott M, Browne K, Kilcoyne J. Child sexual abuse prevention: What offenders tell us. *Child Abuse & Neglect*. 1995; 19:579–594. DOI: 10.1016/0145-2134(95)00017-3 [PubMed: 7664138]
- Evans AD, Lee K. Promising to tell the truth makes 8- to 16-year-olds more honest. *Behavioral Sciences & the Law*. 2010; 28:801–811. DOI: 10.1002/bsl.960 [PubMed: 20878877]
- Evans AD, O'Connor AM, Lee K. Verbalizing a commitment reduces cheating in young children. *Social Development*. in press.
- Garven S, Wood JM, Malpass RS, Shaw JS III. More than suggestion: The effect of interviewing techniques from the McMartin Preschool case. *Journal of Applied Psychology*. 1998; 83:347–359. DOI: 10.1037/0021-9010.83.3.347 [PubMed: 9648524]
- Goodman-Brown TB, Edelstein RS, Goodman GS, Jones DPH, Gordon DS. Why children tell: A model of children's disclosure of sexual abuse. *Child Abuse & Neglect*. 2003; 27:525–540. DOI: 10.1016/S0145-2134(03)00037-1 [PubMed: 12718961]
- Gordon HM, Lyon TD, Lee K. Social and cognitive factors associated with children's secret-keeping for a parent. *Child Development*. 2014; 85:2374–2388. DOI: 10.1111/cdev.12301 [PubMed: 25291258]
- Hershkowitz I, Lamb ME, Katz C. Allegation rates in forensic child abuse investigations: Comparing the revised and standard NICHD protocols. *Psychology, Public Policy, & Law*. 2014; 20:336–344. DOI: 10.1037/a0037391
- Hershkowitz I, Lanes O, Lamb ME. Exploring the disclosure of child sexual abuse with alleged victims and their parents. *Child Abuse & Neglect*. 2007; 31:111–123. DOI: 10.1016/j.chiabu.2006.09.004 [PubMed: 17316793]

- Heyman GD, Fu G, Lin J, Qian MK, Lee K. Eliciting promises from children reduces cheating. *Journal of Experimental Child Psychology*. 2015; 139:242–248. DOI: 10.1016/j.jecp.2015.04.013 [PubMed: 26074407]
- Huffman ML, Warren AR, Larson SM. Discussing truth and lies in interviews with children: Whether, why, and how? *Applied Developmental Science*. 1999; 1:6–15. DOI: 10.1207/s1532480xads0301_2
- Kanngiesser P, Köymen B, Tomasello M. Young children mostly keep, and expect others to keep, their promises. *Journal of Experimental Child Psychology*. 2017; 159:140–158. DOI: 10.1016/j.jecp.2017.02.004 [PubMed: 28285043]
- Lamb, ME., Hershkowitz, I., Orbach, Y., Esplin, PN. *Tell me what happened: Structured investigative interviews of child victims and witnesses*. London, UK: John Wiley & Sons, Inc; 2008.
- Lawson L, Chaffin M. False negatives in sexual abuse disclosure interviews: Incident and influence of caretaker's belief in abuse in cases of accidental abuse discovery by diagnosis of STD. *Journal of Interpersonal Violence*. 1992; 7:532–542. DOI: 10.1177/08862609200704008
- Lee K, Talwar V, McCarthy A, Ross I, Evans A, Arruda C. Can classic moral stories promote honesty in children? *Psychological Science*. 2014; 25:1630–1636. DOI: 10.1177/0956797614536401 [PubMed: 24928424]
- London K, Nunez N. Examining the efficacy of truth/lie discussions in predicting and increasing the veracity of children's reports. *Journal of Experimental Child Psychology*. 2002; 83:131–147. DOI: 10.1016/S0022-0965(02)00119-4 [PubMed: 12408959]
- Lyon, TD. False denials: Overcoming methodological biases in abuse disclosure research. In: Pipe, ME, Lamb, ME, Orbach, T., Cederborg, AC., editors. *Child sexual abuse: Disclosure, delay, and denial*. Mahwah, NJ: Erlbaum; 2007. p. 41-62.
- Lyon TD, Ahern EC, Malloy LC, Quas JA. Children's reasoning about disclosing adult transgressions: Effects of maltreatment, child age, and adult identity. *Child Development*. 2010; 81:1714–1728. DOI: 10.1111/j.1467-8624.2010.01505.x [PubMed: 21077859]
- Lyon TD, Dorado JS. Truth induction in young maltreated children: The effects of oath-taking and reassurance on true and false disclosures. *Child Abuse & Neglect*. 2008; 32:738–748. DOI: 10.1016/j.chiabu.2007.08.008 [PubMed: 18599119]
- Lyon TD, Evans AD. Young children's understanding that promising guarantees performance: The effects of age and maltreatment. *Law and Human Behavior*. 2014; 38:162–170. DOI: 10.1037/lhb0000061 [PubMed: 24127895]
- Lyon TD, Malloy LC, Quas JA, Talwar VA. Coaching, truth induction, and young maltreated children's false allegations and false denials. *Child Development*. 2008; 79:914–929. DOI: 10.1111/j.1467-8624.2008.01167.x [PubMed: 18717898]
- Lyon TD, Wandrey L, Ahern EC, Licht R, Sims M, Quas JA. Eliciting maltreated and non-maltreated children's transgression disclosures: Narrative practice rapport building and a putative confession. *Child Development*. 2014; 85:1756–1769. DOI: 10.1111/cdev.12223 [PubMed: 24467688]
- Malloy LC, Brubacher SP, Lamb ME. Expected consequences of disclosure revealed in investigative interviews with suspected victims of child sexual abuse. *Applied Developmental Science*. 2011; 15:8–19. DOI: 10.1080/10888691.2011.538616
- Malloy LC, Quas JA, Lyon TD, Ahern EC. Disclosing adult wrongdoing: Maltreated and non-maltreated children's expectations and preferences. *Journal of Experimental Child Psychology*. 2014; 124:78–96. DOI: 10.1016/j.jecp.2014.01.018 [PubMed: 24769356]
- Pipe ME, Wilson JC. Cues and secrets: Influences on children's event reports. *Developmental Psychology*. 1994; 30:515–525. DOI: 10.1037/0012-1649.30.4.515
- Quas JA, Goodman GS, Jones DPH. Predictors of attributions of self-blame and internalizing behavior problems in sexually abused children. *Journal of Child Psychology & Psychiatry*. 2003; 44:723–736. DOI: 10.1111/1469-7610.00158 [PubMed: 12831116]
- Rotenberg KJ. "A promise kept, a promise broken": Developmental bases of trust. *Child Development*. 1980; :614–617. DOI: 10.2307/1129307
- Rudy L, Goodman GS. Effects of participation on children's reports: Implications for children's testimony. *Developmental Psychology*. 1991; 27:1–26. DOI: 10.1037/0012-1649.27.4.527

- Rush EB, Stolzenberg SN, Quas JA, Lyon TD. The effects of the putative confession and parent suggestion on children's disclosure of a minor transgression. *Legal & Criminological Psychology*. 2017; 22:60–73. DOI: 10.1111/lcrp.12086 [PubMed: 28286409]
- Saywitz KJ, Moan-Hardie S. Reducing the potential for distortion of childhood memories. *Consciousness & Cognition*. 1994; 3:408–425. DOI: 10.1006/ccog.1994.1023
- Saywitz KJ, Snyder L, Nathanson R. Facilitating the communicative competence of the child witness. *Applied Developmental Science*. 1999; 3:58–68. DOI: 10.1207/s1532480xads0301_7
- Shields A, Ryan RM, Cicchetti D. Narrative representations of caregivers and emotion dysregulation as predictors of maltreated children's rejection by peers. *Developmental Psychology*. 2001; 37:321–337. DOI: 10.1037/0012-1649.37.3.321 [PubMed: 11370909]
- Shipman KL, Zeman J. Socialization of children's emotion regulation in mother–child dyads: A developmental psychopathology perspective. *Development & Psychopathology*. 2001; 13:317–336. Retrieved from: <https://www.cambridge.org/core/journals/development-and-psychopathology/article/socialization-of-childrens-emotion-regulation-in-motherchild-dyads-a-developmental-psychopathology-perspective/0FA6E2B99F64FAD191D8F3AE017612CF>. [PubMed: 11393649]
- Stolzenberg SN, McWilliams K, Lyon TD. The effects of the hypothetical putative confession and negatively-valenced yes/no questions on maltreated and non-maltreated children's disclosure of a minor transgression. *Child Maltreatment*. 2017; 22:167–173. DOI: 10.1177/1077559516673734 [PubMed: 27753611]
- Talwar V, Arruda C, Yachison S. The effects of punishment and appeals for honesty on children's truth-telling behavior. *Journal of Experimental Child Psychology*. 2015; 130:209–217. DOI: 10.1016/j.jecp.2014.09.011 [PubMed: 25447716]
- Talwar V, Lee K, Bala N, Lindsay R. Children's conceptual knowledge of lying and its relation to their actual behaviors: Implications for court competence examinations. *Law & Human Behavior*. 2002; 26:395–415. DOI: 10.1023/A:1016379104959 [PubMed: 12182530]
- Talwar V, Lee K, Bala N, Lindsay R. Children's lie-telling to conceal a parent's transgression: legal implications. *Law & Human Behavior*. 2004; 28:411–425. DOI: 10.1023/B:LAHU.0000039333.51399.f6 [PubMed: 15499823]
- Talwar V, Yachison S, Leduc K. Promoting honesty: The influence of stories on children's lie-telling behaviors and their moral understanding. *Infant & Child Development*. 2015; 25:484–501. DOI: 10.1002/icd.1949/full
- Toth SL, Cicchetti D, Macfie J, Rogosch FA, Maughan A. Narrative representations of moral-affiliative and conflictual themes and behavioral problems in maltreated preschoolers. *Journal of Clinical Child Psychology*. 2000; 29:307–318. DOI: 10.1207/S15374424JCCP2903_2 [PubMed: 10969415]

Highlights

- Interview instructions can overcome children's reluctance to disclose wrongdoing.
- Asking children to promise to tell the truth is effective for older children.
- A putative confession instruction is equally effective across ages.
- Recognition questions that suggest wrongdoing increase true disclosures, but can induce false alarms.

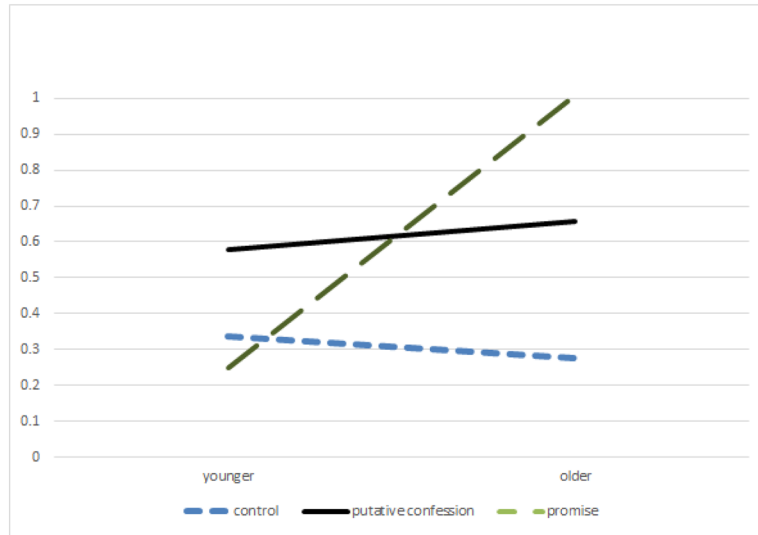


Fig. 1. Age-Related Changes in Likelihood of Breakage Disclosure by Condition