Routledge
Taylor & Francis Group

Applied Developmental Science

ISSN: 1088-8691 (Print) 1532-480X (Online) Journal homepage: www.tandfonline.com/journals/hads20

Transmission of children's disclosures of a transgression from peers to adults

Heather L. Price, Angela D. Evans & Kaila C. Bruer

To cite this article: Heather L. Price, Angela D. Evans & Kaila C. Bruer (2021) Transmission of children's disclosures of a transgression from peers to adults, Applied Developmental Science, 25:3, 228-239, DOI: 10.1080/10888691.2019.1586544

To link to this article: https://doi.org/10.1080/10888691.2019.1586544

APPLIED DEVELOPMENTAL SCIENCE
2021, VOL. 25, NO. 3, 228–239
https://doi.org/10.1080/10888691.2019.1586544

Transmission of children's disclosures of a transgression from peers to adults

Heather L. Price[a], Angela D. Evans[b], and Kaila C. Bruer[c]

[a]Department of Psychology, Thompson Rivers University, Kamloops, British Columbia, Canada; [b]Department of Psychology, Brock University, St. Catharines, Ontario, Canada; [c]Ddepartment of Psychology, University of Regina, Regina, Saskatchewan, Canada

ABSTRACT

Peers are common recipients of disclosures about negative events, but the transmission of peer disclosures to adults is not well understood. We explored children's ($N = 352$; aged 6–11 years) disclosures of a negative event to peer and adult interviewers. Some children witnessed an adult transgression and were asked to keep the transgression a secret (*witnesses*). Some of these witnesses (*peer-interviewed witnesses*) were then interviewed by peer who had not witnessed the event (*peer interviewers*) and then by an adult. The remainder of the witnesses (*control*) were only interviewed by an adult. Peer interviewers who received a disclosure were likely to share the disclosure with an adult and were significantly more likely to do so than children in either witness condition. Although the probability of disclosure transmission likely depends on context, this study provides the first evidence of peer recipients' willingness to disclose to adults at a high rate.

Children's introduction to moral concerns begins at a young age and among the most prominent lessons is truth-telling. Honesty is essential in developing trusting interpersonal relationships (e.g., DePaulo & Kashy, 1998; Rotenberg, 2010; Rotenberg, Michalik, Eisenberg, & Betts, 2008). However, there are other contexts in which interpersonal trust is enhanced by a lack of honesty, such as secret-keeping (Rotenberg, 2010). Decisions regarding when to tell the truth may be especially difficult when there are competing moral concerns such as in the case of disclosing a transgression committed by someone else. For example, children can be reluctant to disclose adult wrongdoings (e.g., Lyon, Ahern, Malloy, & Quas, 2010), a difficulty that may be magnified if they have been asked to keep the transgression a secret (e.g., Gordon, Lyon, & Lee, 2014). This reluctance to disclose can leave children in a particularly difficult situation if the disclosure itself (i.e., honestly reporting a transgression) is also morally desirable.

Children's decisions regarding how and when to disclose their own transgressions (e.g., Evans & Lee, 2010; Evans & Lee, 2011; Evans, Xu, & Lee, 2011; Talwar, Gordon, & Lee, 2007; Talwar, Lee, Bala, & Lindsay, 2002), the transgressions of others (e.g., Bottoms, Goodman, Schwartz-Kenney, & Thomas, 2002; Ceci & Leichtman, 1992; Dickinson & Poole, 2017; Loke, Heyman, Forgie, & McCarthy, 2011; Pipe & Wilson, 1994; Talwar, Lee, Bala, & Lindsay, 2004), and co-transgressions committed by a child and adult (e.g., Gordon et al., 2014; Lyon & Dorado, 2008; Lyon, Malloy, Quas, & Talwar, 2008; Lyon, Wandrey, Ahern, Licht, Sim, & Quas, 2014; Rush, Stolzenberg, Quas, & Lyon, 2017) have all been explored in prior literature and the general consensus is that children are often reluctant to disclose a transgression they witnessed or committed. However, we know comparatively little about how children who themselves receive a disclosure about an adult's transgression from a peer decide whether to further transmit that disclosure to an adult.

In the present study, we explored the transmission of a peer-to-peer transgression disclosure, and then both the witness and the peer disclosure recipient spoke with a naïve adult interviewer. We anticipated that the relative distance between the immediacy of witnessing a transgression (i.e., transgression witness) and the secondhand hearing of the transgression (i.e., peer disclosure recipient) would influence the likelihood of disclosure transmission. We expected that children who themselves witnessed the transgression and were directly asked to keep it a secret may be more likely to keep the secret from a naïve adult than

CONTACT Heather L. Price hprice@tru.ca Department of Psychology, Thompson Rivers University, 805 TRU Way, Kamloops, British Columbia, V2C 0C8, Canada.

children who were not present for the transgression and thus experienced a lower degree of competition between the moral concerns of keeping the secret and informing a naïve adult about a transgression.

Competing moral concerns

The way that children navigate competing moral concerns has been extensively considered in social domain theory. A critical tenet of social domain theory is that children are able to differentiate context as it relates to moral behavior and that this ability to assess the acceptability of violations across varying contexts differs across development (see Smetana, Jambon, & Ball, 2014). When an adult commits a transgression and requests that a child witness not inform others about the transgression, the child may experience competing moral concerns. A child may recognize that a transgression has been made in which secrecy was requested but also know that the transgression, if not disclosed, could have negative consequences for him/herself or another person. With both secret-keeping (commitment to the transgressor) and disclosure (truthfulness) as moral concerns, the child must choose between two competing concepts.

There is evidence to suggest that children are able to balance competing moral concepts at a young age. Children as young as three years of age can distinguish between violations of moral concepts that vary in severity and weigh their actions accordingly (Smetana, 2006). As children grow older, work specifically related to the disclosure of peer transgressions confirms that children actively balance between competing moral concerns. Loke et al. (2011) explored the transmission of disclosures regarding peer transgressions to adults among 6- to 11-year-olds. Loke and colleagues reported that although the children were consistent in their belief that *major* peer transgressions should be reported to authority figures, there was a developmental shift to disapproval of the reporting of *minor* transgressions. Thus, this work provides support for the distinction between major and minor transgressions across development as well as a balancing of competing moral concerns of disclosure versus nondisclosure. Into adolescence, there continues to be strategic weighing of when and how to follow moral concerns associated with truth-telling and disclosures of transgressions. However, during this time, the focus of how the context is weighted may shift to relationships between parties (e.g., Perkins & Turiel, 2007).

Disclosures to peers

Much of the research on children's disclosures of transgressions relates to disclosures to adults. We know little about how children decide to disclose to peers and what these peer recipients of disclosures will choose to do once the disclosure is received. Given children's sensitivity to factors related to both the nature of moral issue violated (Smetana et al., 2014) and the relationship shared with a potential disclosure recipient (Perkins & Turiel, 2007), it is reasonable to hypothesize that children's disclosures to peers may play a unique role in understanding how disclosures ultimately reach adults. Children's sensitivity to the disclosure recipient's role can be seen at a young age. For instance, Lyon et al. (2010) presented maltreated and nonmaltreated children with vignettes in which they were asked what a hypothetical child would or should do about an adult's (parent or stranger) transgression. They found that children as young as 4 and 5 years-old predicted fewer disclosures about parents compared to stranger instigators. Similarly, Gordon, Lyon, and Lee (2014) examined 4 to 12-year-olds' willingness to disclose their own parent's transgression of breaking a toy and found that most children failed to disclose their parent's transgression (but see Talwar et al., 2004). Taken together, these findings indicate that even quite young children are sensitive to the consequences of disclosing a transgression. Despite these important conclusions, this laboratory research on transgressions has focused on disclosures to adults. In none of the transgression studies that we located, was the recipient of the disclosure a peer.

The consequences of disclosing to a peer may be as unclear to children as they are to researchers. A child may expect his or her peer to keep the disclosure confidential, in which case the ultimate consequence is negligible to the child. Alternatively, the child may be uncomfortable disclosing directly to an adult and may have an explicitly stated or unstated expectation that the peer will pass the information on to an adult. Perhaps a peer disclosure forms a sort of "consultancy" wherein children feel out a peer's reaction to the situational concerns. Given the frequency with which we expect disclosures to be made to peers in some critical contexts such as abuse (Malloy, Brubacher, & Lamb, 2013), particularly among a school-aged sample, it is crucial to understand what happens after a child discloses to a peer. Will a disclosure to a peer subsequently be shared with an adult by the peer recipient? Or will a peer disclosure result in a "dead-end" and not be transmitted further? And,

importantly, does telling a peer reduce the likelihood that a child discloser will then also tell an adult?

Present study

To explore young children's disclosures to peers—and the potential transmission of that disclosure to an adult—we staged an event that involved an adult transgression during a children's (aged 6–11 years) art show. The adults expressed remorse over the transgression and asked the children not to disclose the transgression to anyone. Some children were then paired with a naïve peer to discuss the event, and then all children were later paired with adult interviewers to track the transmission of disclosures.

Given children's frequent reluctance to disclose transgressions committed by adults, we sought to explore if the opportunity to first disclose the transgression to a peer may provide a less direct conduit through which information about the transgression could flow. That is, we hypothesized that children might be more likely to disclose to a peer than an adult because that may seem to be a less clear violation of the moral concept of keeping the secret of the transgression. These children may also seek to resolve competing moral conventions by informing a peer about the transgression, and thus reducing the feeling of a need to inform an adult. Furthermore, we anticipated that the children who received the disclosure of the transgression, without actually witnessing the event themselves would experience reduced competition between competing moral concepts of keeping the secret and disclosing the transgression due to their only peripheral involvement in the event. This reduction in competition between moral issues among disclosure recipients should result in a higher rate of disclosure to adults, relative to the children who themselves witnessed the transgression.

As a final consideration of the context of disclosure, we also sought to explore the role of the peer who may receive the disclosure. There is ample evidence that *a priori* expectations of *adult* interviewers influence how they question children about prior experiences (see Cantlon, Payne, & Erbaugh, 1996; Ceci & Bruck, 1995; White, Leichtman, & Ceci, 1997), but we know little about how expectation biases would impact peer interviewers of child witnesses. Thus, the naïve peer interviewers in the present study (i.e., children who did not witness the transgression event, but interviewed a peer about his/her witnessing of the transgression) either did or did not receive instructions leading them to believe that a "bad thing" had previously happened with the adult transgressor.

Methods

Participants and design

Children ($N = 352$, $n = 207$ males) aged 6–11 years ($M_{age} = 8.51$ years, $SD = 1.23$) were recruited from a summer science camp. Our primary interest was in exploring the transmission of a disclosure from a peer to an adult interviewer. Thus, we included two main groups of children: witnesses (who were potential disclosers of a transgression) and peer interviewers (who were potential recipients of a disclosure but did not witness the transgression). Half of the witnesses were not interviewed by a peer (control witness group) to establish a baseline rate of disclosures to adults of this particular transgression. All children (witnesses and peer interviewers) were then interviewed by an adult interviewer. Thus, each camp group of children (approximately 15–20 children per group) was randomly divided into three conditions: (1) Control witnesses (children who witnessed the art event but were not interviewed by a peer, $n = 126$; 60% boys), (2) peer-interviewed witnesses (witnesses to the art event that were immediately interviewed by a peer, $n = 113$; 58% boys), and (3) peer interviewers (children who did not witness the art event and who later interviewed a peer about the event, $n = 113$; 58% boys). The group of peer interviewers was further divided into two conditions which differed in the nature of instructions they received prior to interviewing their peers (as described in the following section): neutral interviewing instructions ($n = 54$) and suspicious interviewing instructions ($n = 59$). Camp groups included children in the same school grade and thus, all pairings involved children of approximately the same age and sex. Initial analyses were conducted with children separated into two age groups (6–8 years, 9–11 years), but no differences emerged, thus all results are collapsed across age (see the Results section).

Procedure

Researchers arrived at each camp group location and divided children into two groups: two-thirds of children were selected to be event witnesses and the remaining third to be nonwitness peer interviewers. Event witnesses were further divided into control witnesses and peer-interviewed witnesses, see Figure 1.

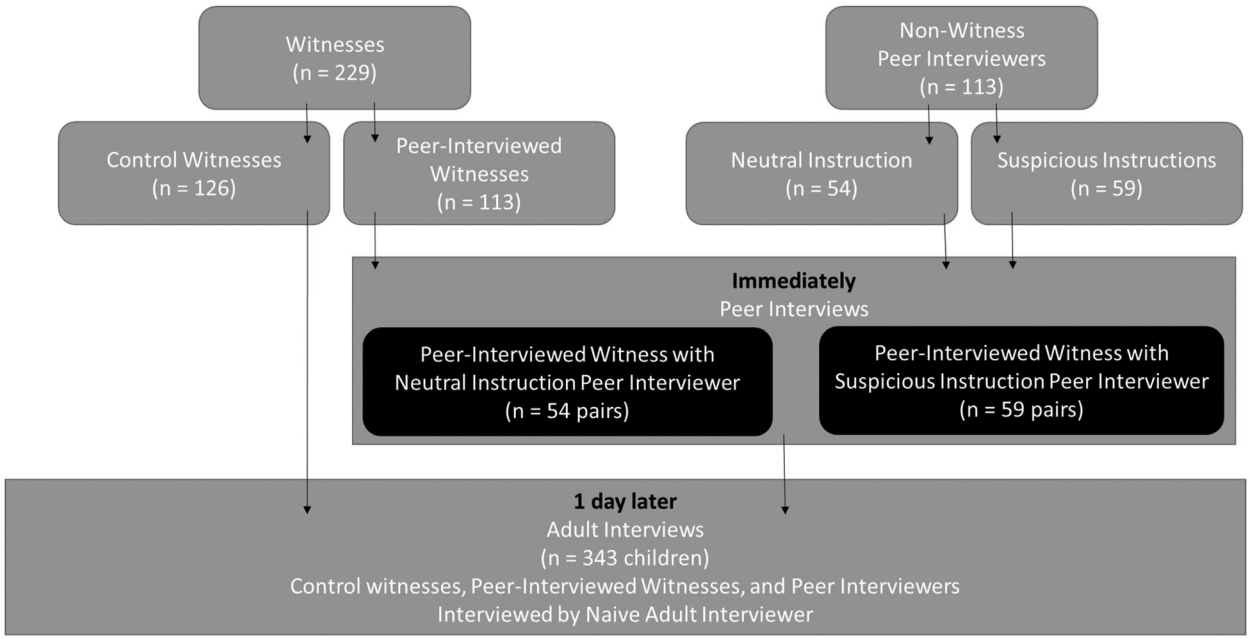

Figure 1. Methodology.

Event

Two confederates (one male, one female) visited the children's summer science camp to perform an art show for small groups (15–20) of children. The show began with the two confederates introducing themselves and explaining their roles. The female confederate, C1, performed the role of the artist and indicated that she would execute two art tricks and then show a video of a messy art trick. While she set up for each trick, her assistant, C2, performed physical activities with the children (e.g., stretching, lunges). Prior to the second art trick, C1 spilled water on a laptop computer, which resulted in an inability to show the planned video. The artist then asked the children not to tell anyone about the incident ("*Oh no! I'm going to be in so much trouble—that's a camp laptop. My boss is going to be so mad at me. Please don't tell anyone this happened, I will get in so much trouble with my boss.*"), while also trying to turn on the laptop (and failing to do so). C1 apologized: "*I'm so sorry. Okay you guys, maybe you should go outside with the others while I clean this up before anyone sees the mess.*" Children were not individually asked to confirm their willingness to conceal the transgression. The event lasted approximately 10 minutes. Witnesses to the event were unaware that they would later be interviewed about the event.

Peer interviews

Before the art show took place in the children's camp room, peer interviewers were pulled from the room and assigned to one of two interviewing conditions that differed in the perceived seriousness of the transgression (neutral vs. suspicious interviewing conditions) to assess whether disclosure rates as well as interviewing style varied based on peer-interviewer's suspicions. The instructions were the same for both conditions with one small variation in the suspicious condition (see as follows):

The visitors in the classroom are going to do some activities with the other kids in your group. When they are done, they will come out and you will be paired up with one of the kids that was in the room with the visitor. Your job is to talk to that kid and find out what happened in the room while you were gone. You will have to ask the other kid questions to find out what happened. You can ask as many questions as you would like. [Added to suspicious condition only: *One time, the person in the room made a mistake and something bad happened. We need to find out if a bad thing happened again.*] *It is important that you find out everything you can about what happened because an adult will come tomorrow to talk to you about it. The adult will want to know everything that happened.*

Children were informed about the pending adult interview to ensure they stayed on task and attended to their interviewee's responses. Peer interviewers were provided with digital voice recorders to record their interview, but a research assistant was responsible for starting and stopping each recording. Children were directed to a quiet location in a large hallway to conduct the interview and distribution of children was monitored by several research assistants to avoid over-hearing of conversations. Peer

interviews took place immediately following the end of the art show. Children were quasi-randomly assigned to a peer for the interview, with the aim of pairing same sex peers as much as possible (3/113 were mixed sex pairs). Same sex peers were considered more desirable because of the anticipated parallels with disclosures in which peers choose the recipient (i.e., the commonality of same-sex peer friendships; Maccoby, 1990). Peer interviewed witnesses were simply told by their peer interviewer that the interviewer was supposed to find out about the activities in the room. Interview duration ranged from approximately 2 to 10 minutes and children indicated completion by signaling to a nearby researcher.

Adult interview instructions

Children in all three conditions (control witnesses, peer-interviewed witnesses, and peer-interviewers) were interviewed one day later by a research assistant who received training on general interview principles (e.g., establishing rapport, rely on open-ended questions, avoid suggestive questions) and how to administer a structured interview protocol that included both free and cued recall components. The interview protocol was designed to keep the interviews as consistent as possible across interviewers. The instructions for all children who witnessed the art show (both control and peer-interviewed witnesses) were as follows: *Yesterday, [C1] the art lady came to visit your camp and she wore a red apron. I wasn't here yesterday so I don't know what happened. Tell me everything you can about what happened when [C1], the red apron artist, came to camp.* This general instruction was followed by three nondirective prompts, with pauses and facilitators between each: *What else can you tell me? What else? Is there something else you can tell me?* Once children appeared to have exhausted their recall, interviewers moved to the next phase of the interview.

The free recall component was followed by cued recall that targeted five specific event details: 1) *What was [C1], the artist, wearing? 2) What was the name of the skull on her apron? 3) While [C1] and [C2] were here, they talked about two special words. What were the words? 4) She showed you a trick with milk. Tell me about the trick. 5) What can you tell me about the exercises you did?* Finally, as an indirect probe of children's willingness to disclose, the interviewer asked: *Did something else happen?* (final probe question). Following the interview, children were asked to complete a brief questionnaire about their preexisting relationship with the interviewer/interviewee.

The free recall and cued recall interview instructions were modified for children who were in the peer-interviewer condition: Free recall modification: *Yesterday, [RA1] the art lady came to visit your camp and she wore a red apron. I wasn't here yesterday so I don't know what happened. I heard that you talked with another kid about what happened. Can you tell me everything you can about what that kid told you about what happened when [RA1], the red apron artist, came to camp? I know you weren't there, but I need to know everything that kid told you.* Cued recall modification: *Now I'm going to ask you some questions about particular things you may have learned about. Just do your best, I know you weren't there, but I want to know if you can tell me what the other kid said to you.*

Following completion of this study, children participated in a photo identification task of the art show leaders. Although the data relating to children's identification accuracy are beyond the scope of the present paper, one component of that task is relevant here. During the introduction of this task, interviewers indicated their knowledge of the water spilling event by telling the child that s/he was going to be asked to select the photo of the person who spilled the water (i.e., adult knowledge disclosed phase). Children's spontaneous disclosures after learning that the interviewer was aware of the transgression were recorded.

Coding

Interviews were transcribed verbatim and coded for both the interview characteristics and disclosure characteristics. Interview characteristics from the free recall section of the interview included overall on-topic word count, the number of questions posed by interviewers, and the type of interviewer prompts. Interviewer prompts were coded into the following categories:

1. *Open-ended*: Invited child to talk about an event with no cues from the interviewer (e.g., "Tell me more," "What else?").
2. *Closed-ended*: Directed the child towards a particular topic and invited a brief response (e.g., "What was he wearing?" "What color was it?" "Were you inside or outside?" "Did you go home right away?").
3. *Suggestive:* Utterance contained information not mentioned by the child or the interviewer led the child into a particular response (e.g., "You walked away, didn't you?").

Disclosures were also coded for the presence/absence of children's explicit disclosures, nonspecific disclosures of something "bad" without specific details about the transgression, and reference to the disclosure/transgression event as a "secret". Word counts of children's disclosures and time to disclosure were coded as rough proxies for willingness or apprehension to disclose. We anticipated that children who were less conflicted between competing moral concerns, and who ultimately decided in favor of disclosing, would be more verbose in their descriptions and would do so more quickly after the start of the interview. Finally, children's responses to the five cued recall questions were coded as either accurate or inaccurate and the final probe question (*Did something else happen?*) was coded as either including a transgression disclosure or not. Twenty-five percent of interviews (randomly selected) were coded by two coders, who achieved a minimum Kappa value of .85 for each coding category.

Results

Recall that children were divided into three conditions: two experimental conditions (peer interviewers and peer interviewed witnesses) and a control condition (control witnesses), which served the purpose of establishing the baseline for disclosures in this paradigm. Peer interviewers were further assigned to either the suspicious or neutral instructions condition. Analyses reported below were originally conducted with, 1) children's age as a factor of interest (both age as a continuous variable and split into 6–8 years, 9–11 years), and 2) peer interviewer instructions as a factor of interest. However, neither of these variables were significantly ($ps > .05$) related to the presence/absence of disclosure in any analyses; thus, all results reported are collapsed across age and peer interview instructions conditions. In the following section, we report the characteristics of, and disclosure rates in, the peer interviews followed by the adult interviews (excluding cued recall) and a comparison between the two interviews. Finally, we examine children's responses to the cued recall questions in the adult interviews.

Peer interviews

Not all children discussed the art show during the peer interviews; 10% of children had exclusively off-topic conversations (12/125 pairs), many of whom were confused about their task (for 10/12 the interviewer appeared not to understand the task of questioning their peer and for 2/12 the witness failed to stay on task). Because these off-topic interviews do not provide us with information about children's likelihood of disclosure, analyses of the peer interviews are restricted to the on-topic dyads ($n = 113$).

Interview characteristics

Peer interviewers spoke, on average 113.53 ($SD = 126.04$) on-topic words, while witnesses spoke slightly more ($M = 142.56$, $SD = 110.85$), $F(1, 225) = 3.38$, $p = .07$, $\eta_p^2 = .02$. Peer interviewers posed an average of 10.35 ($SD = 11.98$) questions, of which 50% were open-ended, 41% were closed-ended, and 9% were suggestive. Disclosures typically occurred less than a minute into the discussion of the art show ($M = 44.85$secs, $SD = 73.00$; excluding off-topic discussion), described using 19.17 ($SD = 13.15$) words, and most often in response to an open ended-question (64%).

Disclosures

Among children who witnessed the transgression ($n = 113$), almost half (41%) explicitly disclosed the transgression to the peer interviewer, and an additional 18% disclosed that "something bad" had happened. Forty-one percent of all disclosures described the transgression as a secret. Disclosure patterns across all experimental stages are presented in Figure 2.

Adult interviews

Interview characteristics

Adult interviewers spoke, on average 101.05 ($SD = 35.74$) on-topic words, while child interviewees spoke a similar amount ($M = 107.88$, $SD = 69.77$), $t(209) = 1.15$, $p = .25$, Cohen's $d = .12$. Adult interviewers posed an average of 4.39 ($SD = 2.02$) questions, of which 83% were open-ended, 15% were closed-ended, and 2% were suggestive. The inclusion of closed-ended and suggestive questions occurred when interviewers erred in asking follow-up questions during the open-ended portion of the interview. When a disclosure took place, it was typically just over a minute ($M = 76.98$secs, $SD = 103.80$) into the discussion of the art show (i.e., excluding any initial off-topic discussion), described using 20.52 ($SD = 15.82$) words, and most often in response to an open-ended question (84%). As with the peer interviews, there were no differences across the three witness/interviewer conditions.

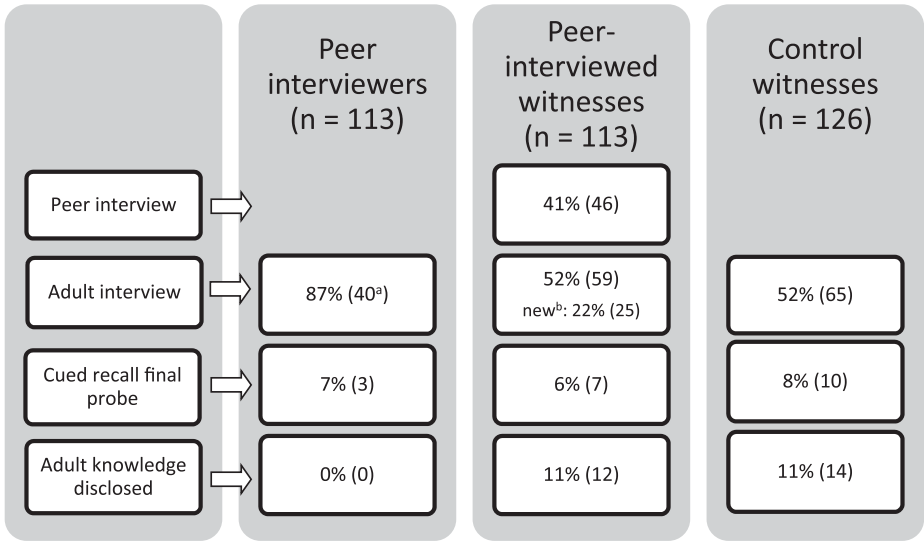

Figure 2. Percentage (number) of condition total sample disclosing for the first time at each experimental phase.
Note. [a]Though there were 113 peer interviewers in the sample, only 46 received a disclosure from a peer-interviewed witness. Therefore, the total number of possible disclosures that could be passed on to adults was 46. [b]"New" disclosures refer to children who did not disclose to a peer but did disclose to an adult. A total of 25 of the 59 adult disclosures (which includes inconsistent, consistent, and new disclosures) were new.

Witness disclosures

Recall that child witnesses were divided into two groups: control and peer-interviewed witnesses. In the adult interview, 52% of control witnesses and 52% of peer-interviewed witnesses disclosed the transgression to the adult interviewer. There was no difference in disclosure rate between control and peer-interviewed witnesses, $z = 0.31$, $p = .76$, Cohen's $h = .02$. An additional 14% of control witnesses and 7% of peer-interviewed witnesses disclosed a more general "bad thing" happening, $z = 1.92$, $p = .06$, Cohen's $h = .23$. Thirty-eight percent of control witnesses and 41% of peer-interviewed witnesses who explicitly disclosed described the transgression as a secret, $z = 0.33$, $p = .74$, Cohen's $h = .06$.

Peer interviewer disclosures

Among peer-interviewers who received an explicit disclosure from a peer ($n = 46$), 87% went on to explicitly disclosed this information to an adult. The disclosure rate of peer interviewers was significantly higher than either of the child witness groups, $zs > 5.00$, $ps < .001$.

Disclosure of secrets

When a witness initially disclosed the transgression to a peer and described it as a secret, peer-interviewers and peer-interviewed witnesses were both less likely to report the transgression to the adult interviewer (61% for peer-interviewed witnesses and 65% for peer-interviewers), than when it was not described as a secret (88% for peer-interviewed witnesses and 78% for peer-interviewers). However, this difference was only statistically significant for the peer-interviewed witnesses, $z = 1.98$, $p = .047$, Cohen's $h = .64$, and not for the peer-interviewers, $z = 0.91$, $p = .37$, Cohen's $h = .29$.

Comparing peer and adult interviews

Children in the peer-interviewed witness condition ($N = 113$) were the only children to receive two interviews: one with a peer-interviewer and one with an adult interviewer. To explore these two interviews, we analyzed the behavior of children in the peer-interview condition in their respective peer and adult interviews. Children were more likely to disclose the transgression to an adult (52%) than a peer (41%), $z = 2.08$, $p = .04$, but disclosed faster to peers ($M = 38.58$secs, $SD = 40.27$) than to adults ($M = 82.33$sec, $SD = 118.20$), $t(44) = 2.44$, $p = .02$. Descriptions of the transgression comprised a statistically equivalent number of words to adults and peers, $t(32) = 0.04$, $p = .97$, though children used more words in describing the art show in general to their peers ($M = 144.08$, $SD = 112.92$) than to adults ($M = 118.26$, $SD = 80.12$), $t(106) = 2.19$, $p = .03$.

Selective disclosers

Interestingly, over a quarter ($n = 13$ of 46; 28%) of children who disclosed to a peer did not go on to disclose to an adult (selective peer disclosers). Of these

children, approximately half were in each peer-interview instruction condition (55% neutral), 59% were male (the same ratio as in the full sample), and they were approximately the same age ($M = 7.95$ years) as the average participant in the full sample ($M = 8.51$ years). These selective disclosers also did not show evidence of different behavior in the peer interviews compared to children who disclosed to both peers and adults: They spoke a similar number of words when referring to the transgression event and, overall, they took approximately the same amount of time from the beginning of the interview to the disclosure, and referred to the event as a secret as often as did the nondisclosers $ps > .22$.

There were an additional 25 children who selectively disclosed to adults, but not to peers (selective adult disclosers). Of these children, approximately half were in each peer-interview instruction condition (48% neutral), 68% were male, and they were the same age ($M = 8.54$ years) as children in the full sample ($M = 8.51$ years). The number of words used to described the transgression event did not differ between selective adult disclosers and consistent disclosers; however, these selective disclosers took significantly longer to disclose to the adult interviewer ($M = 150.84$secs, $SD = 175.62$) than children who disclosed to both peers and adult interviewers ($M = 51.12$secs, $SD = 35.18$), $F(1, 57) = 10.16$, $p < .01$, $\eta_p^2 = .15$. Just under half ($n = 11$; 44%) of the 25 children described the transgression as a secret. Interestingly, 11 of the 25 children had spoken during the peer interview about "something bad" happening, but did not explicitly disclose the transgression event; overall 58% of "something bad" children from the peer interview went on to explicitly disclosure the transgression event itself to an adult.

Cued recall

Next, we compared the accuracy rate for children's responses to the five cued recall questions about the art show content. There was an overall main effect of children's condition, $F(2, 351) = 152.46$, $p < .001$, $\eta_p^2 = .47$. There was no difference between control witnesses ($M = 2.75$, $SD = 0.84$) and peer-interviewed witnesses ($M = 2.62$, $SD = 0.93$) in response accuracy to cued recall questions, thus indicating that the opportunity for rehearsal involved with the peer interview did not enhance children's ability to accurately respond to the cued recall questions during the adult interview. There were, as expected, significantly fewer correct responses given by the peer interviewers, who did not experience the event, ($M = 0.88$, $SD = 0.97$) than either witness group, $ps < .01$.

Late disclosures

The final probe question, "Did something else happen?" resulted in 20 children explicitly disclosing for the first time. Of these 20 children, 3 were peer interviewers, 7 were peer-interviewed witnesses, and 10 were control witnesses. Finally, a further 26 children (14 control witnesses and 12 peer-interviewed witnesses; of the remaining 98 children who did not disclose at any other point in the interview) disclosed the event once it became clear that the interviewer was aware of the transgression (i.e., during the photo task).

Discussion

The present study was designed to explore the transmission of a child's disclosure of an adult transgression during peer interviews from peer recipients to adult recipients. We were interested in both how and how often children disclosed a transgression to peers and adults, and also what peer recipients chose to do if they received a disclosure. One of the most interesting, and encouraging, findings from the present study is the high rate of transmission from peer recipients to adults. It is apparent that children who receive a disclosure of an adult's minor transgression from a peer (i.e., those who themselves did not witness the transgression) are willing to share that information with an unfamiliar adult interviewer. This finding is consistent with our expectation that reduced competition between moral concerns (secret-keeping and transgression disclosure) via a lack of direct observation of the transgression would increase the likelihood of the transmission of the disclosure. Of course, the nature of the transgression itself, the relationship between peers, and relations to the transgressor are all likely to have a substantive influence on children's disclosure decisions, but the present research provides the first experimental evidence that peer recipients will pass on a peer disclosure to an adult interviewer.

It should not be surprising that peer disclosure recipients informed adult interviewers about the transgression at a higher rate than children who witnessed the transgression themselves. A child who witnessed an event and is then asked to keep the transgression a secret is likely to feel more compelled to keep that secret than a child who received an account of the experience secondhand (peer interviewer). That is, to peer disclosure recipients, issues of honesty may be

more salient than the competing moral concerns of protecting the teacher or maintaining a commitment of secrecy to the teacher. Importantly, having previously disclosed to a peer did not change disclosure rates during the adult interviews as demonstrated by the similar disclosure rates of control witnesses and peer-interviewed witnesses during the adult interview. Considering that peer recipients of a disclosure were more likely to disclose to adults than witnesses and that we observed no disadvantage of prior disclosure to a peer, our findings suggest that peer disclosure may be a positive act toward increasing overall disclosure rates.

Children disclosed at a higher rate to adults than peers. Interestingly, much of the discrepancy between adult and peer interview disclosures came from the nonspecific disclosure to peers that "something bad" happened. One can speculate that this may be a result of children not knowing what their peer interviewer would do with this information; perhaps children assumed that an adult was a more responsible "keeper" of the information than the peer interviewer would be. In future work, it would be interesting to directly ask the children for their justification for the disclosure decisions. Another possible reason for disclosure to adults compared to peers may be the controlled structured interview protocol utilized during the adult interview. While adults asked fewer questions, they tended to use more open-ended questions for which they had been given advice on how to construct (e.g., phrasing suggestions) during training. Given that both groups were found to obtain disclosures most often in response to open-ended questions, the structured interview and training may have assisted in increasing disclosure rates. Peers, in contrast, had little structure to their conversations. Finally, it is also important to consider that we did not have a condition in which children experienced a second interview by a peer. Thus, we cannot separate influences of a repeated interview from influences of an adult interview.

Selective disclosers

A particularly fascinating observation in the present work is the identification of selective disclosers. Almost a quarter of children who disclosed to peers did not also disclose to adults. If exposure to the transgression elicited anxiety within the witnesses, these selective disclosers may have sought to reduce this anxiety by sharing the secret with a peer, while concurrently balancing the moral concern of tattling on the transgressor by not informing someone who might actually take action (the adult interviewer). Nonetheless, in the context of some types of transgressions (e.g., abuse), this group may be considered the most concerning because these children were willing to share the secret with a peer, but not an adult. The likelihood of an adult receiving the disclosure then falls to the peer recipient. In the present study, the likelihood of transmission to adults was high, but one can imagine that this rate would be affected by many characteristics of the event and the peer disclosure, such as the level of emotion involved and the consequences to the discloser of an adult learning of the transgression. Our exploration of these selective disclosers revealed nothing in the children's individual or interview characteristics about how they differed from children who disclosed to both peers and adults. This particular group is well-worth further investigation, particularly with consideration of event characteristics, individual differences, and the nature of the relationship between peers and adult transgressor.

The other selective disclosers in the present study told an adult about the transgression, but not a peer. Many of these children had disclosed 'something bad' had happened to peers, but did not describe the nature of the transgression until the second interview with the adult. Interestingly, these children also took significantly longer to disclose to an adult (close to two minutes longer) than children who disclosed to both peers and adults. We speculate that these children were more cautious in their decision about the disclosure and perhaps even used this extra time to 'feel out' the adult recipient for trustworthiness. The relation between children's trust and disclosure, too, warrants further investigation. This additional time to disclosure may also have been a marker of children wrestling with competing moral concerns about disclosure of a transgression and protecting the transgressor and assessing which of these concerns should be prioritized.

Reluctant disclosers

For a small number of children, the final recall probe led to an initial disclosure. Of course, we did not have a condition in which a transgression did not occur; therefore, it is not possible to assess the impact of such a question on false disclosures. Although our question ("Did something else happen?") did not suggest to children that a particular negative event had taken place, it may have implicitly pressured children to disclose the negative experience. In this present

context, no child made a false disclosure about a negative event. However, future studies in which a no-transgression condition is included are required to ensure such a question does not lead to false disclosures.

There was another small group of children who only disclosed once it became clear that the adult interviewer was aware of the transgression (i.e., during the unrelated lineup task in which the interviewer presented a photo lineup and asked who, if anyone, spilled the water). Fu, Evans, Xu, and Lee (2012) found that young children were significantly more likely to disclose their own transgression when an adult interviewer appeared knowledgeable about the child's transgression compared to when the adult was ignorant of the child's behavior. Fu et al. (2012) suggested that by 4 years of age children are capable of strategically concealing or disclosing their transgressions based on the likelihood of being caught. It is likely that the participants in the present study realized that they were no longer able to successfully conceal the transgression and thus disclosed. However, it is also possible that these children were simply responding to a suggestive statement and if a transgression had not occurred they may have falsely disclosed. In the present context, we view acquiescence as unlikely because children who disclosed during this phase often expressed surprise that the interviewer had knowledge about the transgression (e.g., "You knew?!"). However, future studies including a non-transgression condition are required to fully address this possibility.

Limitations and future directions

Somewhat surprisingly, we did not observe age differences in disclosure rates to peers and adults. Previous research indicates that preferred disclosure recipients about abuse differ developmentally (e.g., Malloy et al., 2013) and, thus, extrapolating from this, we anticipated that we may observe some differences between peer and adult disclosures among children of different ages. However, the present study involved children up to 11 years of age, which is near the threshold of the age range Malloy et al. (2013) observed a tip in the likelihood of disclosures to peers (10–13 year olds). Perhaps the more marked intensification of peer relations increases the disclosure rates of older children, but not within a younger age range. It is also possible that the nature of the transgression was not as personal as in past research (i.e., abuse; Malloy et al., 2013) and, thus, the sensitivity to the recipient/discloser relationship may not have been as important. It is also possible that the present study may not have been able to capture the close relationships that may influence the decision to disclose to peers. Future work with this paradigm could also consider obtaining information from parents about spontaneous disclosures from their children, or directed conversations in which parents question children about the events of the day.

Relatedly, the peer interviews in the present study were conducted between children who knew each other from summer camp and often characterized one another as "friends" (more than 50% of friendship pairings were mutually characterized this way), but were not the very close friendship pairings that one may expect to lead to a high rate of personal disclosure. Of course, in the present study, the transgression was not of a personal nature and did not require disclosure of personal information in order to transmit. Nonetheless one can imagine that the relationship between peers will influence the likelihood of disclosure in most contexts. Developmental differences may be found with more naturalistic relationships (e.g., reporting to a friend or familiar adult) compared to forced relationships in the laboratory (e.g., a less familiar peer they met at the start of the week and an unfamiliar adult) which may be perceived similarly by all children in this age range as 'unfamiliar' others. Similarly, these conversations involved a peer interviewer probing for information, whereas a child's disclosure of abuse may be more spontaneous.

A further limitation relates to our instructions to peer interviewers (neutral and suspicious). Our manipulation of instructions had no impact on children's disclosures. Although not terribly surprising given the relative weakness of the manipulation, we do not believe this null pattern warrants discarding the exploration of the influence of prior expectations and belief on peer conversations. Future research should explore the type and strength of peers' prior beliefs and what influence they may have on peer conversations, as this has the potential to have a powerful impact on how disclosures are received and transmitted.

Finally, as previously mentioned, a key limitation of the present research lies in the nature of the transgression. Though children appeared to take the transgression seriously and were often hesitant to reveal the art show leaders' secret, the transgression may not generalize to other contexts to which disclosure of transgressions might be applied (e.g., betrayal, loyalty, severe consequences). Thus, while the pattern of

disclosure may remain the same, the overall disclosure rates observed in the present investigation may change based on the characteristics of the transgression being reported. Relatedly, children witnessed a transgression, but were not themselves implicated in the transgression.

Conclusions

The present findings build on a growing body of work exploring factors that influence the likelihood of children's disclosures of transgressions. The study provides a clear demonstration of willingness to disclose a transgression to peers, but also of the strong likelihood of peer recipients transmitting that disclosure to adults. Much more work needs to be done to understand the circumstances that will enhance or reduce the probability of peer transmission of disclosures of negative events and the results from the present study identify several possible avenues for further investigation.

Acknowledgments

The authors thank the Educating Youth in Engineering and Science Camp at the University of Regina, Jordan Nixdorf, Matthew Pechey, Briana Vaags, Jasmine Bender, the many research assistants and camp Counselors who assisted with data collection, and the parents and children for their participation in the research.

Funding

This research was supported by Social Sciences and Humanities Research Council of Canada (SSHRC) Insight Grants to H. L. Price and A. D. Evans, and a CGS SSHRC grant to K. C. Bruer.

References

Bok, S. (1978). *Lying: Moral Choice in public and private life*. New York: Vintage.

Bottoms, B. L., Goodman, G. S., Schwartz-Kenney, B., & Thomas, S. N. (2002). Understanding children's use of secrecy in the context of eyewitness reports. *Law and Human Behavior*, *26*(3), 285–313. doi:10.1023/A:1015324304975

Cantlon, J., Payne, G., & Erbaugh, C. (1996). Outcome-based practice: Disclosure rates of child sexual abuse comparing allegation blind and allegation informed structured interviews. *Child Abuse & Neglect*, *20*, 1113–1120. doi:10.1016/0145-2134(96)00100-7

Ceci, S. J., & Bruck, M. (1995). *Jeopardy in the courtroom: A scientific analysis of children's testimony*. Washington, D.C.: American Psychological Association.

Ceci, S. J., & Leichtman, M. D. (1992). "I know that you know that I know that you broke the toy": A brief report of recursive awareness among 3-year-olds. In S. J. Ceci, M. D. Leichtman, & M. Putnick (Eds.), *Cognitive and social factors in early deception* (pp. 1–9). Hillsdale, NJ: Erlbaum.

DePaulo, B. M., & Kashy, D. A. (1998). Everyday lies in close and casual relationships. *Journal of Personality and Social Psychology*, *74*(1), 63–79. doi:10.1037/0022-3514.74.1.63

Dickinson, J., & Poole, D. A. (2017). The influence of disclosure history and body diagrams on children's reports of inappropriate touching: Evidence from a new analog paradigm. *Law and Human Behavior*, *41*(1), 1–12. doi:10.1037/lhb0000208

Evans, A. E., & Lee, K. (2010). Promising to tell the truth makes 8- to 16- year olds more honest. *Behavioral Sciences & the Law*, *28*(6), 801–811. doi:10.1002/bsl.960

Evans, A. E., & Lee, K. (2011). Verbal deception from late childhood to middle adolescence and its relation to executive functioning skills. *Developmental Psychology*, *47*(4), 1108–1116. doi:10.1037/a0023425

Evans, A. E., Xu, F., & Lee, K. (2011). When all signs point to you: Lies told in the face of evidence. *Developmental Psychology*, *47*(1), 39–49. doi:10.1037/a0020787

Gordon, H. M., Lyon, T. D., & Lee, K. (2014). Social and cognitive factors associated with children's secret keeping for a parent. *Child Development*, *85*, 2374–2388. doi:10.1111/cdev.12301

Loke, I. C., Heyman, G. D., Forgie, J., McCarthy, A., & Lee, K. (2011). Children's moral evaluations of reporting the transgressions of peers: Age differences in evaluations of tattling. *Developmental Psychology*, *47*(6), 1757–1762. doi:10.1037/a0025357

London, K., Bruck, M., Wright, D. B., & Ceci, S. J. (2008). Review of the contemporary literature on how children report sexual abuse to others: Findings, methodological issues, and implications for forensic interviewers. *Memory*, *16*(1), 29–47. doi:10.1080/09658210701725732

Lyon, T. D., Ahern, E. C., Malloy, L. C., & Quas, J. A. (2010). Children's reasoning about disclosing adults' transgressions: Effects of maltreatment, child age, and adult identity. *Child Development*, *81*(6), 1714–1728. doi:10.1111/j.1467-8624.2010.01505.x

Lyon, T. D., & Dorado, J. S. (2008). Truth induction in young maltreated children: The effects of oath-taking and reassurance on true and false disclosures. *Child Abuse & Neglect*, *32*, 738–748. doi:10.1016/j.chiabu.2007.08.008

Maccoby, E. E. (1990). Gender and relationships: A developmental account. *American Psychologist*, *45*(4), 513–520. doi:10.1037/0003-066X.45.4.513

Malloy, L. C., Brubacher, S. P., & Lamb, M. E. (2013). "Because she's one who listens": Children discuss disclosure recipients in forensic interviews. *Child Maltreatment*, *18*(4), 245–251. doi:10.1177/1077559513497250

Perkins, S. A., & Turiel, E. (2007). To lie or not to lie: To whom and under what circumstances. *Child Development*, *78*(2), 609–621. doi:10.1111/j.1467-8624.2007.01017.x

Pipe, M., & Wilson, J. C. (1994). Cues and secrets: Influences on children's event reports. *Developmental*

Psychology, *30*(4), 515–525. doi:10.1037/0012-1649.30.4.515

Rotenberg, K. J. (2010). *Interpersonal Trust During Childhood and Adolescence*. Cambridge, UK: Cambridge University Press.

Rotenberg, K. J., Michalik, N., Eisenberg, N., & Betts, L. R. (2008). The relations among young children's peer-reported trustworthiness, inhibitory control, and pre-school adjustment. *Early Childhood Research Quarterly*, *23*(2), 288–298. doi:10.1016/j.ecresq.2007.04.003

Rush, E. B., Stolzenberg, S. N., Quas, J. A., & Lyon, T. D. (2017). The effects of the putative confession and parent suggestion on children's disclosure of a minor transgression. *Legal and Criminological Psychology*, *22*(1), 60–73. doi:10.1111/lcrp.12086

Smetana, J. G. (2006). Social-cognitive domain theory: Consistencies and variations in children's moral and social judgments. In M. Killen & J. G. Smetana (Eds.), *Handbook of moral development* (pp. 119–153). Mahwah, NJ: Erlbaum.

Smetana, J. G., Jambon, M., & Ball, C. L. (2014). The social domain approach to children's moral and social judgments. In M. Killen & J. G. Smetana (Eds.), *Handbook of moral development* (pp. 23–45). New York, NY, US: Psychology Press.

Talwar, V., Gordon, H., & Lee, K. (2007). Verbal deception and its relation to second-order belief understanding. *Developmental Psychology*, *43*(3), 804–810. doi:10.1037/0012-1649.43.3.804

Talwar, V., Lee, K., Bala, N., & Lindsay, R. C. L. (2002). Children's conceptual knowledge of lying and its relation to their actual behaviors: Implications for court competence examinations. *Law and Human Behavior*, *26*(4), 395–415. doi:10.1023/A:1016379104959

Talwar, V., Lee, K., Lindsay, R. C., & Bala, N. (2004). Children's lie-telling to conceal a parent's transgression: Legal implications. *Law and Human Behavior*, *28*(4), 411–435. doi:10.1023/B:LAHU.0000039333.51399.f6

White, T. L., Leichtman, M. D., & Ceci, S. J. (1997). The good, the bad, and the ugly: Accuracy, inaccuracy, and elaboration in preschoolers' reports about a past event. *Applied Cognitive Psychology*, *11*(7), S37–S54. doi:10.1002/(SICI)1099-0720(199712)11:7<S37::AID-ACP546>3.0.CO;2-4