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Implicit Encouragement: Enhancing Youth Productivity when Recounting a Stressful Experience

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Abstract

In recent years, increasing efforts have been focused on testing strategies of improving victimized children's narrative productivity, given that, for many youth, finding out what has happened to them is crucial to intervening and promoting their well-being. Implicit encouragement strategies, such as back channeling by conversational partners, have shown some preliminary promise, but their precise effects on productivity and accuracy have not been adequately examined. In this study, 98 youth, ages 8–14, completed a laboratory-based stressful activity, and a week later, a surprise memory test regarding what happened in the lab activity. Interviewers varied their use of implicit encouragement. Open-ended recall questions asked youth about both factual details and detail about their feelings and thoughts during the laboratory activity. Implicit encouragement increased the amount of both types of details and had no effect on errors. In fact, few youth provided any incorrect information in their recall reports. Neither age nor stress was related to youth's productivity or accuracy, directly or in conjunction with implicit encouragement. Results highlight the value of interviewers using encouraging behaviors when questioning children and adolescents to elicit a range of information about prior stressful experiences.

Keywords

Children; Adolescents; Memory; Implicit encouragement; Stress

In legal settings, statements made by children directly affect investigative decisions and the progression and outcomes of legal cases. This is especially true when the statements are a primary source of evidence of a crime, such as the crime of child sexual abuse, and the completeness and accuracy of children's statements become crucial to the case. The outcome of the case, in turn, has broader implications for protecting victimized children and promoting their long-term well-being.

Over the past several decades, hundreds of studies have been conducted assessing ways of increasing the amount of information children report about prior experiences without

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Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

compromising the accuracy of what they report (Lamb et al. 2018; Saywitz et al. 2017). Of direct relevance to the current investigation are studies showing that the dynamics of the interaction between an interviewer and a child exert a powerful influence on the child's reporting tendencies, above and beyond the influence of the specific questions asked (Saywitz et al. 2017, 2016). Our research focuses on one potentially important component of these dynamics, namely an interviewer's use of verbal cues while questioning children and adolescents (i.e., "youth"). We were specifically interested in whether the use of specific types of verbal cues enhances the amount of information youth provide about a prior stressful personal experience and if so, what types of information are enhanced (e.g., factual details, details about their emotions). We were also interested in whether such cues differentially affect children's versus adolescents' responding. The verbal cues we studied included back-channel utterances, which are brief non-lexical expressions, such as uh-huh and mm-hmm, that communicate a listener is paying attention, interested, and would like the speaker to continue (Gardner 2001; McCarthy 2003); and vocatives, which are words or phrases designed to capture a conversational partner's attention (McCarthy and O'Keeffe 2003). We refer to these cues collectively as implicit encouragement.

Prior work on interview dynamics and children's memory has largely focused on interviewer support while questioning youth. Support has most often been operationalized as the inclusion of verbal and nonverbal behaviors that convey warmth and trust and indicate that the information provided by a conversational partner (in this case, a child) is important and valued (Burleson et al. 1994). Examples of such behaviors include smiling, non-contingent verbal praise, head nodding, eye contact, and vocal intonation (Bottoms et al. 2007; Saywitz et al. 2016). Of note, to be considered supportive, the behaviors need to be provided throughout an interview in a non-contingent fashion, regardless of what children say. When supportive behaviors are contingent on specific answers, they become a form of selective reinforcement that can quickly become suggestive rather than helpful (Cleveland et al. 2018; Garven et al. 1998; Powell and Earhart 2018).

In field investigations of forensic interviews with suspected child victims of abuse, positive correlations between interviewer support and the amount of substantive detail (i.e., details about the alleged abuse) provided have often been uncovered (Hershkowitz et al. 2014, 2015, 2006; Teoh and Lamb 2013). These field studies' naturalistic designs have precluded causal conclusions to be drawn about whether support per se affected children's reports. In addition, the accuracy of the information could not be ascertained. However, benefits of support have also been reported in analogue studies in which interviewer support has been experimentally manipulated and the accuracy of children's responses could be objectively verified. In the latter types of studies, results have fairly consistently revealed that children are more accurate and less suggestible when questioned by supportive versus non-supportive or neutral interviewers. These trends have emerged in children as young as the late preschool years and as old as adolescents and have been found when memory was tested for positive and negative prior experiences (Davis and Bottoms 2002; Goodman et al. 1991; Quas and Lench 2007; Quas et al. 2014; Rush et al. 2014; Saywitz et al. 2016, but see Eisen et al. 2019).

Despite the evident benefits of support, several important questions remain, particularly in relation to which aspects of support are specifically affecting youth productivity, and about whether effects vary with age, the stressfulness of the to-be-remembered event, or the content of what is being reported (e.g., factual details, emotional details). For example, with regard to support and productivity, in field investigations, support has typically been coded from transcripts of forensic interviews with suspected victims. As a result, support has largely been reflected in verbal utterances provided by an interviewer (e.g., back channels, supportive statements) that convey warmth. What has been less often included, given that transcripts may not document such details, are nonverbal behaviors, like smiling or head nodding, that may also be supportive in nature. Theoretically, however, there are reasons to suspect that the interviewer's verbal behaviors (e.g., name use, reinforcing statements, back channels) may be directly affecting children's productivity, a possibility worthy of exploring further given the potential ease with which such verbal behaviors could be augmented in an interview if they indeed are uniquely beneficial.

Among the types of verbal behaviors coded in field, investigations are back-channel utterances and vocatives (see Hershkowitz 2009). Back channels, also known as response tokens, facilitators, or receptive listening (e.g., "mhm," "ok," "uh-huh"), in a dyadic exchange imply interest in what a conversational partner has to say (Gardner 2001; Hutchby 2005; McCarthy 2003; Sternberg et al. 1996) and may therefore encourage a partner to say more. Vocatives, or strategies that identify and call attention to the individual being addressed in an interaction (Bruner 1975), such as the use of a child's name at the start of a sentence (e.g., "*Monica*, what color was his hat?"), signal familiarity with a conversational partner and send a message that the partner should respond.

Across a range of settings, both back channeling and vocatives are related to increases in youth disclosures, engagement, and productivity. In classrooms, for instance, back channeling by teachers fosters more positive relationships between teachers and students and improves student discourse (Frisby and Martin 2010; Klem and Connell 2004; Roorda et al. 2011; Wentzel 1998; Wentzel and Wigfield 1998). In clinical settings, therapists who use "active listening" strategies, which include pauses, back channels, and vocatives, have patients who report feelings of support and who disclose more personal information than do patients whose therapists do not use such strategies (Lambert and Barley 2001; Street et al. 2009). Finally, benefits of implicit encouragement emerged in an experimental investigation of children's memory for an event that occurred in their classroom: Cleveland et al. (2018) questioned 3- to 8-year-olds either with or without implicit encouragement about a baking activity in which they had participated in their class a week previously. Children questioned by interviewers who embedded implicit encouragement in the interview provided more detail than children questioned by interviewers who did not, with no differences emerging in the accuracy of those details. These trends, moreover, were stronger in older rather than younger children.

Together, extant research suggests that implicit encouragement, regardless of nonverbal behavior, should directly improvehow much children say, especially as they get older. Whether these benefits or age-related changes in them extend into adolescence is not clear, but a worthwhile issue given that adolescents, just like children, may be the victims of

sexual abuse, exploitation, and other crimes and, as a result, may be questioned in legal settings. (U.S. Bureau of Justice Statistics 2018; U.S. Department of Health & Human Services 2019). Given adolescents' greater tendency than children to be reluctant to disclose sexual abuse and possibly other negative experiences (Goodman-Brown et al. 2003; Jaccard et al. 1998) and adolesents' potential evasiveness when answering questions about victimization (Lavoie et al. 2019; Lindholm et al. 2015), they may well need additional prompting to elaborate on their experiences. Implicit encouragement may provide this.

Implicit encouragement may also be particularly helpful when youth are asked about negative or stressful prior experiences. In Cleveland et al.'s (2018) study, the baking activity about which children were interviewed contained a negative component (an accidental spill), but the activity was largely positive. In field research and clinical settings, youth are often asked about negative, including potentially traumatic, experiences (Hershkowitz 2009; Teoh and Lamb 2013). Youth are often reluctant to disclose such experiences (Ahern et al. 2019; Blasbalg et al. 2018; Goodman et al. 1997), or if they do, they may answer in an evasive manner or provide only minimal details (Lindholm et al. 2015). Verbal strategies that signal to youth the information they are providing even if stressful is important, could enhance how much detail they report.

Mixed findings have emerged regarding this possibility. Quas et al. (2014) compared children's and adolescents' memory for a prior stressful versus non-stressful laboratory event. The youth were interviewed in either a supportive or non-supportive manner, with support being manipulated both via verbal and nonverbal interviewer behaviors. When only factual details were considered, regardless of age, those questioned by a supportive interviewer provided fewer factual details than did those questioned by a non-supportive interviewer, a finding that runs counter to many of the field investigations that have uncovered positive associations between verbal support and productivity. However, the overall amount of information (i.e., total number of words) provided did not differ between youth questioned by the supportive versus non-supportive interviewer. Quas et al. (2014) did not examine whether stress, reflected in the magnitude of changes in youth's cortisol levels (a glucocorticoid whose levels vary in response to social-evaluative threat, stress, and challenge; Dickerson and Kemeny 2004), interacted with interviewer support to affect youth memory, including for factual details or potentially other types of details.

Such an investigation would be worthwhile, however, given that stress at encoding, when measured via physiological responses (which are less affected by potential response biases than self-reported stress levels), is often positively related to youth memory (Quas et al. 2011, 2012). In addition, in a separate analysis, Klemfuss et al. (2013) coded youth's recall responses not only for factual information but also for details about their feelings and cognitions during the laboratory event. Youth who experienced the stressful laboratory activity and were then questioned by the supportive interviewer provided a greater amount of details about their feelings and cognitions than did youth who experienced the stressful laboratory activity questioned by a non-supportive interviewer and youth questioned about the non-stressful activity. Given that both verbal and nonverbal support was varied, it is not clear whether implicit encouragement was playing a unique role in affecting the content of what youth reported. Perhaps implicit encouragement directed youth's attention toward

components of the event that were most salient, which, in this case, could have been the most arousing or stressful components. By signaling that what youth say was important, the youth may have responded with elaborations about their feelings, a possibility in need of further investigation.

Present Study

In the current study, 8- to 14-year-olds completed a laboratory activity, the Trier Social Stress Test-Modified (TSST-M) (Kirschbaum et al. 1993; Yim et al. 2010a, b), a widely used laboratory protocol that reliably induces behavioral and physiological (e.g., glucocorticoid) stress responses in youth and adults. A week later, the youth were interviewed about what had happened. Interviewers varied in their use of implicit encouragement while asking recall and direct (closed ended) questions. Youth's responses to recall questions were coded for productivity and content, the latter of which included accurate, inaccurate, and evaluative (e.g., emotional) details. Youth's responses to direct questions were coded for accuracy. During the TSST-M, salivary cortisol was collected repeatedly to ascertain whether the effects of implicit encouragement varied as a function of youth stress.

Several hypotheses were advanced. Overall, implicit encouragement was expected to increase productivity without compromising accuracy. Age-related improvements in these effects were also anticipated, given prior work suggesting implicit encouragement may be more helpful to older rather than younger youth (Cleveland et al. 2018) and given adolescents' relative to children's greater tendency for disclosure reluctance about negative or embarrassing experiences (Goodman-Brown et al. 2003; Jaccard et al. 1998). Third, the beneficial effects of implicit encouragement were predicted to be particularly robust when evaluative content was examined. Without encouragement, youth often fail to report emotional or evaluative details about their experiences (Ahern et al. 2019). Finally, we did not have a hypothesis specifically about implicit encouragement and stress, indexed by youth's cortisol responses, but we still explored the possibility that implicit encouragement was most beneficial among youth who evidenced higher rather than lower levels of stress, indexed via changes in cortisol levels to the TSST-M.

Method

Participants

Ninety-eight youth, ages 8 to 14 years (M = 11.56 years, 46 females), comprised the final sample. Most were Caucasian non-Hispanic (81%), followed by Asian (12%), and then multi-ethnic (7%), and most had parents who graduated college. Annual household incomes ranged from 30 k to over 200 k (USD). Two additional youth began the study but elected to stop part way through the TSST-M. All were participating in a larger study of puberty, memory, and physiological stress reactivity (Quas et al. 2018). Measures relevant to the current investigation are described in detail here.

Materials and Procedure

All study procedures were approved by the university's Institutional Review Board. Families were recruited via local parenting list serves and word of mouth to participate in a large

study of youth's experiences in novel social situations. Youth individually completed two sessions, separated by 1 week (range = 5–17 days, $M = 8.27$). Sessions started between 13 and 18 h (1–5 pm) to control for diurnal cycles of circulating cortisol, which was repeatedly measured in the study to index physiological stress responses (Kudielka et al. 2004).

Session 1 Session 1 began with parent consent and youth assent. The youth and a female research assistant (RA) then built rapport for several minutes, and the youth completed demographic and background questionnaires that took 20 min. When the youth had acclimated to the session, an initial saliva sample was collected (baseline).

Then, youth were brought to a separate room to complete the TSST-M, a widely used and well-established laboratory task that involves social evaluation and reliably induces physiological and behavioral arousal in individuals as young as age eight (e.g., Yim et al. 2010b, 2015). First, the RA provided instructions for 2 min. Youth were told that they would be asked to give a speech about themselves and to complete math while two adult observers took notes. They were also told that they would be videotaped, and their responses would be evaluated later by experts. Youth were then given 3 min to prepare. A male assistant had youth begin the speech, which lasted 5 min (the assistant asked prescribed questions if youth stopped before the time ended). After the time had lapsed, a female assistant administered the math task, which required youth subtract numbers serially for 5 min. She corrected youth when they erred and had them begin again. During the last 45 s of the math task, an unfamiliar adult (male 77% of the time) interrupted and explained that he forgot his notebook. He and the youth looked for it briefly. He then stated that he might have left it in his office, thanked the youth, and left. This latter component, though not a standard part of the stress-inducing TSST-M, provided youth with a meaningful experience that required active involvement but was non-evaluative or stressful and was sufficiently short that it would not alter their earlier stress response.

As the adult left, the RA brought the youth to a separate room to provide additional saliva samples at prescribed times and complete additional questionnaires. Samples were specifically collected at + 1, + 5, + 10, + 20, + 30, + 45, and + 60 min post-TSST-M while the youth were completing other questionnaires about themselves and completing measures of working memory.

At the end of the session, youth and parents were thanked. Parents were asked not to discuss the session with the youth until after session 2, and both were told that, upon their return, the youth would be doing new activities unlike the first session. We made no mention of memory.

Session 2 Following a 1-week delay, the youth returned for a surprise memory test. The session was conducted in a new building by an unfamiliar female assistant who was blind to the study hypotheses and was not present during session 1. Two saliva samples were also collected during this visit. The session began with a casual conversation with the youth (e.g., about their likes and dislikes) and relaxation for approximately 20 min.

Youth then provided a saliva sample (baseline) and were informed of our interest in their memory of the last visit.

The interviewer administered a memory test about details of the TSST-M. She began with three free-recall prompts asking youth to report everything they remembered about the prior session (e.g., “Tell me everything you remember about what happened last time when you went to the other building,” “What else can you remember?”). These were followed by six additional recall prompts asking youth what they were feeling and thinking before, during, and after the TSST-M (order counterbalanced; e.g., “Tell me everything you were thinking after the speech and math task ended”). Finally, the interviewer asked 24 direct (e.g., yes/no) questions about factual details regarding the prior session (e.g., “How many saliva samples did you give?”). Some correct answers required yes responses, some required no responses, and some required single-word answers.

Youth (balanced across age and sex) were randomly assigned to either an implicit encouragement or control interview condition. In the implicit encouragement condition, throughout the interview, the interviewer provided back-channel utterances (e.g., “mhm,” “ok,” “uh-huh”). These were included when youth paused in their recall reports and were included at three prescribed times during the direct questions. The interviewer also mentioned the youth’s name at least twice during the recall prompts and at least once during the direct questions. In the control condition, the interviewer was instructed not to use back-channel utterances or say the youth’s names at any point once the questions began.

At the end of the direct questions, an RA entered, collected a second saliva sample, and thanked youth. At the end of the session, youth and parents were thanked and fully debriefed, which included explaining why the TSST-M observers were serious. Families received a small honorarium. All youth reported positive feelings about the study and were pleased with their involvement.

Coding

Saliva samples were shipped on dry ice to the University of Dresden and assayed for cortisol. Assays were performed with commercial chemiluminescence immunoassay kits without modification following the manufacturers’ recommended protocol (IBL International, Hamburg, Germany). The lower limit of sensitivity was 0.44 nmol/L; intra-assay and inter-assay precision was less than 11%. The assayed cortisol samples were combined to create two reactivity scores, one for each session that indexed youth’s level of stress, as indexed physiologically. In session 1, each youth’s peak cortisol level during the TSST was identified by comparing their scores across the + 1, + 5, + 10, + 20, + 30, and + 45 min post-TSST-M. Extreme values (above or below three SD) were removed. Cortisol stress reactivity scores were computed by subtracting the youth’s baseline cortisol level from their peak level. In session 2, two saliva were collected. The first, baseline, was subtracted from the second to create a stress reactivity score at retrieval. (Adjusting both reactivity scores for the time lapse between samples and for baseline levels did not alter any of the reported results; thus, the raw difference reactivity scores are reported.)

Youth’s recall and direct question responses were reliably coded for the amount and type of information reported and for accuracy (reliability for all measures was calculated on at least 18% of the sample; proportion agreement was > .85 across measures). First recall responses were coded for units of information (mutually exclusive) about subject, action, object,

descriptor, evaluation, and ambiguous details. Subjects, actions, objects, and descriptors were all factual details that could be compared with the original TSST-M and be classified as correct, incorrect, or unscoreable units. The number of each type was then summed separately. Evaluations included details about what youth were thinking and feeling. These could not be coded for accuracy but were summed to create a total score as well. Ambiguous details were also summed. Finally, in addition to the summed scores, a proportion recall accuracy score was calculated as the number of correct details divided by the sum of correct and incorrect details.

Examples of coding are as follows: the phrase, “I did a speech and it was awful” was coded as 5 units: 3 correct for “I,” “did,” and “speech”; and two evaluative for “it” and “awful.” The phrase “He kept asking me questions, and his shoes stuck out under the table,” received correct scores for “he,” “kept asking,” “me,” and “questions,” and unscoreable for “shoes,” “stuck out,” “under the table,” as our video camera angle could not verify this statement as correct or incorrect.

Children’s responses to the direct questions, which asked about factual details, were coded as correct, incorrect, don’t know, or unscoreable. Proportions were calculated by dividing the number of each type of answer by the total amount of direct questions asked. Correct and incorrect proportion scores were inversely related ($r = -.61$, $p < .001$). Correct proportion scores are included in the main analyses. Do not know and unscoreable responses accounted for 14% of responses and are not considered further.

Results

Preliminary Analyses

Preliminary analyses tested for potential confounds and the effects of stress at retrieval (i.e., changes in cortisol during the memory interview) on performance. Analyses also evaluated interviewers’ behavior to ensure that they followed the manipulation instructions. Means for all study variables by interview condition (implicit encouragement vs. control) are presented in Table 1.

Regarding potential confounds, correlations revealed that delay between sessions was unrelated to youth age, gender, stress reactivity in session 1 (i.e., during the TSST-M) and session 2 (i.e., during the memory interview), and memory performance (i.e., the number of correct, incorrect, and evaluative details provided in response to the recall questions and the proportion correct responses to the direct questions), $rs \leq .17$, $p_s \geq .10$. *t* tests revealed no significant gender differences in youth’s stress reactivity during the TSST-M or memory interview, or in their performance on the recall questions, $ts\,(94–95) \leq .91$, $ps \geq .11$. However, for direct questions, girls ($M = .77$, SD = .09) provided a significantly greater proportion of correct responses than boys (M = .71. SD = .11), $t\,(94) = -2.75$, $p = .01$. Thus, gender was covaried in analyses predicting direct question responses. t tests and chi-squared analyses, as appropriate, revealed no significant differences between those in the implicit encouragement and control conditions in age, $t\,(96) = -.02$, $p = .98$, gender, $\chi^2\,(1) = .04$, $p = .85$, or stress reactivity at either session (during the TSST-M or memory interview), $ts\,(88–94) \leq -.09$, $ps \geq .38$.

Finally, we compared the number of back channels and vocatives and total recall prompts between the implicit encouragement and control conditions. Mean number of back channel and vocatives in the implicit encouragement condition, *Ms* = 12.98 and 1.20 and .06, respectively, *ts* ≥ 7.48, *ps* < .001. No differences, however, emerged between conditions in the total number of recall prompts asked, *Ms* = 15.43 and 15.71 in the implicit encouragment and control conditions, respectively, $t = .76$, $p > .05$. Thus, the interviewers adhered to the manipulation instructions, and differences in youth performance between conditions could not be attributed to interviewers in the implicit encouragement condition simply asking more questions overall.

Recall Productivity and Accuracy

A quick review of youth's recall performance revealed that, overall, youth provided substantial amounts of correct and evaluative details in their narrative responses to the recall prompts, *Ms* = 79.58 and 106.55, respectively, and very few incorrect, *M* = 4.23; ambiguous, *M* = .32; or unscoreable, *M* = 2.57, details. Given the low variability for incorrect details, analyses first focused on the effects of implicit encouragement on the amount of correct and evaluative details provided. We expected implicit encouragement to improve productivity, especially in terms of the amount of evaluative details provided, and we expected these benefits to be stronger for adolescents than children. We tested whether implicit encouragement's benefits were also stronger for youth who were more versus less stressed, as reflected in their cortisol responses during the TSST-M. Second, we considered the proportion recall accuracy scores to evaluate whether implicit encouragement, directly or in conjunction with age or stress levels, affected the accuracy of the information youth provided in their recall responses.

Our initial analysis of youth's recall responses was comprised of a generalized estimating equation (GEE). With GEE, we were able to include both the amount of correct and evaluative details youth provided in the same model as separate dependent measures. The model takes into account their correlation, $r(95) = .71$, $p < .001$, and provides a statistical test of whether the predictors' effects on the two dependent measures are similar or not. Predictors included youth age (entered continuously), stress reactivity during the TSST-M, interview condition (implicit encouragement vs. control), and the interview condition × age, interview condition × stress reactivity, and interview condition × information type (i.e., correct or evaluative detail) interactions. The interactions tested our hypotheses concerning the differential effects of implicit encouragement across age and type of information and explored whether implicit encouragement and stress jointly influenced youth productivity. A normal distribution and exchangeable correlation matrix were specified. Robust standard errors were obtained.

Results, shown in Table 2, revealed significant main effects of interview condition, information type, and age: youth questioned in the implicit encouragement condition provided a significantly greater amount of correct and evaluative details than did youth in the control condition, $b = 117.42$, SE = 58.36, $p = .04$, 95% CI (3.03, 231.80). Youth provided more evaluative than correct detail overall, $b = 28.58$, SE = 8.27, p = .001, 95% CI (12.36, 44.81), and the amount of both types of details in youth's recall reports increased

with age, $b = 12.06$, SE = 3.40, $p < .001$, 95% CI (5.40, 18.71). Stress was unrelated to the amount of information reported (regardless of type), and implicit encouragement did not interact with age, stress, or information type to affect youth productivity. Thus, the beneficial effects of implicit encouragement on the overall amount of information provided were consistent across age, stress reactivity, and information type.

Youth in general provided very little incorrect information. In fact, 33 youth provided no incorrect details in their recall reports. Nonetheless, as a secondary check on implicit encouragement and accuracy, we regressed youth's recall accuracy proportion score (i.e., the total number of correct details divided by the sum of correct and incorrect details) onto age, stress reactivity, interview condition (implicit encouragement vs. control), and the interview condition × age and interview condition × stress reactivity interactions. The model was non-significant, $F(5, 58) = 1.00$, $p = 0.43$. Thus, recall accuracy was not affected by implicit encouragement, directly or in conjunction with age or stress.

Direct Question Accuracy

Analyses next turned to youth's responses to the direct questions. The proportion correct responses were regressed on youth age, stress reactivity, interview condition (implicit encouragement vs. control), and the interview condition × age and interview condition × stress reactivity interactions. Because of the significant gender differences in correct responding, gender was included as an additional predictor. Only gender emerged as a significant predictor of youth's responses, with girls providing a significantly greater proportion of correct responses than boys, $b = 0.06$, SE = 0.02, $t(87) = 2.74$, $p < .01$, overall model, $F(6, 87) = 5.42$, $p < .001$. Thus, implicit encouragement increased how much information youth provided in their recall narratives about a prior stressful laboratory activity without deleteriously effecting accuracy, including when they were answering direct questions.

Discussion

In order to intervene, ensure children's safety, and promote their well-being, it is imperative to have detailed and accurate knowledge about children's experiences, thoughts, and feelings. Interviewers play a key role in this regard, with their interactions and questions shaping not only the amount of information children provide but also the accuracy of that information (Saywitz and Comparo 2013; Saywitz et al. 2017). Our study focused on strategies interviewers use to be successful in this role. The strategies consisted of verbal behaviors that extend beyond the phrasing of the questions, heuristically labeled implicit encouragement. We found that youth, spanning middle childhood into early adolescence, questioned by an interviewer who used implicit encouragement provided more detail about a prior stressful experience than did youth questioned by an interviewer who did not. These benefits emerged regardless of the type of information youth provided—factual and evaluative—the latter of which might be of considerable value in increasing youth credibility and believability (Myers et al. 1999).

Our results are consistent with evidence from other settings that reveal benefits of back channeling on youth communication. For instance, when teachers use back channels,

students speak up more in class and during student-teacher and peer-to-peer classroom exchanges and when parents use back channels, children are more elaborative in conversations (Dillon 1988; Peterson et al. 1999). Implicit encouragement, therefore, may be contributing to a broader expectation in youth that they should elaborate when engaged in an interaction with or when asked questions by an adult. Similar expectations seem to be operating when interviews begin with open-ended narrative rapport building, which has been shown to increase the amount of detail children later provide about substantive topics (Lyon et al. 2014; Saywitz et al. 2015). Implicit encouragement's benefits are also not limited only to children or only to adolescents. Once children are beyond the preschool years, positive effects of implicit encouragement on recall productivity are evident (see also Cleveland et al. 2018). Finally, implicit encouragement did not interact with stress, at least as reflected in youth's cortisol responses, to affect their memory performance. As such, implicit encouragement seems to create a broad context within which youth are motivated to elaborate on all aspects of their experiences, including those that were negative and physiologically arousing.

Of importance, the additional information implicit encouragement helped youth provide was not at the expense of accuracy. Very few youth, regardless of whether implicit encouragement was or was not included in the interview, provided any incorrect details in their recall responses. Recall prompts typically yield highly accurate responding in children as well as adolescents, including about high-stress events like the TSST-M (Goodman et al. 1997; Quas et al. 2014; Saywitz et al. 1991). In our study, even when encouraged to say more via implicit encouragement, youth did not elaborate with false information just to please the interviewer, a concern that has been raised in prior studies with younger children (Cleveland et al. 2016; Garven et al. 1998). This trend remained when the proportion of correct details (out of the total number of details) was considered. Thus, our findings were not a function of our coding procedures, but instead, implicit encouragement appears to improve reporting without compromising accuracy.

As a final note, although the direct question proportion accuracy scores were low overall, this is due to the questions asking about narrow and sometimes peripheral details about the TSST-M. As such, it was somewhat unsurprising that youth had difficulty (see also Peterson and Bell 1996; Roebers and Schneider 2000; Rush et al. 2011). Of relevance to the current study, implicit encouragement did not influence youth's responses to the direct questions and reduce their accuracy further.

Although our results provide support for the use of implicit encouragement when questioning youth across age about salient and stressful prior experiences in order to enhance their productivity, limitations are also warranted. First, in the current study, stress was not experimentally manipulated. Our design, therefore, could not test whether stress-affected memory per se directly or in conjunction with implicit encouragement. Had we compared memory between youth who had experienced a higher stress event to those who experienced a comparable but objectively lower stress event, as was done in Klemfuss et al. 2013, implicit encouragement might have led the former to report a greater amount of evaluative details. Second, and somewhat related, the to-be-remembered event in our study, although stress inducing, was certainly not comparable to the highly distressing types of

experiences about which youth are typically questioned legally. Future work, particularly field investigations, could expand their coding to examine whether implicit encouragement differentially affects youth's reports of factual and evaluative information about trauma. Third, implicit encouragement was included at prescribed times in the interview. Backchannel utterances were delivered after youth paused in their recall responses and at specific junctures during the direct question. Name use, as well, was embedded after specific prompts. Thus, the encouragement was not selective and tied to any particular response per se. Had encouragement been given following false suggestions or been given selectively, its effects may have been different (Cleveland et al. 2018). Moreover, the extent to which implicit encouragement simply encourages youth to talk, which is helpful when a to-be-remembered event is true but harmful when it is false, needs to be tested.

In closing, the content of what youth report in their narratives is crucial to adult professionals who use that content as a guide regarding what services are needed and how children should best be protected. Youth, including children and adolescents, must be able to recount past experiences, including those that were negative, stressful, or embarrassing, in the most complete and accurate manner possible. It is imperative to continue to assess how best to elicit narratives from youth in a way that enhances productivity without compromising accuracy. One strategy that holds promise in this domain is by including implicit encouragement, that is, non-contingent verbal support, while questioning youth. Doing so can significantly increase not only what youth say about their experiences, but also their evaluation of how they felt and what they thought. This information, in combination, will be enormously helpful in aiding in their protection.

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Table 1

Descriptive statistics for study variables by interview condition ($N = 98$)

	Implicit encouragement ($n = 50$)		Control ($n = 48$)		p
Variables	***M***	**SD**	***M***	**SD**	
Age	11.56	1.67	11.55	1.87	ns
Gender (% female)	46.00	-	48	-	ns
Session 1 cortisol reactivity (nmol/L)	4.09	1.32	5.71	1.23	ns
Session 2 cortisol reactivity (nmol/L)	− 1.11	2.82	− 1.37	4.21	ns
Number of correct details recalled	84.45	53.41	73.48	49.95	ns
Number of evaluative details recalled	106.71	66.84	101.58	75.20	ns
Recall accuracy (%)	95.00	0.06	96.00	0.04	ns
Direct question accuracy (%)	73.00	0.11	74.00	0.11	ns

Means and standard deviations are presented separately by interview condition. The final column (p) indicates whether simple group comparisons were statistically significant (*ns*, non-significant, $p > .05$)

Table 2

Predictors of youth's recall performance

Model	*b*	SE	*z*	95% CI
Age	12.06	3.4	3.55***	5.40, 18.71
TSST-M stress reactivity	− 0.11	0.73	− 0.15	− 1.53, 1.32
Interview condition	117.42	58.36	2.01*	3.04, 231.80
Information type	28.59	8.28	3.45**	12.36, 44.81
Interview condition × age	− 8.92	5.19	− 1.72	− 19.10, 1.25
Interview condition × stress reactivity	− 1.08	0.94	− 1.15	− 2.93, 0.77
Interview condition × information type	− 6.32	10.39	− 0.61	− 26.70, 14.06

The overall model Wald χ^2 (7) = 46.25, $p < .001$. The dependent variables are coded as (0, correct detail; 1, evaluative detail). For interview condition: 1, implicit encouragement; 0, control. For information type: 0, correct; 1, evaluative. Robust standard errors are displayed.

* $p < .05$

** $p < .01$

*** $p < .001$