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Socioemotional Factors in Child Sexual Abuse Investigations

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Two socioemotional factors were explored in association with children's production of forensic information during sexual abuse investigations: rapport building and interviewer's support. The study tested to what extent (a) the length and questioning style in the rapport-building session and (b) the level of support interviewers provided to the children, were associated with the amount of forensic details children provided in their investigation. These associations were explored for more talkative and less talkative children as well as for children of two age groups (4-6 and 7-9 years). A total of 71 forensic interviews of alleged victims of child sexual abuse were subject to a detailed psycholinguistic analysis. Results suggest that richer information in the child's responses is associated with a short and open style rapport-building session as well as with a higher level of interviewer's support. This association is especially marked for less talkative children who might be in special need of support and for whom the rapport with the interviewer might be more meaningful.

Keywords: *rapport building; support; investigation; child sexual abuse*

The growing involvement of children in the legal system has led researchers to explore factors associated with the richness and accuracy of children's testimony. Most pertinent studies have focused on the effects of cognitive factors on the quality of such testimony and specifically on the effects of the question type used in investigative interviews, whereas the exploration of socioemotional factors has attracted relatively little research. Socioemotional factors are especially relevant to the research of children's testimony because much of this research aims to study children's reports of sexual abuse experiences or to generalize findings to equally stressful situations. The present study examines, in the forensic context, the association between the amount of information obtained from children in the course of sexual abuse investigations and the style of rapport-building attempts by interviewers as well as the level of support they provided to the children.

Rapport Building in Interviews of Children

Field professionals and researchers are largely in agreement about the necessity for effective rapport building in forensic interviews of children who are alleged victims of sexual abuse (Collins, Lincoln, & Frank, 2002; Goodman, Bottoms, Schwartz-Kenney, & Rudy, 1991; Lamb, Orbach, Warren, Esplin, & Hershkowitz, 2007; Sternberg et al.,

1997). It is widely claimed that the development of rapport may help facilitate communication with children and encourage them to affirm and describe traumatic experiences either in clinical (Boggs & Eyberg, 1990; Morgan, & Friedemann, 1988), evaluative (Kanfer, Eyberg, & Krahn, 1992; Powell & Lancaster, 2003), or investigative interviews (Aldridge & Wood, 1998; Goodman & Bottoms, 1993; Hynan, 1999; McBride, 1996; Powell & Thomson, 1994). However, as previously stated by Lamb et al. (2007), only a few researchers have empirically assessed different styles of rapport building in investigative interviews with children or compared the results of interviews with and without attempts to build rapport.

Two studies shed light on the effects of rapport on children's willingness to disclose abuse experiences. Wood, McClure, and Birch (1996) found that children who seemed reticent and were uncommunicative at the beginning of an interview were more likely to talk or open up to the interviewer later when rapport building

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was conducted well. In a recent study (Hershkowitz, Orbach, Lamb, Sternberg, & Horowitz, 2006), the dynamics of interviews with 50 children who failed to disclose abuse was compared with that with cooperative children who did disclose. The researchers reported that disclosers were provided with fewer questions during rapport building than nondisclosers. The questioning style used in the rapport-building sessions also differed among the groups. Rapport building in interviews of children who later did disclose abuse was characterized by higher proportions of free recall prompts than that used in interviews of children who failed to disclose abuse. Finally, children's disclosure was associated with a more supportive style of rapport: the amount of supportive comments made by interviewers during rapport building was higher for the disclosers than for the nondisclosers.

A few other studies focused on cooperative witnesses and examined the effects of rapport on the amount of forensically relevant information they provide. A recent field study reported by Ruddock (2006) generally supported the positive effects of rapport established between the child and interviewer in investigative interviews. Transcripts of child sexual abuse investigative interviews conducted by trained social workers in a child's hospital were examined. The researcher identified three components of rapport behavior: emotional rapport (emotion words and reflections), cognitive rapport (part nods and restatements), and visual rapport (eye contact). Greater rapport was in general associated with longer responses from the children, and specifically, emotional rapport positively predicted the number of details children provided. On the other hand, cognitive rapport negatively predicted the number of details, whereas visual rapport had no effect.

Another field experiment directly manipulated the questioning style in the rapport-building phase of investigative interviews with abused victims. Sternberg et al. (1997) found that rapport building using open-ended questions (invitations) about the child's everyday life and a particular past event (such as a recent birthday or holiday) helped children disclose more abuse-relevant information than closed-ended specific rapport-building questions did. As this was a field study, it did not assess the accuracy of the information obtained in each condition. In an attempt to explore the accuracy of the information provided by children under the two conditions, Roberts, Lamb, and Sternberg (2004) performed a subsequent laboratory analog study in which they similarly manipulated the rapport-building style. The general trend of findings showed that children in the open-ended rapport-building condition provided more accurate

reports than children in the direct rapport-building condition after both short and long delays.

The effect of the length of rapport building in investigative interviews was the focus of the next examination. Davies, Westcott, and Horan (2000) compared interviews including short (less than 8 minutes) and long (8 minutes or more) rapport building in terms of the amount of abuse-relevant information elicited from the children involved. They found that short rapport building was more likely to elicit longer answers containing more Criteria Based Content Analysis criteria. They speculated that longer rapport building may have reduced the children's attention level and/or interviewers' efforts in the substantive questioning phase of the interview. An alternative explanation they offered is that longer rapport building was provided to children who were less comfortable and more hesitant to provide information, suggesting that it might be helpful to control for these individual characteristics in a future study.

Despite the professional recommendations to develop rapport in investigative interviews with children and despite some empirical evidence supporting these recommendations, it seems that investigators often fail to establish rapport adequately with children. Field studies based on the analysis of investigative interviews with children who were allegedly abuse victims clearly indicated that investigators do not make the necessary efforts to develop rapport with their interviewees before shifting the focus to the abusive events and that the presence and quality of rapport building are often unsatisfactory (Hershkowitz et al., 2006; Sternberg, Lamb, Esplin, & Baradaran, 1999; Warren, Woodall, Hunt, & Perry, 1996; Westcott & Kynan, 2006).

The Effects of Support in Interviews of Children

The effects of supportive interviewing on children's memory performance have been positive in general, although inconsistent across several analog studies, and only a small amount of direct evidence of the effects of support in child sexual abuse investigations has been reported.

There is general evidence that supportive environments such as peer presence in the interview can improve the accuracy of the information that children report (Greenstock & Pipe, 1997, exp. 2; Moston, 1992) and reduce their suggestibility (Cornah & Memon, 1996; Greenstock & Pipe, 1997, exp. 1; but see also Greenstock & Pipe, 1996). Familiar interviewers such as parents (Goodman, Sharma, Thomas, & Considine, 1995; Ricci, Beal, & Dekle, 1996) and nonofficial interviewers

(Tobey & Goodman, 1992) seem also to have a positive impact on the children's reporting accuracy, at least in some parts of the interview.

In a few analogue studies that are more relevant to forensic investigations, the interviewer's interpersonal style and specifically his supportive style was directly manipulated. Although the interviewer's support was not always associated with increased accuracy in the children's reports, there is evidence of the beneficial effects of emotional support and no evidence of harmful effects.

Goodman et al. (1991) found that 3- to 7-year-olds were more accurate in their free recall descriptions of inoculation experiences when the interviewers were supportive than when they were neutral. After a 4-week delay and under supportive conditions, young children were also as resistant as older children to misleading questions regarding possible abuse, although their reports regarding peripheral aspects of the events were less complete. Similarly, Carter, Bottoms, and Levine (1996) reported that 5- to 7-year-old children were more resistant to misleading questions under supportive than under intimidating conditions, although support did not specifically affect their free recall descriptions of a play session. Finally, consistent with the two previous studies, Davis and Bottoms (2002) found that 6- to 7-year-old children who were interviewed with no delay by a supportive interviewer about a play session in which they had participated were more resistant to misleading suggestions than were those who were interviewed by an intimidating interviewer. This study, unlike Goodman et al.'s, failed to show the effect of support on children's free recall but a re-examination of the children's memory after a delay did reveal an effect of support on free recall. In a later study performed with colleagues (reported in Bottoms, Quas, & Davis, 2007), Davis and Bottoms reinterviewed the children who participated in their first study 1 year later. Children interviewed by supportive interviewers reported more accurate and less inaccurate information by free recall and made fewer errors of commission in response to specific and misleading questions. The researchers proposed and tested a potential mechanism underlying the effects of support in their first study. Their findings suggest that support fosters a sense of self-efficacy, which improves the child's resistance to misleading information.

In contrast, Imhoff and Baker-Ward (1999) failed to show similar effects of support on children's performance in interviews. They examined young (3- to 4 year-old) children's descriptions of a classroom demonstration after a 2-week delay. No differentiated effects of supportive versus neutral interviewing on children's accuracy in

yes-no or direct questions were apparent, and the children's resistance to misleading questions was similarly unaffected. After a 4-week delay, no effect of support was evident in their responses to all type of questions, including free recall questions (Imhoff, 2000).

In an attempt to explain inconsistencies in the findings of the different studies, researchers (Davis & Bottoms, 2002; Imhoff & Baker-Ward, 1999) have suggested that the manipulation of the interviewer's support might be responsible for differences in the findings because the effects seem more consistent when supportive interviewers are contrasted with intimidating interviewers than when they are compared with neutral interviewers. This observation suggests that the findings may reflect the harmful effects of intimidating conditions rather than the beneficial effects of supportive conditions, or at least it suggests that the effects are not well-separated.

Overall, study findings illustrate that social support helps decrease children's suggestibility and enhances their memory performance with no evidence of harmful effects. However, because empirical evidence is scarce and relevant studies vary in their methodology, it is hard to specify the conditions under which interviewer's support enhances children's reporting competency. The effects of interviewer's support have been studied only in laboratory analogue studies. Children undergoing sexual abuse investigations seem to be in special need of emotional support to report their painful experiences and to cope with the stressful nature of forensic investigations. In real-life investigations of children it is unclear to what extent the interviewers are being supportive of the children and whether or not support enhances children's testimony about abusive crimes. Moreover, it is unclear whether support may help less rather than more talkative children recounting their experiences. Developmental differences also need more exploration. Researchers have examined mostly samples of young children and it seems important to study support effects in a wider range of ages.

The Current Study

In the current study, the effects of rapport building and interviewers' support in child forensic investigations were explored based on a sample of children of two age groups (4-6 and 7-9 years), who were allegedly sexual abuse victims. Specifically, this study tests to what extent (a) the length and questioning style of the rapport-building session and (b) the support interviewers provide to children are associated with the amount of forensic details they provide in sexual abuse investigations. Another central question addressed is how these associations may differ depending on the characteristics of the

children interviewed, specifically their age and level of talkativeness. Because shorter or more open-ended questioning during rapport building and more support are likely to be directed to more talkative children, separate analyses of the responses of the more talkative and the less talkative children were performed.

We expected that shorter rapport-building sessions and rapport-building attempts comprising open-ended questions would be positively associated with the production of forensic details during the substantive part of the interview. We also expected that higher levels of interviewers' support would evoke larger amounts of details in the substantive part of the interview.

In the obvious absence of documentation of the sexual abuse crimes, we could not assess the accuracy of the information provided by the children but we did assess the amount of information in relation to the eliciting strategy: open-ended versus focused utterances.

Methods

Sample

Forensic interviews were conducted in Israel with 71 alleged victims of sexual abuse, aged 4 to 9 years ($M = 6.8$ years) from two age groups (4-6 years, $n = 36$; 7-9 years, $n = 35$). A total of 24 experienced and trained child investigators conducted all the investigative interviews, as required by law (Sternberg, Lamb, & Hershkowitz, 1996). These child investigators (20 women and 4 men) had degrees in social work and were employed by the Israeli Ministry of Labor and Welfare as the only professionals authorized to conduct forensic interviews with children less than 14 years of age. They represented two of the main geographical regions in Israel (the Central and Northern regions). The children were referred for investigation by the police or by the Child Protective Services because of sexual abuse suspicions and were selected for the study on the criteria that they alleged crimes involving single events of sexual abuse perpetrated by extrafamilial persons. No other inclusion criteria were implemented, the children interviewed being the first 71 children to be referred for investigation during the data-collection period. Permission to perform this study was provided by the management of the Ministry of Labor and Welfare in Israel, subject to strict limitations regarding the privacy of the victims, suspects, or witnesses involved. The sample consisted of 20 boys and 51 girls, all of them were Hebrew speaking and Jewish. Allegations consisted of sexual touch over clothes ($n = 16$), sexual touch under clothes ($n = 27$), and penetration ($n = 28$). Most suspects were strangers ($n = 44$) whereas

the others were familiar to the child ($n = 27$). For most Israeli children, the investigative interview is their only involvement in the forensic process, because they are unlikely to testify in court. The interviews tightly followed the National Institute of Child Health and Human Development (NICHD) investigative protocol (Orbach et al., 2000; see description below).

The National Institute of Child Health and Human Development Investigative Protocol

The NICHD protocol is fully structured, covering all the phases of the investigative interview. In the introductory phase, the interviewer introduces him/herself, clarifies the child's task (the need to describe events in detail and to tell the truth), and explains the ground rules and expectations (i.e., that the child can and should, if that be the case, say "I don't remember", "I don't know", "I don't understand", or correct the interviewer).

The rapport-building phase comprises two sections. The first is a structured open-ended section designed to create a relaxed, supportive environment for children. In the second section, children are prompted to describe a recently experienced neutral but personal event in detail. In addition to its rapport-building function, this phase of the interview is designed to simulate the open-ended investigative strategies and techniques used in the substantive phase and the related pattern of interaction between interviewers and children, while demonstrating to children the specific level of detail expected.

In a transitional phase between the presubstantive and the substantive parts of the interview a series of prompts are used to identify the target event(s) to be investigated. Presented in two versions, the first prompt asks the child either: "Do you know why you came to see me today?" or "Tell me the reason you came to talk with me today." The interviewer moves on to some carefully scripted but more focused prompts (in sequence) only if the child fails to identify the target event(s).

The free recall phase then begins with the main invitation ("Tell me everything that happened from the beginning to the end as best you can remember"). Follow-up open-ended prompts are then recommended ("Then what happened?"; "Tell me more about that"), and so are cued invitations ("Earlier you mentioned a person/object/action, tell me everything about that") aimed at eliciting spontaneous accounts of the alleged incident/s from free recall memory.

As soon as the first narrative is completed, the interviewer determines whether the incident occurred "one time or more than one time" and proceeds thereafter to secure incident-specific information. Only after the

open-ended questioning has been exhausted, do interviewers proceed to directive questions (focused questions addressing details previously mentioned by the child such as “what color was his car?” after the child mentioned a car). If crucial details are still missing at the end of the interview, interviewers may ask limited option-posing questions (mostly yes/no questions referencing new details that the child failed to address previously such as “Did he touch any part of his body when he was talking to you?”). Suggestive questions which communicate to the child what response is expected (“At that time he was lying on top of you, wasn’t he?”) are strongly discouraged in all phases of the interview.

Data Coding

Audiotape recordings of the interviews were transcribed and checked to ensure their completeness and accuracy. Two raters then classified the interviewers’ utterance types into open-ended (main invitations, follow-up invitations, and cued invitations), or focused (directive, option-posing, or suggestive) utterances as defined in the previous paragraph.

The raters also tabulated the number of details conveyed in the child’s statement by employing a technique first developed by Yuille and Cutshall (1986, 1989) and elaborated by Lamb et al. (1996). Details were defined as words or phrases identifying or describing individuals, objects, or events (including actions) related to the investigated incident or its disclosure. Details were counted only when they were new and added to the understanding of the target incidents and their disclosure. Before coding transcripts for the study, the raters were trained on an independent set of transcripts until they agreed on the identification of at least 90% of the utterances and 90% of the details. During the course of coding, 20% of the transcripts were independently coded by both coders to ensure that they remained equally reliable. Further details regarding the coding categories and rules were provided by Lamb et al. (1996) and by Orbach et al. (2000).

The coding of interviewer’s support was based on verbal messages conveyed by the interviewers. Support was identified in all types of interviewers’ utterances (open-ended and focused utterances) when the interviewers personally addressed the child by his name (“Now Daniel, tell me everything that happened from the beginning to the end” or “where did you meet this person, Sharon?”) and when they included neutral reinforcements, unrelated to the content of the child’s response (“You are doing just fine”/ “you are telling very well”/ “you really help me understand”). Only substantive utterances with requests for information on the alleged

events were scanned for the existence of support. Therefore, nonsubstantive utterances addressed personally/including reinforcement (“Daniel, please sit down”) were not analyzed. Utterances including reinforcement of specific content (“Good that you ran away in time”) were categorized as suggestive. Two independent raters performed the coding of support with agreement on the identification and classification of more than 90% of the utterances.

Data Transformation

Because the distribution of variables describing the interviewers’ behaviors (number of utterances and proportion of invitations in the rapport-building phase) as well as the children’s responses (number of details) showed asymmetry at varying levels, they were transformed using Lan computations (new variable = Lan [1 + old variable]). All transformed variables roughly represent now normal distributions, with skewness values always lower than twice their standard errors.

Results

Rapport Building

The mean number of prompts provided to the children during the rapport-building phase was 23.15 ($SD = 9.32$; range 5-70), out of which 14.96 were open-ended ($SD = 4.85$; range 3-29). The average ratio of open-ended questions out of the total number of questions was 0.67 ($SD = 0.16$; range 0.16-1). No age-related differences were evident in the number of prompts posed to the children during rapport building, although a lower proportion of open-ended prompts were posed to the younger ($M = 0.63$; $SD = 0.15$) than to the older children ($M = 0.71$; $SD = 0.16$, $p < .05$). The way the interviewers addressed the more and less talkative children was then examined. The children were divided by the median cut-point of the number of details in their average response during rapport building (7.80 details). Interviewers treated more and less talkative children differently with longer rapport ($M = 26.65$; $SD = .11.69$ vs. $M = 19.95$; $SD = 4.63$, $p < .01$) and fewer invitations ($M = 0.62$; $SD = 0.17$ vs. $M = 0.73$; $SD = 0.14$, $p < .01$) being addressed to less talkative children.

Regression analyses were conducted to predict the average number of details, and specifically, the average number of details following open-ended prompts in the substantive part of the interview based on the length of rapport building and the proportion of invitations during rapport building. The regression analyses were conducted

Table 1
Prediction of the Amount of Substantive Details Following Open-Ended Prompts Based on the Characteristics of Rapport Building ($N = 71$)

Predictors	<i>B</i>	<i>SE B</i>	β	R^2	Adjusted R^2	<i>t/F</i>
Proportion of invitations	2.044	0.698	.332	.111	.108	8.576**
Length of rapport building	-0.649	0.206	-.355	.126	.114	9.965**
Proportion of invitations and length of rapport building	1.398 and -0.484	0.740 and 0.220	.227 and -.265	.170	.145	6.955**

** $p < .01$.

after it was ensured that the variables entered in the equation were normally distributed, and the association between the predicting and dependent variables was linear ($p < .01$ for length and $p < .01$ for proportion of invitations).

Although the independent variables did not significantly predict the child's production of the average number of details, they did significantly predict the child's production of the average number of details following open-ended prompts. The proportion of invitations, $F(1, 69) = 8.576$, $p < .01$, and the length of rapport building, $F(1, 69) = 9.965$, $p < .01$, significantly predicted the mean number of details children provided following open-ended prompts in the substantive part of the interview. The higher the proportion of invitations and the shorter the rapport-building duration, the more details were obtained. Table 1 suggests that the proportion of invitations and the length of rapport building explain each about 11% of the variance in the amount of details. When combined within the same model, both variables account for 14.5% of the variance, $F(2, 68) = 6.955$, $p < .01$.

This predictive model was then separately tested for more and less talkative children as well as for older and younger children. Although the proportion of invitations and the length of rapport building combined showed predictive power for the group of children who were less talkative, $F(2, 31) = 4.005$, $p < .05$, and were responsible for more than 20% of the variance (adjusted $R^2 = .205$), these variables together failed to predict the production of details by the more talkative children. Each variable separately was associated with production by the less talkative children, $F(1, 32) = 3.919$, $p = .06$, adjusted $R^2 = .109$ for the length of rapport building and, $F(1, 32) = 6.518$, $p < .01$, adjusted $R^2 = .169$ for the proportion of invitations, but not by the more talkative children.

Similarly, when regression was separated for the two age groups, the proportion of invitations showed a significant effect only for the older children, $F(1, 34) = 7.639$, $p < .01$, adjusted $R^2 = .188$, and the length of rapport building showed predictive power for both groups,

$F(1, 33) = 6.074$, $p < .05$, adjusted $R^2 = .155$ for the older and, $F(1, 34) = 4.275$, $p < .05$, adjusted $R^2 = .188$ for the younger. Their combined effect was significant only for the older children, $F(2, 32) = 5.399$, $p < .01$, accounting for more than 25% of the variance (adjusted $R^2 = .252$).

Interviewer's Support

The average number of interviewers' utterances including a supportive comment in the substantive part of the interview was 7.69 ($SD = 7.53$), which forms 8.89% ($SD = 8.57$) of the total number of utterances. Out of the substantive utterances with support, 2.77 ($SD = 2.68$) or 11.9% ($SD = 10.7$) were open-ended invitations and 4.91 ($SD = 5.87$) or 9.9% ($SD = 10.7$) were focused utterances. Interviewer's support was absent in seven interviews. No differences according to age or talkativeness in the amount of support directed to children were evident.

Regression analyses were conducted to predict the average number of details, and specifically, the average number of details following open-ended prompts in the substantive part of the interview, based on the interviewer's support. Interviewer's support was computed as the total number of supportive comments he or she directed to the child during the whole interview. The regression analyses were conducted after it was ensured that the variables entered in the equation were normally distributed, and the association between interviewer's support and the amount of the child's information was linear ($p < .05$).

Although interviewer's support did not significantly predict the child's production of details in the interview, it showed a near significant effect, $F(1, 69) = 3.688$, $p = .06$. In addition, interviewer's support significantly predicted the child's production of free recall details following open-ended prompts, $F(1, 69) = 5.489$, $p < 0.05$. The larger the amount of supportive comments interviewers addressed to the child in the interview, the more details were obtained. Table 2 suggests that interviewer's support explains 6% of the variance in the amount of open-ended details.

Table 2
Prediction of the Amount of Substantive Details
Following Open-Ended Prompts Based on the Level
of Interviewer's Support ($N = 71$)

Predictor	<i>B</i>	<i>SE B</i>	β	R^2	Adjusted R^2	<i>t</i>
Interviewer's support	0.023	0.010	.271	.074	.060	5.576*

* $p < .05$.

This predictive model was then separately tested for more and less talkative children as well as for older and younger children. Although interviewer's support showed predictive power for the group of children who were less talkative, $F(1, 33) = 7.892$, $p < .01$, and was responsible for more than 17% of the variance in the number of details (adjusted $R^2 = .173$), interviewer's support failed to predict the production of details by the more talkative children.

When regression analyses was separated for the two age groups, interviewer's support predicted the number of details following open-ended prompts, for the older children only, $F(1, 33) = 8.346$, $p < .01$, and was responsible for 17.8% of the variance.

Discussion

This study provides an exploration of socioemotional factors in interviews with children who were alleged victims of sexual abuse and indicates the relevance of these factors to the study of children's testimony. In an attempt to identify conditions and factors which enhance children's descriptions of experienced events, researchers have devoted many efforts to the study of cognitive factors whereas research focusing on social and emotional factors has remained scarce.

One strength of this study stems from its reliance on systematically designed interviews, of a specific population, which reduces potential intervening variables. All interviews were conducted with adherence to the NICHD protocol, by experienced interviewers, and participating children were all alleged victims of a single sexual abuse incident committed by a nonfamilial perpetrator.

Several central findings which were obtained in the current study deserve elaboration. First, this study identified the amount and style of rapport building that was associated with richer statements made by children in sexual abuse investigations. Larger amounts of forensic details followed shorter rapport-building sessions, and

those consisting of open invitations for personal narratives. The negative association between the length of rapport building and children's production was also evident in a previous study (Davies et al., 2000), but the methodology did not permit a clear interpretation. Davies et al.'s claim that short rapport building is more effective in child interviews was followed by reservations that the findings may simply reflect the fact that longer rapport-building sessions were provided to the less talkative children. The current study separated the analyses for more and less talkative children, which permitted the effects of interviewer-child rapport and child's talkativeness to be differentiated to some extent. The findings confirm that less talkative children were indeed provided with longer rapport-building sessions but also suggest that even when children were less talkative, a shorter rapport-building session was associated with higher production of forensic information.

It is possible that long rapport-building sessions were too demanding in terms of the children's attention and cognitive performance, therefore leaving them with fewer cognitive resources in the substantive part of the interview. Ideally, rapport building should be designed to optimize children's performance in the substantive part of the interview, and a short rapport-building session may enhance the children's performance during the substantive investigation, especially when children are not talkative. Because this is a correlational study, however, this direction of causality cannot be assumed and it is alternatively possible that the causality is inverse, that is, children with higher verbal performance, even within the group of less talkative children, made disclosure of abuse earlier in the interviews, thus shortening the rapport phase.

Note also that the current sample consisted of cooperative children who voluntarily disclosed abuse and who were likely to perceive the child investigator as a helpful figure. It might not be the case that short rapport has an advantage for reluctant children. Researchers have suggested that reluctant children who refuse to disclose abuse might benefit from longer rather than shorter rapport and even from a second opportunity to establish rapport with the interviewer (Hershkowitz et al., 2006).

The apparent advantage of child investigators using open-ended strategies when attempting to develop rapport with alleged abuse victims validates previous findings by Sternberg et al. (1997). However, their study was conducted on free style interviews of which only the rapport-building phase was structured, but which otherwise did not follow best practice recommendations. The interviews examined in the current study were conducted

according to the NICHD protocol and consisted of more effective interviewing strategies. It is therefore impressive that the effects of open-ended rapport building were evident beyond the effects of adequate questioning during the interview.

The open style rapport building seems to operate in two related ways. The children's development of a meaningful and elaborated personal narrative in combination with the interviewers' interested and attentive approach might have empowered the children and helped them to use their resources better to perform the witnessing task. In addition, an open style rapport-building session seems to constitute a specific training of free recall retrieval skills, used later in the substantive part of the interview (Orbach et al., 2000). Interestingly, the open style of the rapport-building session seemed to be helpful for the less talkative children and was more strongly associated with production of details than was its length. Again, clear causality cannot be inferred based on the current study and an alternative explanation may be that more verbally responsive children produced information following open questions and were therefore not addressed with focused questions. However, previous studies with experimental designs strongly support the first explanation (Roberts et al., 2004; Sternberg et al., 1997).

These findings help define what form of rapport building is associated with more elaborated forensic statements. The findings imply that short sessions consisting of open-ended invitations aimed at establishing child-interviewer rapport are associated with richer information, especially in interviews of children who are less verbal.

Interestingly, this association appeared when children provided forensic information from free recall. A large body of research and theory suggests that free recall information is likely to be most accurate, whereas the accuracy of the information provided in response to focused utterances is more likely to be compromised. Therefore, it seems possible that an appropriate social and emotional approach on the part of interviewers can increase high quality information without introducing additional risks to the child's statement. This claim was not directly tested in the present study, however.

Second, the study stressed the positive role of interviewers' support, especially in interviews of less talkative children. The level of interviewer's support was positively associated with the amount of forensic information obtained about the alleged crimes. This finding is consistent with results from previous laboratory studies (Goodman et al., 1991; Carter et al., 1996; Davis & Bottoms, 2002), which indicated improvement in the

children's memory performance in supportive interviews, and validates theoretical assertions suggesting that under supportive conditions, children may function at their higher range of cognitive performance (Fisher, 1980). However, these effects were not directly tested in the case of sexually abused children and for conditions of investigative interviews (Bottoms et al., 2007). This is the first field study of adequate ecological validity to do so and to focus on the association between supportive questioning and production of forensic information.

A previous field study examining only the presubstantive phase of the interview focused on the association between interviewers' support and children's willingness to disclose abuse (Hershkowitz et al., 2006). The examination of the substantive part of the investigation in the current study allows those findings to be expanded and permits us to suggest that a supportive approach on the part of child forensic interviewers may be associated not only with children's willingness to disclose abuse but also with the richness of information they provide when they do disclose abuse. The children sampled in this study were likely to experience stress from multiple sources related to the alleged sexual abuse, to the disclosure and social reactions, or to the investigation, which seemed to increase their need for support and render them positively influenced by supportive conditions.

Of course, these findings relate to the providing of support to children in terms of their efforts and their performance as interviewees, never in terms of the content they convey. Support in this study constituted either a request for information addressed personally to the child (with mention of his name) or an utterance including neutral reinforcement. Reinforcements of content were not coded as supportive comments in the current study but rather as suggestive utterances. As previously shown, suggestive reinforcement of contents may have detrimental effects on children's statements (Billings et al., 2007; Bruck, Ceci, Francoeur, & Barr, 1995; Garven, Wood, Malpass, & Shaw, 1998) and should be avoided.

Testing the effects of socioemotional variables in children of two age groups in the current study suggests that the effects are especially marked in older children. Although a short rapport-building session was positively correlated with the amount of details in both age groups, its open style was correlated only in older children. Similarly, the positive association with interviewer's support was evident only in the older children. A warm and supportive relationship with an interviewer was expected to have positive effects on a child's performance, regardless of his age. However, there is no empirical

support of this expectation, mostly because previous studies examined only preschoolers. Two related explanations of the selective effects on school-aged children can be offered. First, it is possible that older children who provide testimony on sexual abuse are more in need of social support than younger ones, because they are more aware of the sexual nature of the crime of which they have been the victims, and may therefore feel shame or guilt, and/or because they are more aware of the possible consequences of their incriminating statements. Second, it is also possible that older children are more reactive to social support because they recognize social expectations and social dynamics better. The sensitivity of young children to the length of rapport building and their higher performance following short rapport building may support the explanation suggesting that short rapport-building sessions better preserve their limited attention span.

Conclusions based on this study need to be considered in light of the study's limitations. Because this is a field study, which lacks the possibility of assessing accuracy, the value of the additional information obtained under these conditions is not directly assessed. However, laboratory analogue studies have supported the assumption that the accuracy of the information obtained from free recall and under supportive conditions is not likely to be compromised.

Another major limitation stems from the nonexperimental design of the current study, which does not allow causal explanations. The relationships between support or rapport-building variables and the amount of details children produced are correlational in nature and should be interpreted cautiously. The suggestion that short and open rapport, as well as a supportive approach, resulted in an increased amount of detail is just one explanation. One must consider the possibility that talkative children raised the subject of the allegations after a short rapport and, likewise, that they were responsive to open questions in the presubstantive as well as in the substantive parts of the interview. Although the comparison of more and less talkative children permitted us to control for a major factor, only a full experimental design could provide clear evidence of the effects of socioemotional factors.

Finally, although the association between rapport building or support and children's production of forensic details was statistically significant, its strength was moderate. However, those socioemotional factors account for variance of children's production beyond the type of question, which is known as a major factor influencing production.

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