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Emotional Language Used by Victims of Alleged Sexual Abuse During Forensic Investigation

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ABSTRACT

Addressing the characteristics of children as witnesses has been a focus of many researchers; however, the emotion derived from children during investigative interviews is an understudied field that is vital for practitioners from various contexts. The current study explores the emotional language that children use during forensic investigations following suspected sexual abuse. The sample comprises 97 investigative interviews with children (N = 97) aged 3–14 years. These interviews were randomly selected from all forensic interviews carried out in Israel in 2011. All of the interviews were conducted in conformity with the National Institute of Child Health and Development Protocol, and the emotional language of the children was coded. The results reveal a limited overall presence of emotional language. Children hardly used positive emotional language and mainly employed negative emotional language. The interview phase and the age of the children greatly affected the use of emotional language, and gender and suspect familiarity had no effect on the children's emotional language. The findings from the current study enhance existing knowledge on the emotional language of children during forensic investigations and highlight the study's unique characteristics in the context of abuse, trauma, and forensic investigation. The results of this study demonstrate the need for including probes about emotions in investigative interviews and the addition of emotional language to coding schemes for investigative interviews.

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Introduction

An increased awareness of child maltreatment in the 1970s was followed by an increased incidence of children in the legal system in the 1980s (Malloy, La Rooy, Lamb, & Katz, 2011). It is well established that the crime of child maltreatment is difficult to investigate; due to the frequent lack of evidence and the fact that perpetrators are often closely linked to the victim, the children involved are commonly the sole source of information (Malloy, Lamb, & Katz, 2011a). Addressing the characteristics of children as witnesses

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has been a focus for researchers who have identified a special set of characteristics among children that have a profound effect on the ability of the children to retrieve and report on alleged incidents of maltreatment. These characteristics were identified by an exhaustive examination of both lab and field studies and relate to the children's cognitive, social, and emotional developmental abilities, which are of special importance for forensic child interviewers and are factors that interviewers need to be aware of (Bruck, Ceci, & Principe, 2006).

The study of children's memories of stressful medical procedures has opened the door to empirical investigations of emotion and memory in childhood (Quas et al., 1999), and some studies have been conducted on children's expressed emotions while disclosing maltreatment (Sayfan, Mitchell, Goodman, Eisen, & Qin, 2008; Wood, Orsak, Muphy & Croos, 1996). Moreover, several studies described the way in which the perception of credibility during forensic interviews might be influenced by the emotional expression adopted by abused children (Castelli & Goodman, 2014; Goodman et al., 1992; Kaufmann, Drevland, Wessel, Overskeid, & Magnussen, 2003; Myers, Redlich, Goodman, Prizmich, & Imwinkelried, 1999; Regan & Baker, 1998). Beyond the forensic relevance of emotional expression by children, this expression also has clinical relevance in that the ability to emotionally narrate negative experiences is linked to the ways in which children create meaning and cope with such experiences (Fivush, Hazzard, Sales, Sarfati, & Brown, 2003). However, the emotional language of children during investigative interviews has not been sufficiently studied and requires further exploration.

Emotional language development

Emotions can be understood by looking at three components: (a) a specific innately determined neural substrate (emotional state), (b) a characteristic facial display or neuromuscular-expressive pattern (emotional expression), and (c) a distinct subjective or phenomenological quality (emotional experience; Kotsch, Gerbing, & Schwartz, 1982). Emotion is the process of marking the significance of events in terms of how individuals assign meaning to them. The nature of the emotion involved is a function of an event's construed significance, and greater significance is associated with greater emotional response (Campos, Frankel, & Camaras, 2004). For an emotion to occur, some stimulus must trigger a change in the internal physiological state of the individual. Emotional elicitors may be either external (social, such as separation from a caregiver, or nonsocial, such as a loud noise) or internal (physiological states, cognitive activities; Lewis & Michalson, 1982) stimuli.

Research on children's understanding of emotions has focused on children's ability to label different emotional expressions. The main finding is

that children's understanding and ability to apply emotion categories develops gradually but is very limited at 2 years of age (Camras & Allison, 1985; Herba, Landau, Russell, Ecker, & Phillips, 2006; Izard, 1971; Markham & Adams, 1992; Widen & Russell, 2008). Harter and Whitesell (1989) divide children's emotional development into 5 levels, ranging from level 0 (mean age, 5.2) to level 4 (mean age, 11.3). These stages describe a gradual development from level 0, where children have developed a single representation for each separate emotion but can only apply one emotional representation to any given event (a denial that two feelings can simultaneously exist), to level 4, where children are able to describe how opposite valence feelings can be provoked by the same event (e.g., "I was happy that I got a present but sad that it was not what I wanted.").

Importantly, the emotion categories of younger children are not equivalent to those of adults, even when the children and adults use the same labels. The younger the child is, the broader the emotion categories are. As the child grows older, these categories gradually narrow and are increasingly restricted to a specific type of emotion (Aldridge & Wood, 1997; Widen & Russell, 2008). Happy expressions are recognized first and most accurately, followed by sad or angry expressions (Aldridge & Wood, 1997; Camras & Allison, 1985; Herba et al., 2006; Widen & Russell, 2008). Aldridge and Wood (1997) found that children are nearly 8 years old before they begin to use words associated with negative emotion; however, the descriptive vocabulary for negative emotions appears to be far more diverse than that for positive emotions.

Other than age, gender is a critical filter through which emotional understanding is constructed, largely because of the way in which parents occasionally foster emotion regulation and expression differently between boys and girls (Fivush, 1993; Maccoby, 1998). Studies suggest that girls' narratives are more socially contextual, coherent, detailed, and relational than those of boys (Buckner & Fivush, 1998; Fivush, Brotman, Buckner, & Goodman, 2000). Aldridge and Wood (1997) found that girls could provide combined emotion-related descriptive adjectives by the age of 7, whereas boys did not perform equally to girls until the age of 10. Girls mention more emotions than boys, and parents talk more about sadness with girls than with boys (Fivush et al., 2000).

It is important to stress that children's emotional language is generally sparse while narrating their past experiences (Sales, Fivush, & Peterson, 2003; Walton, Harris, & Davidson, 2009). Setting expectations is highly important, given that the average number of children's emotion words used per narrative is between zero and four (Butler, Gross, & Hayne, 1995; Fivush, Sales, & Bohonek, 2008). An important area of research involves maltreated children's emotional language, both because maltreatment has previously been reported

as having an adverse effect on child development and because maltreated children's emotional language has an important bearing on practice.

Emotional language and maltreated children

To experience an emotion, individuals must undergo a cognitive-evaluation process (i.e., a process influenced by a wide variety of previous experiences) in which other individuals define the nature of the eliciting event and the appropriateness of particular expressions. The parents or caregivers of a child provide the cognitive-evaluative context for the child's emotional expression through words and actions; therefore, children experiencing maltreatment and abuse are placed at a disadvantage (Bowlby, 1969; Howe, 2005). Previous studies have clearly indicated that abused children's emotional behavior and emotional intelligence might be different from that of nonabused children (Camras, Grow, & Ribordy, 1983; Camras et al., 1988; Pollak, Cicchetti, Hornung, & Reed, 2000).

Abused children have been found to show either excessive amounts of negative emotion or blunted patterns of emotion from early infancy (Gaensbauer & Hiatt, 1984). Abused children have also been found to be less accurate at rating facial expressions than nonabused children, in that they saw fewer distinctions between emotions and demonstrated greater variance across emotions (Pollak et al., 2000). Alessandri and Lewis (1996) found that maltreated girls showed more shame when they failed and less pride when they succeeded than non-maltreated girls, and Garnefski and Diekstra (1997) found that sexually abused boys demonstrated considerably higher numbers of emotional and behavioral problems than their female counterparts.

The main emotions found in relation to sexual abuse are guilt, shame, disgust, sadness, fear, and anger (Bennet, Sullivan, & Lewis, 2005; Bonanno et al., 2002; Feiring & Taska, 2005; Long & Jackson, 1993; Negrao, Bonanno, Noll, Putnam, & Trickett, 2005; Newman & Peterson, 1996; Sayfan et el., 2008). However, these emotions are not necessarily expressed at disclosure. Both negative (Bonnano et al., 2002) and positive emotions (Long & Jackson, 1993) have been found in association with disclosure and retrospective accounts of childhood sexual abuse.

In the forensic context, recent studies have examined children's emotional expressions with respect to its disclosure. Malloy, Brubacher, and Lamb (2011) indicated that children reported fear from the disclosure which affected their decision to disclose. Four empirical studies (Castelli & Goodman, 2014; Katz et al., 2012; Sayfan et al., 2008; Wood et al., 1996) emphasize that when children discussed alleged abuse in a forensic context, most were more likely to display relaxed or neutral behaviors than shame, sadness, or anger. In the studies of Castelli and Goodman (2014) and Katz

and colleagues (2012), it was found that the intensity of expressed emotion as displayed by the child was greater when children disclosed the alleged abuse than when they discussed neutral events in the presubstantive phase of the interviews. It is important to note that these studies explored children's emotional behavior indicators rather than their emotional language.

Recent research suggests that the developmental stage of the child and trauma-related symptoms, such as dissociation and other behavioral problems (depression, aggression), might affect emotional expressivity at disclosure (Sayfan et al., 2008). Dissociation can lead CSA (child sexual abuse) survivors to display neutral or stunted emotional effects when discussing abuse or at disclosure (Bonnano, Noll, Putnam & Trickett, 2003; Sayfan et al., 2008). Children might suppress negative emotional displays because of earlier experiences that caused them to develop coping strategies to reduce their emotional awareness, and such strategies might result in neutral emotional displays (Sayfan et al., 2008). Bonnano and colleagues (2007) suggest that the expression of positive emotion while discussing abuse is related to adjustment problems. Other findings indicated that sexually abused children employing more dissociative characteristics have been found to be more upset while discussing abuse (Sayfan et al., 2008), and recent research has found that abused children often demonstrate an early processing bias toward anger or threatening expressions (Hadwin et al., 2003; Pollak et al., 2000).

The current study

The current study aims to further explore children's emotional language during investigative interviews. This study is unique in that all of the interviews were conducted according to the NICHD (National Institute of Child Health and Human Development) Protocol, which allows a standardized evaluation of this question. Another advantage of this study is that it examines and compares the children's verbal display of emotional language during their discussion of neutral events and of the alleged traumatic incident (i.e., during the presubstantive and substantive phases of the interview, respectively). Based on previous studies, the main hypotheses of the current study are as follows:

(1) Children's use of emotional language will be scarce.
(2) The use of emotional language will be greater during the substantive phase of the interview than during the presubstantive phase of the interview.
(3) Age will affect children's emotional language; older children will display more emotional language than young children.
(4) Gender will affect children's emotional language; girls will display more emotional language than boys.

(5) Suspect familiarity will affect children's emotional language; children who are abused by their parents will employ less emotional language than children abused by someone who is not a family member.

Method

Sample

The sample comprised 97 investigative interviews with children (N = 97). These interviews were randomly selected from all forensic interviews carried out in Israel in 2011 (N = 15,502). The interviews selected for the sample were those that satisfied the following inclusion criteria: Hebrew was the children's native tongue, there were no recorded developmental disabilities in the children, the children were interviewed for the first time following the suspected child sexual abuse, and the children provided an allegation with respect to the alleged incidents (meaning that the children made disclosure during the forensic interview). Gender was unequally spread among 19 boys (19.5%) and 78 girls 80.4%). Age ranged between 3 and 14 years (M = 9.31, SD = 3.07) at the time of the interview. The cultural background of the children was not documented for the current study, given strict ethical standards that this information won't be revealed. However, it is important to stress that given the random selection of the cases from the overall investigations that were carried in Israel it can be assumed that the cultural diversity that generally exist remains the same for the current sample.

Forty-nine children (50.5%) experienced a single incident of sexual abuse, and 48 children (49.5%) experienced multiple incidents. Abuse can be classified according to the suspect's relationship to the child victim; therefore, suspect familiarity was divided into four categories: parent figure (parent or guardian; 21 children, 21.6%), family member (uncle, sibling, grandparent; 24 children, 24.7%), familiar person but not a family member (neighbor, babysitter, teacher, etc.; 48 children, 48.4%), and strangers (5 children, 5.1%).

NICHD protocol

All interviews in the current study were conducted by eight well-trained investigative interviewers, all sharing a similar professional background (primary degree in social work and having at least one year of experience with investigations). The NICHD Investigative Interview Protocol is a set of structured guidelines for interviewing children about experiences or witnessed events.

The NICHD Protocol covers all phases of the investigative interview (Lamb et al., 2011). In the introductory/presubstantive phase, the interviewer introduces himself or herself, clarifies the child's task, and explains the ground rules and expectations. Several questions are asked in this phase to establish whether the children understand the difference between true and false statements. The rapport-building phase that follows the introductory phase comprises two sections.

The first section is designed to create a safe and relaxed environment for the child and to establish trust between the child and the interviewer (Lamb, Orbach, Hershkowitz, Esplin, & Horowitz, 2007). The second phase is designed to familiarize the child with open-ended investigative interview strategies while demonstrating the specific level of detail expected of them; in this phase, the children are prompted to describe a recently experienced neutral event in detail. In a transitional dialogue between the presubstantive and the substantive phases of the interview, a series of prompts is used to nonsuggestively identify the target event(s) under investigation using prompts that are as open as possible. If the child makes an allegation during this dialogue, the free-recall phase begins with an invitation ("Tell me everything …") and other free-recall prompts. As soon as the first narrative is completed, the interviewer prompts the child whether the incident happened one or more times and secures incident-specific information. Interviewers proceed to direct questions about issues mentioned by the child and request information within specific categories only after free-recall prompting (Lamb et al., 2011, 2007).

Lamb and colleagues (2007) reviewed research (Cyr, Lamb, Pelletier, Leduc, & Perron, 2006; Lamb, Orbach, Warren, Esplin, & Hershkowitz, 2006; Lamb, Sternberg, et al., 2006; Orbach et al., 2000; Sternberg, Lamb, Orbach, Esplin, & Mitchell, 2001) concerning this protocol and found that controlled studies repeatedly show that the quality of interviewing reliably and dramatically improves when interviewers employ this protocol. Interviewers using the protocol use at least three times as many open-ended and approximately half as many option-posing and suggestive prompts as they do when exploring comparable incidents involving children of the same age without using the protocol.

Coding

The NICHD Protocol does not specifically aim to ask children about their emotions; however, emotional displays were provided spontaneously by the children when asked about other aspects of the alleged incidents or about aspects discussed in the presubstantive part of the interview. Each time a child uttered a word indicating an emotion, the incident was coded using a

system based on a previous hierarchical scale developed by Laurent and colleagues (Laurent et al., 1999), that is, the PANAS-C (Positive and Negative Affect Schedule for Children) scale, which assesses 30 feelings and categorizes them as reflecting positive or negative emotions. In the original scale, the positive emotions were coded on a 1–11 scale and the negative emotions were coded on a 1–16 scale. Based on this scale, the following scheme was developed:

Reflective of positive emotional language: good, happy, exciting, thrilled, relief, proud, satisfied, hope, and love.

Reflective of negative emotional language: fear, anger, disgust, sad, unpleasant, bored, stressed, helpless, guilt.

To double check that no emotional display was overlooked or misunderstood, two independent coders coded all of the transcripts. The two coders were trained to identify and code the emotional language employed in a set of transcripts that were not included in the current study (N = 15). After each of the 97 transcripts was coded independently, the agreement between the coders was higher than 96%. Each time a disagreement emerged, the result was discussed until agreement was achieved. Power analysis was carried out to ensure that the sample size allowed all of the categories to be covered.

Ethical approval

Because the study is based on confidential files that contain highly personal information, the author made a deliberate effort to conduct the research in keeping with ethical standards. Thus, the author requested authorization for the study from the research board of the Ministry of Welfare and the university ethical board. To ensure privacy and anonymity, the investigative interviews were provided to the researchers after the redaction of names or features that could be used to identify the children, parents, or other people and places. No background information of the children was available to the researcher, nor were the children's files.

Results

Descriptive statistics

In the sample of 97 transcripts, words indicating emotional language were found in 62 transcripts (63.9%); in the remaining 35 transcripts (36.08%), no words indicating emotional language were found. Among the transcripts in which emotional language was reported, several types of words were mentioned by the children. These words and their frequency are reported in

Table 1. Words indicating emotional language and the frequency of these words in the children's narratives.

Word indicating emotional language	Frequency
Dislike	88
Fear	62
Horrible	29
Upset	11
Shock	8
Disgust	8
Embarrassment	8
Uncomfortable	7
Anger	6
Excitement	6
Sadness	5
Funny	4
Helplessness	2
Strange	2
Confusion	2
Like	2
Hate	1

Table 1. As seen in the table, the emotional language of "dislike" and "fear" were most prevalent in the children's narratives.

Because the displays of emotional language were relatively scarce, the following steps were taken during further analyses:

(1) Words indicating emotional language were divided into two groups: those indicating positive emotional language and those indicating negative emotional language (as elaborated in the "Method" section).
(2) The mean number of emotional words used was calculated only in transcripts where emotions were discussed by the children (N = 62 interviews).

Table 2. presents the average, standard deviation and range of emotional language employed during the 62 interviews with respect to overall emotional language, negative emotional language, and positive emotional language.

The effect of child characteristics and suspect familiarity on emotional language display

Separate univariate ANOVA analyses were performed to assess the effect of child characteristics (age and gender) and suspect familiarity on emotional

Table 2. Means, standard deviations and range of overall emotional language, positive and negative.

	M (SD)	Range
Emotional language	4.11 (3.26)	0–16
Negative emotional language	3.87 (3.15)	0–16
Positive emotional language	0.24 (0.61)	0-3

Table 3. Means and standard deviations for emotional language display with respect to child characteristics and suspect familiarity.

Variable	Values	Emotional language M (SD)
Age	4–6	1.66 (1.32)
	7–9	3.35 (3.06)
	10–14	5.24 (3.30)
Gender	Boys	3.61 (2.98)
	Girls	4.24 (3.35)
Suspect familiarity	Family member	3.40 (2.54)
	Outside the family	4.78 (3.73)

language display. Age exerted the strongest effect on emotional language display [F (2, 59) = 5.85; $p < 0.005$; $\square_p^2 = 0.16$]; children aged 10–14 used more words reflecting emotions ($M = 5.24$, $SD = 3.30$) than did children aged 4–6 ($M = 1.66$, $SD = 1.32$). No differences in the number of words related to emotional language were found between children aged 7–9 ($M = 3.35$, $SD = 3.06$) and children aged 10–14 and children aged 4–6. A Scheffe post hoc test confirmed these differences. However, no strong effects of gender or suspect familiarity were found. Table 3. presents the means and standard deviations for emotional language display with respect to child characteristics and suspect familiarity.

The effect of child characteristics and suspect familiarity on the type of emotional language used

A 2 (emotion type: positive, negative, within-subject) x 3 (age group: 4–6, 7–9, between-subject) mixed model ANOVA revealed a strong effect for emotional language type [F (1, 59) = 46.64; $p < 0.000$; $\square_p^2 = 0.44$], indicating that children employed more negative emotional language ($M = 3.87$, $SD = 3.15$) than positive emotional language ($M = 0.24$, $SD = 0.01$). There was also a significant interaction between emotional language type and child age [F (2, 59) = 5.79; $p < 0.005$; $\square_p^2 = 0.16$]. This interaction indicated that there were no age differences regarding positive emotional language; children aged 10–14 employed more negative

Table 4. Means and standard deviations for emotional language employed with respect to child characteristics and suspect familiarity.

Variable	Values	Negative emotional language M (SD)	Positive emotional language M (SD)
Age	4–6	1.33 (1.11)	0.33 (0.07)
	7–9	3.25 (3.16)	0.10 (0.30)
	10–14	4.93 (3.08)	0.30 (0.02)
Gender	Boys	3.15 (2.91)	0.46 (0.06)
	Girls	4.06 (3.21)	0.18 (0.08)
Suspect familiarity	Family member	3.23 (2.58)	0.16 (0.07)
	Outside the family	4.46 (3.54)	0.31 (0.08)

emotional language (M = 4.93, SD = 3.08) than did children aged 4–6 (M = 1.33, SD = 1.11), and there were no differences for children aged 7–9 (M = 3.25, SD = 3.16). Additional analyses revealed no significant effect of gender or suspect familiarity, and there were no interactions for these items. Table 4. presents the means and standard deviations of emotional language employed with respect to child characteristics and suspect familiarity.

The effect of interview phase on emotional language display

To assess differences in the children's display of emotional language between the presubstantive (discussing neutral events) and substantive (discussing the alleged traumatic event/s) phases of the interview, a 2 (interview phase: presubstantive versus substantive-within-subject) x 2 (children's emotional language: negative versus positive within subjects) multivariate analysis of variance (MANOVA) was conducted. The results revealed a significant effect for the interview phase [F (1,60) = 88.58, $p < 0.000$, $\eta 2 = 0.59$]; children employed more emotional language during the substantive phase (M = 3.88, SD = 3.07) than during the presubstantive phase (M = 0.26, SD = 0.03). A significant effect was also found for emotional language type [F (1,60) = 87.64, $p < 0.000$, $\eta 2 = 0.59$]; children employed more negative emotional language (M = 3.80, SD = 3.03) than positive emotional language in the substantive phase (M = 0.13, SD = 0.02). Finally, a significant interaction was found between interview phase and emotional language type [F (1,60) = 86.45, $p < 0.000$, $\eta 2 = 0.59$]; children in the presubstantive phase of the interview employed positive emotional language (M = 0.13, SD = 0.02) at a similar level to that of the substantive phase of the interview (M = 0.08, SD = 0.01), but children in the substantive phase employed more negative emotional language (M = 3.80, SD = 3.03) than in the presubstantive phase of the interview (M = 0.13, SD = 0.06).

Additional analyses were performed to examine the effects of the children's characteristics and suspect familiarity on the display of emotional language while comparing the presubstantive phase and the substantive phase. No significant effects and no interactions were found for suspect familiarity and the children's gender; however, age was found to have a significant effect.

A 2 (interview phase: presubstantive versus substantive phase within subject-subject) x 2 (children's age: 4–6, 7–9, 10–14-between subjects) multivariate analysis of variance (MANOVA) was performed to compare the effects of interview phase on the display of negative emotional language. Significant effects were found for interview phase [F (1, 38) = 8.57, $p < 0.006$, $\eta 2 = 0.17$]; children employed more negative emotional language during the substantive phase (M = 0.24, SD = 0.32) than during the presubstantive phase

Table 5. Means and standard deviations for emotional language employed with respect to child characteristics, suspect familiarity and interview phase.

		Presubstantive		Substantive	
Variables	Values	negative emotional language M (SD)	Positive emotional language M (SD)	negative emotional language M (SD)	Positive emotional language M (SD)
Age	4–6	0.25 (0.05)	0.50 (0.01)	1.37 (1.06)	0.12 (0.05)
	7–9	0.11 (0.03)	0.22 (0.04)	3.20 (3.12)	0.03 (0.01)
	10–14	0.37 (0.08)	0.37 (0.01)	4.75 (2.93)	0.12 (0.04)
Gender	Boys	0.25 (0.06)	0.25 (0.07)	3.25 (2.76)	0.33 (0.08)
	Girls	0.28 (0.01)	0.38 (0.06)	3.93 (3.11)	0.02 (0.01)
Suspect familiarity	Family member	0.25 (0.05)	0.25 (0.05)	3.13 (2.55)	0.06 (0.05)
	Outside the family	0.29 (0.07)	0.41 (0.09)	4.45(3.35)	0.09 (0.03)

(M = 0.06, SD = 0.23). In addition, an interaction was found between age and interview phase [F (2.38) = 4.03, $p < 0.026$, $\eta 2 = 0.17$]. A Scheffe post hoc test revealed that children aged 10–14 employed negative emotional language more often (M = 0.39, SD = 0.35) than did children aged 4–6 (M = 0.01, SD = 0.02), and no differences were found with children aged 7–9 (M = 0.23, SD = 0.31). These differences were evident during the substantive phase of the interview but not during the presubstantive phase of the interview. Table 5. presents the means and standard deviations for emotional language employed with respect to child characteristics, suspect familiarity, and interview phase.

Discussion

This study explores the emotional language employed during investigative interviews with children who were alleged victims of sexual abuse and stresses the relevance of studying emotion. One strength of this study is that it was conducted within a specific context that relies on systematically designed interviews (the NICHD Protocol), thus decreasing potential intervening variables. In addition, the study aimed to capture emotional language display at the actual time of disclosure and without prior forensic interviews. Therefore, the emotional language employed in this study sheds light on the children's evaluation of the significance of the events at the time of interview, which might be different than that found in a retrospective account (Bonanno et al., 2007; Hewitt, 1994; Long & Jackson, 1993).

Several findings in the current study deserve elaboration. First, the overall display of emotional language was limited. These findings strengthen those of previous studies by Wood and colleagues (1996) and Sayfan and colleagues (2008), who reported that children in forensic interviews most often display neutral emotion. Although the coding in the current study did not evaluate

children's nonverbal behavior and focused solely on verbal indicators, the results replicated and strengthened the findings of these two decisive studies.

A novel aspect of this study was the separate analysis of the interview phases, thus allowing emotional language employed in relation to neutral events (presubstantive phase) to be contrasted with emotional language employed in relation to the alleged abusive incident (substantive phase). The children employed more negative emotional language during the substantive phase, and no differences were found in the use of positive emotions during the presubstantive phase, indicating the level of the children's understanding of the situation they are in and their evaluation of the alleged abuse. Discussing the abuse produces negative emotional language, replicating the findings of studies showing that CSA is experienced as a negative event (Browne & Finkelhor, 1986; Kuehnle & Connell, 2011).

Two important aspects of the descriptive vocabulary of negative emotional language relate to age and diversity. Children are older before they start using words that describe upset emotions, and the descriptive vocabulary of negative emotion has been found to be far more diverse than that of positive emotion (Aldridge & Wood, 1997). Therefore, it is natural that older children (10–14 years) employ more negative emotional language in general and that age emerges as a powerful predictor of the use of negative emotional language by the studied children. The significance found for age and negative emotional language, specifically that found during the substantive phase of the interview, indicates that older children might have a greater understanding of the ramifications of the allegations and legal investigation, resulting in greater distress. This finding helps to substantiate the findings of Goodman and colleagues (1992) and Quas and colleagues (2005) regarding children's expressed emotion in relation to testifying in court about sexual abuse. Although Sayfan and colleagues (2008) found that age was unrelated to negative affect at disclosure, older children did tend to be more upset than younger children.

For younger children (4–6 years), the investigative interview and discussing the incident triggered less frequent negative emotional language, which is possibly explained by factors that affect their ability to express the emotions they are experiencing or by the fact that the children might not experience as many negative emotions. Aldridge and Wood (1997) found that children are almost 8 years old before they begin to use a descriptive vocabulary for negative emotion. It is possible that younger children are unable to accurately communicate their emotional state because their developmental abilities are not yet fully developed and, thus, they find it especially challenging to express negative emotion. The unfamiliarity of the setting and the interviewer (Lamb et al., 2011) might also inhibit the use of emotional language and behavior.

The damaging effect of trauma on emotional development and subsequent damaged emotional recognition that has been found in various studies

(Camras et al., 1983, 1988; Pollak et al., 2000) could also explain younger children's lack of emotional language. Sayfan and colleagues (2008) found that maltreated children who had made a greater number of prior abuse allegations appeared less upset, indicating the effects of trauma-related symptoms on the display of neutral and stunted emotion. Concerning the current results, suspect familiarity was not found to have an effect. However, the effect of abuse can be seen through the interaction between interview phase and type of emotion. In the current study, age was found to have an effect during the substantive phase but not during the presubstantive phase; this result indicates that talking about the abuse appears to stunt the use of emotional language in younger children because age was not found to affect the use of positive emotional language during the presubstantive phase.

Surprisingly, gender was not found to significantly affect the use of emotional language. This contradicts research findings indicating that girls tend to mention emotion more often than boys (Buckner & Fivush, 1998; Fivush et al., 2000); however, this result replicates findings by Sayfan and colleagues (2008), who did not find gender to be a significant predictor of the use of emotion. However, gender was unequally spread in our sample. Given that most children in the sample were girls, this might have led to a situation in which the number of boys studied did not afford sufficient statistical power.

The findings in the current study must be viewed in light of the limitations of the study. Emotion is a multifaceted aspect of human experience that complicates research and is intricately involved in the cognition-evaluative processes, psychological state, and internal physiological state of a person. Emotions can be experienced but not necessarily expressed through facial expressions, body language, or words. This study encompasses emotional language expressed through words, which requires both the ability to use appropriate labels for the emotional state the child is experiencing and an environment in which the child feels that the display of emotion is welcomed. Therefore, if the child does not possess the language skills required to express what he or she feels or if he or she feels uncomfortable or unsafe, then the display of emotion in the interview will be limited.

Specifically, interview protocols could be revised to enhance children's emotional language. A recent study by Ahern and Lyon (2013) presented two techniques that should be considered: emotional rapport building and cued emotion prompts. The findings in the cited study clearly indicate that cued emotional prompts (e.g., "you mentioning feeling sad, tell me more about that") are very beneficial in enhancing children's emotional language. Another case study reported by Katz (2013) noted that forensic interviewers who are supportive of the children and the emotions they feel might act to promote the display of emotions. However, forensic interviewers need to support the display of emotions in a nonsuggestive way, which presents a challenge for forensic interviewers (Katz, 2013). These studies stress the

importance of including probes about emotions in investigative interviews that might impact the use of emotional language by children. Future efforts should be dedicated to promoting the development and dissemination of interview protocols and forensic interviews that will allow a space for emotional language without compromising the richness and accuracy of the children's narratives and testimonies. In this context it will be interesting to explore whether there are individual difference in that matter between different forensic interviewers.

An additional limitation of the current study is the ground truth challenge, that is determining whether the alleged incidents are credible. Given the absence of evidence that is external to these interviews, an assessment of the credibility cannot be made. Additional studies should explore the relevance of emotional language employed as it interacts with credible and noncredible testimonies. In addition, future studies should replicate the current study using a larger sample that codes both verbal and nonverbal representations of emotions. A larger sample would also allow for better representation of boys and exploration of the gender aspect. Emotional language should be explored in other forms of abuse, such as physical abuse, and as it relates to cultural background.

The current study emphasizes that investigative interviews with children (alleged victims of abuse) are a valuable source of both developmental and emotional information on the children. The current study provides additional support to the need to further adapt forensic investigations to provide children space for emotional language without compromising the quality of their testimonies.

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