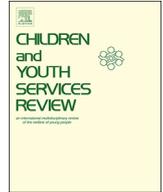




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Forensic interviews with children: Exploring the richness of children's drawing and the richness of their testimony

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ABSTRACT

The current study was designed in order to explore the richness of drawings created by children during their forensic interviews following incidents of suspected sexual abuse. The research also aimed to assess the association between the richness of the drawings and the richness of the testimonies children provided. A coding system for analyzing the richness of the drawings was developed and implemented in relation to 64 children's drawings. The study's main findings indicated that age was a contributing factor in the richness of the drawings and in the subsequent richness of the testimonies. In addition, the findings emphasized three core categories in the children's drawings, the richness of which correlated with the richness in their testimonies: people, action, and location. The current study sheds light on a possible explanation for the beneficial effects of the use of drawings in forensic interviews with children. The findings may have an impact on practical guidelines and future training in the field.

1. Introduction

Child sexual abuse (CSA) is a worldwide phenomenon that attracts the attention of many researchers, practitioners, and policymakers (e.g., Hornor, 2010; Wheeler, Williams, Beauchesne, & Dupras, 2013). Because of the covert nature of CSA, there is in most cases a lack of physical evidence, leaving the legal process dependent on the testimonies of the children and suspects involved (e.g., Malloy, Lamb, & Katz, 2010). Therefore, forensic investigations with children are a central component in the justice process. Forensic investigation is a challenging task for both the children and the forensic interviewers, as the legal system requires children's testimonies to be rich in forensically relevant details, coherent, and reliable (Malloy et al., 2010). It should be noted that richness is a subjective term, and for the purposes of the current paper will be used to connote the number of forensically relevant details that can shed light on the alleged abuse. It is difficult for children to provide testimony that meets the criteria of the legal system, as doing so requires that the children face traumatic memories while overcoming developmental barriers (e.g., Lamb, Orbach, Hershkowitz, Esplin, & Horowitz, 2007; Owen-Kostelnik, Reppucci, & Meyer, 2006).

In recent decades, intensive efforts have been made by researchers to identify and evaluate best practice for forensic interviews with children (e.g., Katz, 2013a, 2013b; Katz, Barnett, & Hershkowitz, 2014; Saywitz & Camparo, 2014). One promising strategy that has been

developed and evaluated is the use of drawing (Katz et al., 2014). Nevertheless, previous studies (i.e., Katz et al., 2014; Katz & Hamama, 2013; Katz & Hershkowitz, 2010) did not focus on the nature of such drawings. Hence, the current study focused on the use of drawing in the forensic interview context, aiming to explore the way that the richness of the drawings contributed to the richness of the children's testimonies.

2. Forensic interviews with children

Practitioners who work with children who are alleged victims of CSA strive to safeguard these children via a range of interventions such as assessing whether the abuse actually took place, carrying out forensic interviews with the children, and making decisions on how to act based on their assessments and evaluations (Oliver & Charles, 2015; Waldfoegel, 1998). With regard to forensic interviews in particular, forensic interviewers facilitate a unique encounter where the forensic interviewer adapts strategies that will address the child's developmental and emotional state in order to obtain rich and reliable testimony (Lamb et al., 2007; Lamb, La-Rooy, Malloy, & Katz, 2011; Saywitz & Camparo, 2014).

In recent decades, researchers have pointed to a category of variables that strongly correlate with the richness of children's testimonies. For example, studies have documented that the older the child, the richer the testimony (Saywitz & Camparo, 2014; Saywitz & Goodman,

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1996; Saywitz, Snyder, & Lamphear, 1996), and that girls often provide richer testimonies than do boys (Hershkowitz, Horowitz, & Lamb, 2005; Hershkowitz, Lamb, Orbach, Katz, & Horowitz, 2012; Lippert, Cross, Jones, & Walsh, 2008). Another category of variables relates to the characteristics of the abuse itself; namely, studies have emphasized that children who were abused by a family member provide less detail in their testimonies than children who were abused by perpetrators who aren't family members (London, Bruck, Ceci, & Shuman, 2005; Pipe, Lamb, Orbach, & Cederborg, 2007).

There is a consensus among researchers with respect to best practice in the context of interviewing children (e.g., Lamb et al., 2011). That is, researchers agree that the type of question asked is of central importance in eliciting valuable testimony, and that presenting children with open-ended questions (“tell me everything that happened to you”) produces both richer and more reliable testimony from children. It has also been agreed that interviewers should avoid suggestive questions that integrate information that the child did not provide or that communicate to the child that something in specific is expected from his/her answer (e.g., “it hurt you when he touched you, right?”). Progress in the field of forensic interviews has generated the development of an interview protocol which integrates best practice guidelines and has significantly increased the quality of the interviews as well as the quality of the children's testimonies (e.g., Lamb et al., 2011). However, researchers agree that there is still a need to continue studying different forensic interview practices with children, given that some children need additional support in the retrieval process.

Mapping the literature on integrating interview techniques within forensic interviews conducted with children points to two kinds of techniques: outside cues for retrieval and self-generated cues (e.g., Brown, 2011). Outside cues are those technique or strategies provided by the forensic interviewer to the child; in these cases, the child needs to make an adaptation in the retrieval process in order to use the technique. For example, in the case of using anatomically detailed dolls, the child is provided with dolls that do not necessarily represent his/her experiences or perceptions of the alleged incidents. Therefore, the child needs to adapt his/her retrieval process to the use of the dolls. Both lab and field studies that have explored the use of anatomically detailed dolls in forensic interviews with children have reported on the risk of evoking a suggestive process with the child; as such, it has been recommended not to use this technique in the forensic context.

Techniques of self-generated cues include, for example, the use of drawing; in this case, the child draws freely, whatever he/she wishes to draw, and in the process retrieves cues that will assist him/her in the process of retrieving the abusive incident(s), optimally leading to the retrieval of more accurate narratives from the children (e.g., Katz & Hershkowitz, 2010). In general, even with self-generated techniques, there has been much discussion regarding the adverse effects caused by their use within the forensic interview, given the potential for some sort of suggestive process to have taken place along the way (e.g., Brown, 2011). Therefore, researchers have been focusing specifically on developing techniques that can be used in the forensic context: that is, ones which will not risk the reliability of the testimony production in any way. Free drawing, as described above, is one such technique.

3. Children and drawing

Drawing is a natural part of children's developmental process (Abraham, 2002). It is commonly accepted that children's drawings provide them with nonverbal access to their inner world and mental representations, such as feelings, thoughts, conflicts and conceptions (Cox, 2005; Hamama & Ronen, 2009; Jolley, 2010; Moschini, 2005). Generally speaking, children under eight years of age tend to produce intellectually realistic drawings that reflect their knowledge of the conceptual structure of objects. After the age of eight, children tend to produce visually realistic drawings in which they inhibit their conceptual knowledge and produce drawings that reflect their visual world

(Pariser, Kindler, & van den Berg, 2008).

Drawing, as it activates both sensory and emotional stimuli, can be used as a helpful vehicle in accessing and integrating traumatic memories (Lusebrink, 2004; O'Brien, 2004; Simcock & Hayne, 2002; Wesson & Salmon, 2001). Additionally, drawing may help young children structure their narratives about an event by reminding them what they have or have not said, and what they yet need to describe (Katz & Hamama, 2013; Patterson & Hayne, 2011; Wesson & Salmon, 2001).

Given the above, in the current study we focused on the richness of the drawings created by children during the forensic interview segment of the forensic investigation.

4. Children's drawings in forensic interviews

One of the strategies discussed in the literature, *vis a vis* helping children with retrieval, is drawing during the forensic interview (Cohen-Liebman, 1995; Katz & Hershkowitz et al., 2012; Salmon, Roncolato, & Gleitzman, 2003; Wesson & Salmon, 2001). Nevertheless, researchers have been unable to coherently identify the value of the content of these drawings, although they have identified the utility of drawing in providing the children with emotional release (Allen & Tussey, 2012; Cohen-Liebman, 1995). That is, those studies that have tried to delve into the contribution of drawing have mainly assessed children's emotional experience of drawing (Katz et al., 2014). “Comfort drawing,” a concept which relates to the simple use of children's drawing in the forensic context, does not put the focus on the substantive alleged incidents that are under investigation (e.g., Brown, 2011), but rather on the beneficial impact of drawing in terms of the emotional release it can provide.

Given the fact that the forensic interview is not, in general, a comfortable setting for children, assessing their drawings in this context may serve as a crucial new tool in aiding their detailed retrieval (Brown, 2011; Katz et al., 2014). Driessnack (2005) has suggested that through drawing, children may be able to organize their internal thoughts and emotions and deliver clearer and more detailed narratives in forensic interviews. Additionally, visual art-making engages both the left and right hemispheres of the brain (Zaidel, 2005). Visual motor activities, intuition, emotions, and the body are associated with the right hemisphere (Bogousslavsky, 2005), whereas language, speech, analytical thinking, and the process of creating a narrative relate to the left hemisphere (McNamee, 2004). Thus, the neurobiological processes involved with art-making in general and with drawing in particular may contribute to an organizing frame from which the children build a coherent story using, more richly, elements that were forgotten in their first retrieval (Brown, 2011; Gross & Hayne, 1998; Katz & Hamama, 2013).

The preferred method of integrating drawing in a forensic context is the “draw and talk” method, which provides children with the opportunity to draw while recounting their experiences. The “draw and talk” technique has mainly been studied in labs, where drawing was integrated into interviews with children on personally experienced events. The results clearly demonstrated that, under ideal circumstances (non-suggestive interventions), drawing yielded an increase in the amount of information recalled without compromising accuracy (e.g., Coates & Coates, 2006; Driessnack, 2005; Patterson & Hayne, 2011; Woolford, Patterson, Macleod, Hobbs, & Hayne, 2015).

The lab studies that have been carried out with the use of drawings have greatly contributed to the understanding of drawing's potential contribution to the forensic context. Such drawings were generated and disseminated in a field study that was conducted by Katz and Hershkowitz (2010) with alleged child victims of sexual abuse. This study was a randomized controlled field experiment that investigated the benefits of drawing with regard to details reported during forensic interviewing. Two different research conditions were provided to the children (as elaborated upon in the Method section) and the children were given repeated open-ended phases in these interviews: the

children in the control group received only repeated questions, whereas the children in the drawing group received repeated questions after the use of the drawings. The main finding from this study was that the children who were assigned the drawing task were able to provide 30% more, and more central, details during the second round of questioning in comparison to the control group. However, there is to date nothing in the literature to explain this result. The current study therefore aimed to shed light on the possible contribution that the drawing made to the richness of the testimony.

5. The current study

The current study aimed to explore the richness of children's drawings and to assess whether drawings that were richer with visual cues correlated to richer testimonies, while taking into consideration the characteristics of the child and the abuse (i.e., gender, age, familiarity with the suspect, and type of abuse).

6. Method

6.1. Sample

The current study was based on an original sample ($N = 125$) by Katz and Hershkowitz (2010), which included children who were referred for a forensic interview and who matched the study criteria. Those criteria were as follows: there had been a single incident of sexual abuse by an alleged perpetrator who was not a family member; the child had no developmental disabilities; and the child's mother tongue was Hebrew. The interviews were held between November 2005 and July 2007 in Israel and were conducted by nine forensic interviewers. After the first section of the interviews was completed and the children stated that they did not remember any additional information, they were randomly assigned to one of two groups: interview with drawing and interview without drawing.

The final sample of the current study included 64 drawings by the children who were assigned to the drawing task ($n = 47$ girls and $n = 17$ boys), aged 4.02 to 13.06 years ($M = 9.6$, $SD = 2.5$). Alleged abuse included four types: exposure (i.e., the alleged suspect revealed his/her private body parts to the victim, $n = 13$); touching private body parts over clothes ($n = 13$); skin-to-skin touching of private body parts ($n = 26$); and penetration ($n = 26$), including vaginal, anal, or oral penetration. With regard to suspect familiarity, the alleged perpetrator was a stranger to 64% of the abused children ($n = 41$) and familiar to 36% of the children ($n = 21$). Time delay between the alleged sexual abuse and the forensic interviews varied between 1 and 730 days ($M = 43.9$ days, $SD = 100.9$).

Five drawings from the original sample were excluded from the current study. In three cases, ($n = 3$) this exclusion was due to the poor quality of the available copies of the drawings. In the remaining cases ($n = 2$), no coding for richness was possible due to the lack of detail relevant to the alleged abusive incidents provided by the children; that is, the children involved said that they drew only squares, triangles, and circles, and although such shapes can potentially have "meaning" in some contexts, the children did not indicate that these shapes were in any way relevant to the abusive incident. It is important to stress that no child was excluded from the study on the basis of poor quality of drawing. However, if the child did not indicate any content from the drawing which was relevant or related in any way to the alleged abusive incidents, then the drawing was excluded because the focus of the analysis in the current study was the richness of the drawings.

6.2. Forensic interviewing with NICHD protocol

All of the children in the study sample were interviewed using the NICHD protocol until the interviewers had exhaustively probed the children's memories of the incidents through the use of open-ended

questions. When each child reported not remembering anything else, the interviewer opened an envelope, which contained the study group to which the child had been randomly assigned. In the control group, children were invited to either take a break or play for 7–10 min. In the drawing group, the children were given a blank sheet of paper and a pencil. The interviewer then said, "You've told me everything that happened to you. Now I would like for you to draw what happened, and then we will continue." The children were allowed to draw for 7–10 min. During this time the interviewer did not initiate any conversation, but limited his/her remarks to utterances such as "Hmm" or repeated the children's words.

After the drawing was completed, the interviewer said, "You told me earlier what happened to you and now you've drawn it. The drawing is right there in front of you. Now please tell me again everything that happened to you from beginning to end as best as you can. You can also look at the drawing if you want."

According to the instructions, the interviewers were to ignore the drawings completely, and were not to ask any questions concerning content or expression and to avoid interpretation. Instead, they were asked to focus solely on the verbal narrative, in accordance with interview protocol. At the end of the interview, the interviewers were instructed to ask the children to list everything in their drawings, at which point the interviewers identified each component and wrote it down on the drawing. For example, if the child pointed to one component and said, "This is the sun," the interviewer then wrote "sun" where the child had pointed.

The interviews were conducted in Israel by trained investigative interviewers. The interviewers all had similar professional backgrounds: a bachelor's degree in social work or criminology and approximately seven years of experience conducting investigative interviews with children.

6.3. Coding

All of the details in the richness coding set (Table 1) were identified with one of the following six categories: 1) people; 2) actions; 3) time, with three sub-categories: specific time indicator (e.g., sun, moon), indicator of sequence (e.g., "cartoons," a word taken from the comics arena where boxes with numbers are provided to indicate sequence of events), and indicator of movement (e.g., arrows or lines); 4) locations; 5) objects (i.e., that were used by the victim, suspect, or witness during the incident); and 6) body parts (i.e., that were relevant to the description of the alleged abuse as indicated by the child. For example, just an ear, in and of itself, wouldn't be coded as a body part; however, if the child indicated that the suspect had screamed into his/her ear, then the ear would be coded. Additional coded body parts were body parts that were involved in the alleged sexual abuse such as the penis, breasts, or hands). The content categories were based on previous categorizations used in researching the overall effects of drawing on children's verbal testimonies following a drawing task (Katz & Hershkowitz, 2010), and are described as follows:

Table 1
Mean, standard deviations, and range for the richness of the drawings ($n = 64$).

Category	M	SD	Range
Action	1.71	2.10	0–9
Indication of an abusive act	0.51	0.50	0–1
People	4.59	5.13	0–32
Time (specific time)	4.16	2.56	1–7
Time (sequence)	1.20	3.19	0–20
Time (movement)	0.78	2.59	0–14
Location	3.55	3.69	0–14
Object	0.05	0.28	0–2
Verbal	1.83	5.23	0–25
Body part	3.38	3.13	1–9

- **Actions:** Any action that is drawn or indicated by the child through detailed drawing or through the use of a symbol, coded as either details central to the incident or peripheral details.
- **People:** All persons drawn or indicated by the victim (e.g., a dot with the information that this is a person). In cases of uncertainty with regard to the role of the person being drawn (witness or not a witness), the coder follows the court ruling that a person will be considered a witness unless proven otherwise.
- **Time:** Three sub-categories of time: (1) Specific time indicator (e.g., sun, moon, clouds), (2) indicator of sequences of time (e.g., “cartoons”), (3) movement and direction (e.g., road, arrows).
- **Locations:** Description of the scene of the crime. This category may also include objects not used by victim, suspect, or witness during the incident.
- **Verbal:** Reference to words spoken by the suspect, victim, or a witness during the incident. Every word is coded as a single verbal detail.
- **Objects:** Objects or items used by suspect, victim, and/or witness during the incident (knife, belt).
- **Body Parts:** Any body parts belonging to the victim, witness, or suspect that have relevance to the incident (penis, breasts, belly, buttocks, lips, suspect's hand).

It is important to highlight that although all of the drawings were labeled by the children themselves, the coding process was put into place in order to ensure that others (for example, the forensic interviewers or the research team) wouldn't attribute to the child's drawing things that the child hadn't attributed to them. The coding process was used to enable an assessment of the richness of the drawings (i.e., as the goal of the current study was to capture the richness of the drawings as represented by the number of items the child labeled). For example, if the child labeled one part of the drawing as “place,” the coder was then able to code all of the components in that place (tree, house, road) as the number of details, an indication of the richness of the drawing.

Regarding the verbal testimony itself, the richness of the testimony refers to the amount of forensically relevant information that the child produced in the substantive part of the interview. A detail is defined as information that relates to the specific event about which the child was interviewed (Malloy et al., 2010). In the current study, forensically relevant information was identified and categorized according to Lamb et al. (1996) as follows: people (suspect, witness, victim), actions, objects, places, indicators of time, emotions, thoughts and feelings. A detail was only marked the first time it appeared in the child's narrative. The following statement provides an example of a testimony's richness via the number of details provided: “Dad came into my room and took off my shirt.” In this statement, the victim produced five forensically relevant details: Dad (the suspect), came into (action), my room (place), took off (action), my shirt (object).

Intensive training was carried out in order to achieve an understanding of and control over the coding system. The drawings were then coded by two independent coders in order to achieve reliability. The minimum level for inter-coder agreement has been designated as being above $\alpha = 95\%$. During the coding phase, 43% of the drawings were double-coded for purposes of inter-coder agreement. At this point, agreement reached $\alpha = 92\%$, and discussions were held in order to delve into and/or resolve any disagreements.

6.4. Ethical issues

The original study (Katz & Hershkowitz, 2010) was approved by the manager of the investigative interview service. In addition, approvals were received from the head of the police youth department, the vice president of the juvenile court, and the chairman of the University ethics board.

Furthermore, measures were taken to ensure confidentiality for the sample in question: All codings were conducted at the research lab of

Table 2

The df, f, significance, and R square of the model age as predictor of action, people, and location categories (n = 64).

Variable	Df	F	P	R ²
Action	1,57	13.10	0.001	0.18
People	1,57	4.72	0.034	0.07
Loaction	1,57	6.87	0.011	0.11

the researcher which is located at the university, and at the end of every coding session the drawings were returned to their storage area and locked away.

7. Results

First, we examined the frequencies of the richness of the drawings in total and for each specific category (See Table 1). In addition, to predict the richness of the drawings based on the children's personal characteristics, we conducted a *t*-test with regard to gender and a simple linear regression with regard to age. No significant gap emerged between boys and girls in the whole sample relating to the richness of drawings categories or the total richness of the drawings.

In regard to the children's ages, on the other hand, a significant regression equation was found, $F(1, 57) = 8.35, p < .005$, with an $R^2 = 0.13$. Namely, the older the children were, the richer the drawings they produced. As for the specific categories, it was found that age predicted richer drawings in the categories of action, people, and location, as elaborated upon in Table 2. Nevertheless, age was not a significant predictor for the richness of the drawings in the categories of time (specific), time (sequence), time (movement), object, verbal, and body parts.

With regard to differences in the richness of the drawings (in total and for the specific categories) relative to characteristics of the abuse (i.e., suspect identity and type of abuse), we conducted univariate analyses. No significant differences were found.

In addition, a simple linear regression was conducted to explore the relationship between the richness of the drawings and the richness of the testimonies that followed them. The findings revealed that the richer the drawings were, the richer the testimonies the children provided, $F(1, 57) = 9.13, p < .004$, with an $R^2 = 0.14$. It is important to state that these findings were systematic even when age was held as a “constant.” As for the specific categories, it was found that only richness in action, people, and location contributed to the richness of the testimonies the children provided (Table 3). Richer testimonies were not found to correspond to drawings rich in the categories of time (specific), time (sequence), time (movement), object, verbal, and body parts.

In sum, the current study findings emphasize the fact that the children's ages correlated to the richness of their drawings and that three specific categories in the richness of the drawings were significantly correlated with richer testimonies from the children: people, location, and action.

8. Discussion

The current study aimed to focus on the nature of the drawings

Table 3

The df, f, significance, and R2 of the model richness of the drawings as predictor of the richness of the testimonies provided by the children (n = 64).

Variable	Df	F	P	R ²
Action	1,57	8.21	0.006	0.13
People	1,57	9.53	0.003	0.14
Loaction	1,57	6.75	0.012	0.10

made by children following alleged sexual abuse. More specifically, it explored the correlation between the richness of children's drawing and these children's subsequent verbal testimonies in the context of a forensic interview. The findings revealed that the richness of the drawings significantly predicted the richness of the testimonies the children provided after producing them. Previous studies have reported on the benefits of including drawing in forensic interviews, as this activity enriches the children's narratives and also enhances the cognitive processes of memory retrieval (i.e., Allen & Tussey, 2012; Coates & Coates, 2006; Driessnack, 2005; Katz et al., 2014; Katz & Hamama, 2013; Katz & Hershkowitz, 2010).

The additional details that were provided by the children following the act of drawing highlight the relevance of the notion that memories are never complete and that any attempted retrieval can result in hyperemesis, or the addition of details that were not provided before. The results from the current study might contribute to the assumption that visual cues considerably impact the retrieval process (Katz et al., 2014; Poole & Lamb, 1998; Saywitz & Camparo, 2014).

In the current study, the children produced visual cues in three specific categories: people, action, and location. This finding is extremely interesting and cannot be compared with findings from previous research, as this is the first study which utilized an analysis of the richness of the drawings in the context of forensic interviews. These findings do, however, echo two central notions in memory theory. The first is Tulving's theory of "encoding specificity" (1972; Tulving & Thomson, 1973), which suggests that context cues are a core component in memory retrieval. In addition, prior research (e.g., Katz et al., 2014; Saywitz & Camparo, 2014) has contributed to our understanding of the beneficial impact of visual cues on the retrieval process. The current study supports these ideas by illustrating that when children create their own visual cues, they are able to produce richer testimonies.

It is important to stress that the children's drawings were not rich in the time-related categories. This finding is not surprising, given previous literature indicating children's difficulties in grasping the concept of time (e.g., Friedman, 1977, 1986; Wright, Gaskell, & O'Muircheartaigh, 1997). The findings from the current study broaden our existing knowledge by adding that children find it difficult not only to produce verbal cues about time but also to produce visual cues about time.

With regard to the children's ages, the results indicate that the older the children were, the richer their drawings were. This finding is not surprising given what we know about the capacity for self-awareness at different stages of child development (Kazdin, 2000; Piaget, 1977). In other words, as children grow, they gradually add new skills to their cognitive repertoires. In practice, at around 11 years of age, formal logic becomes possible and verbal explanations of concepts are usually sufficient without demonstration; children become capable of more abstract, hypothetical, and theoretical reasoning (Piaget, 1977).

As for gender, no differences were found between boys and girls in terms of the richness of their drawings. Previous studies on drawing have not addressed this comparison. However, it is interesting that this finding is inconsistent with past findings indicating that girls provide more details in forensic interviews than do boys (e.g., Hershkowitz et al., 2005; Hershkowitz et al., 2012; Lippert et al., 2008).

Beyond the children's characteristics, it was interesting to discover that neither the severity of the abuse nor the familiarity of the suspect was correlated with richer drawings or richer testimonies. Further research will be needed to explore these variables and the underlying processes, as these findings are surprising and run contrary to previous literature in the field (see London et al., 2005; Pipe et al., 2007). In addition, it will be interesting to evaluate in future studies the way the assessment of richness of the children's production (both in the testimony and the drawings) impact the perception of the children's competence and perhaps even the reliability assessment of the forensic interviews with them.

9. Limitations

These findings should be considered carefully, given the limitations of the study. First, this study included a small sample size, a factor which significantly limits the generalizability of the findings. Second, because the data set was retrieved from a field study concerning alleged sexual abuse, accuracy could not be determined. Unlike in laboratory experiments, where accuracy is a key variable that can be measured (Coates & Coates, 2006), in the context of a field study, it cannot be ensured. Third, due to strict ethical guidelines, it was not possible to obtain follow-up or other additional relevant information about the children, and therefore the effects of motivation, general state of mind, personal preferences, and personal experiences on the children's drawings (Oğuz, 2010) could not be determined. Fourth, other general variable factors might explain the association between detail in children's drawings and detail in testimonies that were not tested in the current study, e.g., cognitive factors.

10. Conclusions

Despite the limitations, the current study contributes to the literature in regard to the beneficial impact of drawing – that is, as a useful technique for assessing children's inner world and emotions (Moschini, 2005) – and its importance as a retrieval aid in forensic interviews with children following suspected CSA. Specifically, the current study was able to illustrate how richer drawings are reflected in richer testimonies. The visual cues that the children created provide support for existing theories on memory, while the children's difficulty in producing visual cues with respect to the concept of time echoes developmental theories.

Practically, the study findings may promote the developing notion of using drawing during forensic interviews with children. Namely, the coding system that was developed and utilized in the current study can be incorporated in the practice of forensic interviewers and, as such, can enrich their interventions and assessments of forensic investigations with alleged child victims of abuse. Beyond its relevance in the forensic context, the current study strengthens the idea of using drawing in the clinical context, where the creation of visual cues may enhance children's narratives.

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