Analyzing Children's Drawings for Signs of Abuse and Emotional Distress

Introduction

Child abuse and domestic violence are often hidden due to children's fear or inability to verbally disclose their trauma. Studies estimate that less than 10% of abused children spontaneously disclose their abuse to authorities (Frontiers | Perceptions of Child Abuse as Manifested in Drawings and Narratives by Children and Adolescents). This gap has driven interest in children's drawings as a window into their emotional world. Psychologists and art therapists have long observed that a child's artwork may reflect inner feelings, experiences, and perceptions that the child cannot or will not put into words (Frontiers | Perceptions of Child Abuse as Manifested in Drawings and Narratives by Children and Adolescents). In cases of suspected domestic violence or abuse, drawings are sometimes used as a supplementary assessment tool to detect possible signs of physical, sexual, or emotional maltreatment. Researchers have examined whether specific features in children's drawings – such as the use of colors, how figures are drawn, spatial arrangement of family members, and symbolic content – correlate with abuse or serious emotional distress. Below, we summarize scientifically validated methods and findings from peer-reviewed research on interpreting children's drawings in this context, noting both promising indicators and important limitations.

Human Figure Drawings and Emotional Indicators

One common approach is to ask a child to draw a person or themselves. Human Figure **Drawings (HFD)** have a long history in psychology: early work by Machover (1949) proposed that how a child draws people can reveal emotional conflicts, and Koppitz (1968) later defined specific "Emotional Indicators" (Els) in such drawings (e.g. tear drops, omitted body parts, monster-like figures) that might signal distress. Building on this, Naglieri, McNeish, and Bardos (1991) created the Draw-A-Person: Screening Procedure for Emotional Disturbance (DAP:SPED), a structured scoring system (55-item) for human figure drawings intended to identify children ages 6-17 with emotional or behavioral disturbances (this is a standardized tool, peer-reviewed in its development) (The assessment of drawings from children who have been maltreated: a systematic review - Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf) (The assessment of drawings from children who have been maltreated: a systematic review - Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf). While not specific to abuse, DAP:SPED exemplifies a systematic method: the child draws a man, woman, and self; each drawing is scored on features like presence/omission or exaggeration of body parts, proportion, etc., and high scores may indicate emotional disturbance requiring further evaluation. Independent

reviews have found the DAP:SPED has only modest sensitivity, so it should be used as a screening aid rather than diagnostic on its own (<u>The assessment of drawings from children who have been maltreated: a systematic review - Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf).</u>

In the context of abuse, researchers have looked for distinguishing features in children's figure drawings. Indicators studied include graphic signs like drawing genitalia, omitting major body parts, exaggerated hands or teeth, closed posture, or signs of aggression in the figure. For example, a classic pediatric study by Hibbard et al. (1987, peer-reviewed) found that sexually abused children were more likely to spontaneously include genital details in their drawings of people (The assessment of drawings from children who have been maltreated: a systematic review - Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf). A follow-up controlled study by Hibbard & Hartman (1990, peer-reviewed) compared 65 sexually abused children's figure drawings to 64 non-abused peers using Koppitz's emotional indicators. They reported no single drawing feature was statistically unique to the abused group, but the abused children tended to show certain patterns more often - such as "legs pressed together," "big hands," and drawing genitals on figures – suggesting guarded posture and sexual preoccupation (Emotional indicators in human figure drawings of sexually victimized and nonabused children - PubMed). They also found the abused group's drawings more frequently had signs from Koppitz's "anxiety" category (e.g. tense posture), indicating higher general anxiety (Emotional indicators in human figure drawings of sexually victimized and nonabused children - PubMed). Notably, some ostensibly "emotional" drawing signs appeared in many non-abused kids too, underscoring the risk of false positives (Emotional indicators in human figure drawings of sexually victimized and nonabused children - PubMed).

A recent large-scale validation comes from Jaroenkajornkij et al. (2022, peer-reviewed). In this study, 1,707 adolescents (age 13–18) in Thailand drew a self-figure and also reported their abuse history (using standardized questionnaires) (Use of Self-Figure Drawing as an Assessment Tool for Child Abuse: Differentiating between Sexual, Physical, and Emotional Abuse - PMC) (Use of Self-Figure Drawing as an Assessment Tool for Child Abuse: Differentiating between Sexual, Physical, and Emotional Abuse - PMC). The researchers identified drawing markers that differed between those who had experienced child sexual abuse (CSA), physical abuse (CPA), or emotional abuse (CEA) (Use of Self-Figure Drawing as an Assessment Tool for Child Abuse: Differentiating between Sexual, Physical, and Emotional Abuse - PMC) (Use of Self-Figure Drawing as an Assessment Tool for Child Abuse: <u>Differentiating between Sexual, Physical, and Emotional Abuse - PMC</u>). For example, adolescents with CSA tended to draw exaggerated or heavily outlined face and head features, and even subtle genital region indications, more often than their peers (Use of Self-Figure Drawing as an Assessment Tool for Child Abuse: Differentiating between Sexual, Physical, and Emotional Abuse - PMC) (Use of Self-Figure Drawing as an Assessment Tool for Child Abuse: Differentiating between Sexual, Physical, and Emotional Abuse - PMC). In contrast, physically abused youth drew pronounced ears, hands, and arms on their self-figures significantly more than emotionally abused youth (<u>Use of Self-Figure Drawing as an</u> Assessment Tool for Child Abuse: Differentiating between Sexual, Physical, and Emotional

Abuse - PMC) (Use of Self-Figure Drawing as an Assessment Tool for Child Abuse: Differentiating between Sexual, Physical, and Emotional Abuse - PMC). (Emphasizing ears may symbolically relate to hypervigilance or listening for danger, though interpretation is speculative.) All abuse groups showed more signs of inner turmoil than non-abused youths, but purely emotionally abused children's drawings were the least outwardly distinctive in specific drawing features (Use of Self-Figure Drawing as an Assessment Tool for Child Abuse: Differentiating between Sexual, Physical, and Emotional Abuse - PMC) (Use of Self-Figure Drawing as an Assessment Tool for Child Abuse: Differentiating between Sexual, Physical, and Emotional Abuse - PMC). This study statistically validated a set of drawing indicators for differentiating abuse types, and the authors conclude that self-figure drawings can assist in early identification of at-risk adolescents when used alongside other measures (Use of Self-Figure Drawing as an Assessment Tool for Child Abuse: Differentiating between Sexual, Physical, and Emotional Abuse - PMC). Importantly, even here the differences were matters of frequency and emphasis – e.g. most children, abused or not, did not draw genitalia, but when genitalia do appear it is a red flag (Use of Self-Figure Drawing as an Assessment Tool for Child Abuse: Differentiating between Sexual, Physical, and Emotional Abuse - PMC) (Use of Self-Figure Drawing as an Assessment Tool for Child Abuse: Differentiating between Sexual, Physical, and Emotional Abuse - PMC). Thus, the presence of certain features (like explicit sexual content, or unusually exaggerated body parts) may "tip off" an evaluator to probe further about abuse (The assessment of drawings from children who have been maltreated: a systematic review - Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf).

In sum, human figure drawing analysis has identified some potential markers of distress: for instance, disproportionately large or aggressive hands (possibly indicating anger or physical aggression), figures with legs pressed together (withdrawal or fear, often noted in sexual trauma contexts), omitted or very small hands/arms (which some interpret as feelings of helplessness or powerlessness), and any depiction of genitals or sexual acts (which is uncommon in normal drawings and may indicate sexual exposure) (Emotional indicators in human figure drawings of sexually victimized and nonabused children - PubMed) (The assessment of drawings from children who have been maltreated: a systematic review - Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf). However, these clues are suggestive rather than definitive. They should be interpreted in context – for example, a child drawing a monster with big claws might be just fantasy play, but a child repeatedly drawing people with huge hands inflicting harm could reflect their experience of physical abuse.

Family Drawings and Relationship Dynamics

Another rich source of information is how children draw their **family or home environment**. Techniques like the *Family Drawing Test* or the *Kinetic Family Drawing (KFD)* ask the child to draw their family (the KFD specifically says "draw everyone in your family doing something together"). The hypothesis is that abused or traumatized children may represent family dynamics differently – for instance, depicting violence, emotional distance, or anxiety within the

family scene. Research generally supports that **maltreated children's family drawings often contain more warning signs of distress** than those of non-maltreated children.

A notable study by Piperno, Di Biasi, & Levi (2007, peer-reviewed) analyzed family drawings from children aged 5-10 who were confirmed victims of abuse (physical and/or sexual) versus non-abused controls. They used a structured rating system called the *Family Drawing Inventory* (FDI) to score qualitative aspects of each drawing (Evaluation of family drawings of physically and sexually abused children - PubMed). The results showed clear differences: abused children's family drawings "significantly evidenced greater emotional distress" than those of the control group (Evaluation of family drawings of physically and sexually abused children -PubMed). Specifically, the abused kids were far more likely to draw distorted or bizarre human body shapes, figures with notable missing details (omitted facial features or limbs), and general indicators of trauma (for example, use of dark themes) (Evaluation of family drawings of physically and sexually abused children - PubMed). Strikingly, the majority of abused children even omitted their primary caregiver (often the abusive parent) from the family picture entirely (Evaluation of family drawings of physically and sexually abused children -PubMed). By contrast, non-abused children almost always included all family members in benign scenarios. These findings (from a European psychiatry journal) strongly suggest that "who is not drawn" can be as telling as what is drawn: abused kids might symbolically exclude an abuser or portray family members in alarming ways. Similarly, a study by Veltman & Browne (2002, peer-reviewed systematic review) found across multiple studies that physically abused children's family drawings showed poorly integrated family relationships - e.g. the child drawn far apart from parents, or extremely small relative to others, indicating isolation or low self-worth (Intimate Partner Violence, Parenting, and Children's Representations of Caregivers - PMC) (Intimate Partner Violence, Parenting, and Children's Representations of Caregivers -PMC). Omission of a parent or drawing one parent much smaller/off to the side has been interpreted as the child distancing themselves from that figure, possibly due to fear or estrangement (a common dynamic in domestic violence situations).

Beyond who is drawn, how family members are depicted is informative. Veltman & Browne's systematic review of 23 studies (2002) concluded that physically abused children "were more likely to distort the bodies they draw, show a lack of detail, have poor body image and sexual identification" in family drawings (The assessment of drawings from children who have been maltreated: a systematic review - Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf). For instance, an abused child might draw family figures with scribbled-out faces or disproportionately sized heads/limbs. The review also noted abused children often injected more aggressive themes or ominous symbols into family drawings - for example, weapons, monsters, or stormy weather like rain, dark clouds, lightning (The assessment of drawings from children who have been maltreated: a systematic review - Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf). In fact, inclement weather was a recurring motif in maltreated kids' artwork across studies (The assessment of drawings from children who have been maltreated: a systematic review - Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf). While a sunny day or neutral background is common in many children's drawings, an abused child might draw a family standing in the rain or under a dark sky. Such imagery

potentially reflects the child's internal turmoil or a "stormy" home life. Another study (Clarke et al. 2002) found that even children with other stressors (like ADHD or parental incarceration) often show "negative features, including vulnerability, tension, and anger" in family drawings (Intimate Partner Violence, Parenting, and Children's Representations of Caregivers - PMC), reinforcing that family drawings can mirror a child's emotional environment broadly. When a child witnesses domestic violence between parents, research suggests their family drawings may show fractured or detached family figures - e.g. a child might draw themselves standing apart from the parents (indicating feeling unsafe or not protected), or depict one parent as very large and the other very small (possible dominance or fear). Goldner & Scharf (2012) observed that in Israeli children's family drawings, signs of isolation or detachment between child and caregivers correlated with maladaptive outcomes (like eating disorders) (Intimate Partner Violence, Parenting, and Children's Representations of Caregivers - PMC). These patterns underscore that **spatial arrangement** on the page – distance between figures, whether family members are touching or separated, etc. - can be an important indicator. Abused or neglected children often do not draw themselves interacting happily with parents; instead, they might be off to the side, or draw a wall between family members, or have family members with no smiles and no contact.

The Kinetic Family Drawing (KFD) method adds another layer by asking the child to draw everyone doing something, which can reveal aspects of family roles and aggression. In a KFD, an abused child might draw a very violent scene (e.g. a father hitting a mother or child). In one case example (Lev-Wiesel, 2018), a 9-year-old girl drew herself crying while the father hit her a direct depiction of abuse ((PDF) Children drawing violence: To what extent does it reflect actual experience). However, not all children will overtly illustrate abuse; more often the clues are indirect. Research by Veltman & Browne (2003, peer-reviewed) had trained raters score KFDs of known abused vs. non-abused children on various dimensions (like expression of anger, family cohesion, etc.). They found the KFD ratings could distinguish abused children to an extent and provided "clues to prompt further investigation," but they cautioned that such drawings are not diagnostically definitive on their own (Pregrado - Veltman, M. & Browne, K. (2003) - Trained Raters' Evaluation of Kinetic Family Drawings of Physically Abused Children | PDF | Psychological Evaluation | Child Abuse) (Pregrado - Veltman, M. & Browne, K. (2003) -Trained Raters' Evaluation of Kinetic Family Drawings of Physically Abused Children | PDF | Psychological Evaluation | Child Abuse). Inter-rater reliability for individual drawing elements ranged only fair to moderate ($\kappa \sim 0.2-0.6$) (Pregrado - Veltman, M. & Browne, K. (2003) - Trained Raters' Evaluation of Kinetic Family Drawings of Physically Abused Children | PDF | Psychological Evaluation | Child Abuse). This means even experts sometimes disagreed on what a given drawing feature signified, highlighting the subjectivity involved.

Overall, family drawings tend to show the impact of abuse through themes of distance, distortion, and dysphoria. Key red flags from multiple studies include: the child figure drawn very small or very far from parents (suggesting insecurity or alienation); the omission of a key family member (possibly the perpetrator of abuse); facial expressions of sadness or anger on figures; and any depiction of explicit violence or dark, chaotic elements in the scene (blood, weapons, storms). When these appear, they raise concern. As one review summarized, while not every abused child's drawing looks obviously disturbing, on average maltreated

children's family drawings show significantly more "signals of trauma" than those of non-maltreated children (Evaluation of family drawings of physically and sexually abused children - PubMed) (The assessment of drawings from children who have been maltreated: a systematic review - Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf). Structured scoring systems (like the FDI or KFD checklists) can capture these differences in a systematic way.

House-Tree-Person and Other Projective Drawing Techniques

In addition to human figures and family scenes, clinicians sometimes use broader projective drawing tests such as the House-Tree-Person (HTP) test. In an HTP, the child is asked to draw a house, a tree, and a person, which are then interpreted symbolically (the house often seen as representing the home life or security, the person representing the self or relationships, etc.). This technique has been explored for abuse detection, but research finds it less reliable than focused figure or family drawings. Palmer et al. (2000, peer-reviewed) conducted a controlled study with 47 sexually abused children (ages 4-17) and 82 non-abused children, scoring all their HTP drawings with a detailed quantitative system (Investigation of the Clinical Use of the House-Tree-Person Projective Drawings in the Psychological Evaluation of Child Sexual Abuse Office of Justice Programs). The outcome was that overall HTP scores did not successfully distinguish abused from non-abused children (Investigation of the Clinical Use of the House-Tree-Person Projective Drawings in the Psychological Evaluation of Child Sexual Abuse Office of Justice Programs). Inter-scorer reliability of the HTP scales was only fair, and discriminant analysis failed to predict abuse status better than chance (Investigation of the Clinical Use of the House-Tree-Person Projective Drawings in the Psychological Evaluation of Child Sexual Abuse | Office of Justice Programs). The authors concluded that clinicians "should exercise caution" with HTP-based abuse evaluations, as their data showed serious reliability and validity limitations (Investigation of the Clinical Use of the House-Tree-Person Projective Drawings in the Psychological Evaluation of Child Sexual Abuse | Office of Justice Programs). In practical terms, a child's drawing of a house with, say, no windows (which some interpret as feeling trapped or lacking openness) is too ambiguous to serve as an abuse indicator - many non-abused children might draw a windowless house. This aligns with the broader literature: a 2012 systematic review (Allen & Tussey, peer-reviewed) found that no projective drawing test, including HTP, had sufficient empirical support as a standalone diagnostic for abuse (Can projective drawings detect if a child experienced sexual or physical abuse? A systematic review of the controlled research - PubMed).

Other drawing tasks have similarly been tested. For example, some have tried asking children to draw a "favorite day" or an "ideal family" to indirectly screen for maltreatment, on the theory that abused children might struggle to portray a happy family or might insert troubling elements even in an ideal scenario. However, results have been mixed. Veltman & Browne (2002) note one study where "Favorite Kind of Day" (FKD) drawings did not reliably differentiate maltreated kids, and overall such free drawings had too many false-positives/negatives

(Identifying childhood abuse through favorite kind of day and kinetic ...). The systematic review by Veltman & Browne did report one intriguing finding: in several studies, children who spontaneously drew genitals or sexual content in any task were very likely to have been sexually abused (The assessment of drawings from children who have been maltreated: a systematic review - Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf). This doesn't mean every abused child will draw sexual content (most do not), but if a young child draws something highly sexualized without prior priming, it warrants immediate follow-up.

In summary, broad projective drawing tests like HTP or unguided free drawings have not proven particularly effective for *detecting* abuse on their own. They might reveal general emotional distress, but the indicators are not specific. **Structured approaches targeting family or self-figures** tend to yield more actionable clues. It's also worth noting that **color usage** in drawings, while often speculated about, has not shown a consistent pattern specific to abuse. Young children naturally use bright colors, and a preference for dark colors could simply be stylistic. Some clinicians anecdotally interpret excessive use of black or red as anger or depression, but research cautions that color choice is developmentally influenced and not reliably diagnostic (<u>Pregrado - Veltman, M. & Browne, K. (2003) - Trained Raters' Evaluation of Kinetic Family Drawings of Physically Abused Children | <u>PDF | Psychological Evaluation | Child Abuse</u>). One should instead focus on content and form (what is drawn and how), rather than just color. That said, an abused child might indeed use a lot of black or scribble out parts of a drawing – these can be noted as **expressions of emotion** but again are not proof of maltreatment by themselves.</u>

Using Drawings to Facilitate Disclosure

Beyond analyzing drawings as "data," an important methodological use of art is to help children communicate their experiences. Even if a drawing alone can be ambiguous, the process of drawing can enable a child to open up verbally. Several peer-reviewed studies by Carmit Katz and colleagues have demonstrated that giving a child the opportunity to draw during investigative interviews about abuse significantly increases the richness of the child's testimony. In one field study, children alleging sexual abuse were invited to "draw me everything that happened" while being questioned; those who drew provided more detailed and coherent accounts than those who only spoke (Frontiers | Perceptions of Child Abuse as Manifested in Drawings and Narratives by Children and Adolescents). Katz et al. (2014, peer-reviewed) found that the drawing process made the children more comfortable and expressive, effectively empowering them to describe abusive events that they might otherwise withhold (Frontiers | Perceptions of Child Abuse as Manifested in Drawings and Narratives by <u>Children and Adolescents</u>). Similarly, a 2018 study (Katz, Klages, & Hamama, **peer-reviewed**) observed that when children drew during forensic interviews, the details (locations, actions, people involved) in their reports of abuse nearly always increased, and children often referenced their drawing to explain what happened (Frontiers | Perceptions of Child Abuse as Manifested in Drawings and Narratives by Children and Adolescents). This aligns with clinical observations that drawing externalizes the experience, allowing the child to become "a spectator to his or her negative experience" and describe it from a safer remove (Frontiers | Perceptions of Child Abuse as Manifested in Drawings and Narratives by Children and Adolescents). In therapeutic contexts, art therapists use this approach to help children narrate traumatic events: for instance, a child might draw a scene of domestic violence and then be able to talk about it with the therapist by referring to the drawing rather than making direct eye contact, which reduces anxiety. As a result, drawings are considered a powerful adjunct in assessments – not only for what ends up on paper, but for how they help children overcome communication barriers (Frontiers | Perceptions of Child Abuse as Manifested in Drawings and Narratives by Children and Adolescents). This method is endorsed in practice guidelines (e.g., the National Institute of Child Health and Human Development interview protocol suggests drawing as a tool for reluctant child witnesses). It's important to emphasize that this use of drawings is diagnostic in a different way: the child's own narrative that accompanies the drawing is the key to confirming abuse, rather than an adult "reading into" a silent picture. Still, the very presence of certain themes in a child's drawings (like consistently drawing scary figures or injuries) can prompt adults to gently ask the child to tell the story of their picture, potentially leading to disclosures of abuse or fear.

Validation, Limitations, and Best Practices

How reliable are these methods? Decades of research have produced both encouraging findings and cautionary warnings. On one hand, numerous peer-reviewed studies have documented statistically significant differences between drawings of abused vs. non-abused children (The assessment of drawings from children who have been maltreated: a systematic review - Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf), suggesting that abuse and trauma do leave an imprint on children's artwork. For example, a comprehensive review by Veltman & Browne (2002) noted that in 10 separate studies of physical abuse, abused children's drawings had more distortions, fewer details, and more aggression on average than controls (The assessment of drawings from children who have been maltreated: a systematic review - Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf). Only a minority of studies (3 of 23 in that review) failed to find any drawing differences at all (The assessment of drawings from children who have been maltreated: a systematic review - Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf). This indicates that, across studies, certain drawing-based indicators do correlate with maltreatment. There is also some evidence of convergent validity: different researchers have independently observed similar red flags (e.g., figure distortions, caregiver omission), lending credence that these are not random. Furthermore, new structured approaches – like the 2022 self-figure drawing protocol – are showing promise in quantitatively identifying abuse history from drawings with above-chance accuracy (Use of Self-Figure Drawing as an Assessment Tool for Child Abuse: Differentiating between Sexual, Physical, and Emotional Abuse - PMC) (Use of Self-Figure Drawing as an Assessment Tool for Child Abuse: Differentiating between Sexual, Physical, and Emotional Abuse - PMC).

On the other hand, experts emphasize that drawings alone cannot prove abuse. The most definitive statement comes from Allen & Tussey's systematic review (2012, peer-reviewed): after reviewing all controlled studies up to that point, they concluded "no graphic indicator or scoring system [in children's drawings] possessed sufficient empirical evidence to support its use for identifying sexual or physical abuse" (Can projective drawings detect if a child experienced sexual or physical abuse? A systematic review of the controlled research -PubMed). Many individual studies that reported positive findings had flaws or were not replicated (Can projective drawings detect if a child experienced sexual or physical abuse? A systematic review of the controlled research - PubMed). In practical terms, this means one cannot diagnose abuse by a checklist of drawing features with high confidence. There is considerable overlap between drawings of traumatized and non-traumatized children - for instance, aggressive or sexual content in drawings is uncommon, but when it does occur it might stem from exposure to media or curiosity, not necessarily firsthand abuse. False positives are a serious concern; indeed, some "emotionally disturbed" drawing signs appear in plenty of well-adjusted children's art (Emotional indicators in human figure drawings of sexually victimized and nonabused children - PubMed). Conversely, many abused children draw relatively normal pictures, yielding false negatives if an evaluator were to rely on drawings alone (The assessment of drawings from children who have been maltreated: a systematic review -Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf). For sexual abuse in particular, several studies urge extreme caution because children's drawings are not always reliable differentiators of sexual trauma - some abused children's artwork is remarkably unremarkable, and some non-abused children draw surprisingly graphic images.

Best practice therefore treats children's drawings as one component of a holistic assessment. They can "provide clues to prompt further investigation" (Pregrado - Veltman, M. & Browne, K. (2003) - Trained Raters' Evaluation of Kinetic Family Drawings of Physically Abused Children | PDF | Psychological Evaluation | Child Abuse) but should be corroborated with interviews, behavioral observations, and other clinical data. As the 2002 systematic review concluded, the value of drawings is "inconclusive" for identification per se, however, drawings were found useful in easing recall and 'breaking the ice'" (The assessment of drawings from children who have been maltreated: a systematic review - Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf). In other words, the process of drawing can be therapeutic and revealing, even if any single drawing detail isn't diagnostic (The assessment of drawings from children who have been maltreated: a systematic review -Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf). Many experts recommend using structured frameworks (such as the KFD or an HFD checklist) to systematically document a drawing's features, but then using that information to formulate hypotheses rather than firm conclusions. For example, if a child's family drawing scores high on "signs of aggression," a clinician would note it as a possible indicator of a violent home, but then seek evidence via gentle questioning of the child or collateral reports. Clinicians and researchers also stress developmental appropriateness – a 4-year-old's stick figures are too basic to interpret for subtle signs, whereas an 8-year-old's drawing might convey more. Normative data for drawings at different ages (what level of detail is typical for a 6-year-old

versus a 12-year-old) must inform the analysis to avoid misinterpreting age-appropriate simplicity as a "lack of detail" due to trauma.

Another limitation is **cultural context**. Children's drawings can be influenced by cultural norms and experiences. For instance, children growing up in war zones or violent neighborhoods might depict violence more frequently regardless of personal abuse. One study on bullying (Marengo et al. 2022) found that children involved in bullying (victims or perpetrators) drew more violence in general (<u>Frontiers | Editorial: Children's drawings: evidence-based research and practice</u>). This reminds us that not all disturbing drawings come from home abuse – they could reflect community violence, media exposure, or other stress. Therefore, practitioners interpreting drawings should consider the child's entire context.

Finally, new technology is emerging to support drawing analysis. A pilot study in 2020 applied artificial intelligence (convolutional neural networks) to identify sexual abuse based on children's self-figure drawings (using a data set from the University of Haifa). The Al achieved about 72% accuracy in classifying drawings of abused vs. non-abused children (Can artificial intelligence achieve human-level performance? A pilot study of childhood sexual abuse detection in self-figure drawings - PubMed) (Can artificial intelligence achieve human-level performance? A pilot study of childhood sexual abuse detection in self-figure drawings - PubMed). Interestingly, human experts still outperformed the AI (around 88% accuracy) (Can artificial intelligence achieve human-level performance? A pilot study of childhood sexual abuse detection in self-figure drawings - PubMed), but the research suggests machine learning could eventually help flag high-risk drawings for professional review (Can artificial intelligence achieve human-level performance? A pilot study of childhood sexual abuse detection in self-figure drawings - PubMed) (Can artificial intelligence achieve human-level performance? A pilot study of childhood sexual abuse detection in self-figure drawings - PubMed). Such systems are being trained to recognize patterns (like those heavy face outlines or specific omissions) that experts note. While in early stages, this approach could provide an objective second opinion in the future, especially in large-scale screenings. Nonetheless, even the best Al would be an aid, not a replacement, for clinical judgment and direct communication with the child.

Conclusion:

In conclusion, **children's drawings can offer valuable insights** into a child's emotional state and potentially signal experiences of abuse or violence. Scientifically validated methods exist – including structured scoring systems for figure drawings and family drawings – that have identified common *indicators*: e.g., **distorted or missing body parts**, **disproportionate figures**, **depictions of violence**, **sexual content**, **and telling omissions or distances in family portraits**. These features, especially when multiple appear together, have been associated with abused children across studies (<u>The assessment of drawings from children who have been maltreated: a systematic review - Database of Abstracts of Reviews of Effects (<u>DARE</u>): Quality-assessed Reviews - NCBI Bookshelf) (<u>Evaluation of family drawings of physically and sexually abused children - PubMed</u>). Using such frameworks can help professionals systematically assess drawings for warning signs. However, **no drawing-based method is 100% accurate or conclusive**. As multiple reviews have emphasized, drawings</u>

should never be used in isolation to diagnose abuse (Can projective drawings detect if a child experienced sexual or physical abuse? A systematic review of the controlled research - PubMed) (The assessment of drawings from children who have been maltreated: a systematic review - Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf). The current best practice is to use drawing analysis as a supportive tool – one that can prompt sensitive inquiry and facilitate children's storytelling about their lives. When interpreted carefully and in context, a child's artwork can indeed be a revealing "window into the child's inner world", helping to detect unspoken trauma (Frontiers | Editorial: Children's drawings: evidence-based research and practice) (Frontiers | Editorial: Children's drawings: evidence-based research and practice). Every indicator gleaned from a drawing must be weighed with other evidence, and always with an awareness of the child's developmental level and personal history. With these precautions, analysis of children's drawings remains a respected technique in clinical and forensic settings – one that continues to evolve (now even with Al assistance) to better support early identification of children in distress and to ultimately guide them to the help they need.

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