ORIGINAL CONTRIBUTION

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Evaluation of family drawings of physically and sexually abused children

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■ **Abstract** *Objective* The aim of this study is to analyse the family drawings of two groups of physically and/or sexually abused children as compared to the drawings of non-abused children of a matched control group. *Methods* The drawings by 12 physically abused, 12 sexually abused and 12 non-abused children, all aged between 5 years-old and 10 years-old, were assessed and compared. Family drawings were analysed using a specific Screening Inventory (FDI-Family Drawing Inventory). This Inventory takes into consideration such qualitative and quantitative variables as the quality of drawing, the children's perception of their family members and their own perception of themselves within the family system. *Results* The results have shown significant differences between the abused minors and the control group. Abused children are more likely to draw distorted bodies, the human figure is usually represented devoid of details, their drawings generally show clear signals of trauma and the majority of the abused children are likely to exclude their primary caregiver from the drawings. *Conclusions* The *"drawings of the family"* of physically and/or sexually abused children significantly evidence a greater emotional distress then the drawings of the non-abused children of the matched control group.

■ **Key words** abused children – sexually – physically – drawings

Introduction

A number of theorists have recently presented models for understanding the effects of childhood trauma [17]. These models are *integrative* and consider the child as a whole person, in addiction they are *contextual*, considering the child in the context of the family, peer group and the larger society. Thirdly, these models are *developmental* and considers the ways in which children interpret and respond to traumatic experiences at different ages.

In order to conduct a *comprehensive assessment* of the impact of traumatic stress, Koverola [19] suggests that we look at the child's functioning in many domains, including the cognitive, affective, moral, interpersonal, sexual and physical. It is important to

consider how each of these domains might have been affected by the trauma. In addiction he points to the need to assess sources of resiliency and competence, such as the child's coping strategies and self-esteem, which may moderate the risk of psychopathology.

As a part of a larger assessment, drawing analysis is one of the elective techniques employed in child psychiatry [3, 9, 11, 16–18, 20, 22–24]. We think that those techniques could help professionals to understand the emotional distress of abused children. Information gained from drawings may be useful in the overall assessment process of a distressed child (physically, sexually abused children).

In the past several studies have questioned the validity of drawings analysis as a projective test [14, 32, 33, 36, 37, 39]. Nevertheless both psychoanalysis and developmental psychology regard drawing as the channel that allows the child to express his/her discomfort, anguish and the self-defensive mechanisms against pain.

"Drawings are often called upon by professionals as a method of allowing a child to communicate more freely, no language being necessarily involved, as well as a way of "breaking the ice" between the child and professional"[39].

Children's drawings are used occasionally as evidence of maltreatment in case conferences and court cases [10]. Indeed, The American Bar Association supports the use of drawings as part of a child's testimony [7], especially in cases where the maltreatment is alleged. For these purpose, projective drawing techniques are largely concerned with evaluation of emotional states of the child. Drawings are useful for the identification of emotional problems in children. Its use is all the more valid when one considers that children are able to convey in their drawings thoughts and feelings they cannot express in speech or writing. This may be particularly true of abused children (physically and sexually abused children) who feel fear to talk about the abuse.

Only two drawing techniques specifically convinced for the assessment of physically and sexually abused children were identified: The Favourite Kind of Day Drawing [38] and the Kinetic Family Drawings (FDs) [40].

Family Drawing is widely employed as a test in psychodiagnostic assessment as it enables the clinician to make contacts with:

- the perception child has of itself,
- the perception child has of its parents,
- some indicators of the development of its mental organization.

The FD Test [8] aims to investigate the relationship that children have established with their parent figures and with other family members.

Drawing the family is regarded as an elective tool of investigation of the mental representation of attachments "in tune with the concepts of developmental psychology" [31].

The FD projects the image of the family as perceived by the child in its growth; it captures the fantasies that combine the child's subjective life experiences and their meetings with the objective outside world.

The use of FDs as a projective assessment instrument in prospective studies of child abuse is regarded by the specific literature to be a particularly significant device of clinical investigation and research [35, 36]:
by drawing itself as an integral part of a family, the child will be able to express otherwise inhibited thoughts and feelings;

- the clinician may be enabled to approach prospective family conflicts;
- Abused children often develop speech impediments and/or difficulties in verbal communication. Drawings can help physically and/or sexually abused children to direct their emotions and graphically express their life experiences.

Veltman and Browne [37, 38], have conducted an exhaustive review of the literature concerning the quality of drawings in physically and sexually abused children. The review produced a total of 317 references, but the analysed 23 relevant studies. There were 15 different drawing techniques used in the studies.

The FDs were used in 5 studies and the most considered variables in the specialized literature [13, 14, 33, 34] were:

1. *Size and enhancement of the drawn subjects:* the size of the human figure reflects the children's own self esteem; it is important not to consider the size of the whole human figure only, but also the size and the emphasis of specific parts of the body.
2. *The placemant of the human figures in the drawing (affective distance):* the distance between members of the family could be a graphic representation of the actual emotional distance between the characterized individuals.
3. *Omission of subjects or of parts of the body:* the omission of themselves reveals a seriously low level of self-esteem.

Carpenter et al. [4] found that physically abused children were more likely to distort the bodies they draw, use lack of details, poor body image and sexual identification; they were less likely to include their primary caregiver and themselves. It was further found that

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sexually abused children used faint lines, physically abused children heavy lines, and children from violent homes were found to use heavy outlines [4].

The evidence from research found in this review does indicate that caution should be employed in the use and overinterpretation of drawings.

The aim of this study is to analyse the FDs of two groups of physically and/or sexually abused children and compared to the drawings of non-abused children of a matched control group.

We intend to investigate whether the FD representations will differentiate:

- Drawings of abused children (physically and sexually) from normal ones;
- Physically abused from sexually abused children.

■ Methods

Participants were part of a prospective study of the Psychiatry Developmental Section at the Department of Child ad Adolescent Psychiatry, University of Rome, "La Sapienza".

36 subjetcs (18 female, 18 male), 5–10-years-old were included in the study.

All partecipants were causasian and have the same social–economic background.
The total sample was subdivided in three groups:

- *GROUP M*: 12 physically abused children (4 girls and 8 boys; between 5 and 9 years old);
- *GROUP A*: 12 sexually abused children (7 girls and 5 boys; between 5-years-old and 10-years-old);
- *GROUP C*: 12 children from a matched control group (7 girls and 5 boys; between 6-years-old and 9-years-old).

A sample of 24 case of abused children (physically and sexually) were recruited at the department of child and adolescent psychiatry at the University of Rome "la Sapienza", Italy.

These cases were at random selected from abused (physically and sexually) children diagnosed in the past 2 years (2001–2003) at the department of child and adolescent Psychiatry and were compared with 12 non-abused children, between 5–10-years-old, at random selected from two different primary schools of the Rome district. The control children were selected by the child's class teacher for age, sex, socioeconomic background. Exclusion criteria included Family violence, neglect, divorce, bereavement of the mother/father, Developmental Disorders (Mental Retardation, Autistic Disorder, Language disorders and Learning Disorders).

The comparison of three groups was made between the variables of the Screening Inventory (FDI-Family

Table 1 FDI-Family Drawings Inventory

Graphically maturity	Adequate, no adequate
Omissions	Parents, Self, no omissions, the total family
Body Distortion	Distortions, no distortions
Identification	Parents, self, others, no identifications
Emotional Proximity	Parents, siblings, nobody

drawing Inventory) used for analysed the FDs of the sample.

All subjects completed a semi-structured interview, a brief version of a psychopathology assessment, the Kiddie-SADS-patien version [15], The Wechsler Scale od Intelligence Revised (WIPPSI-R; WISC-R). The Bender Test [1] was used to evaluate the drawing capacity.

Exclusion criteria included children who had experienced multiple types of abuses (both physical and sexual abuse) and children with Developmental Disorders (Mental Retardation, Autistic Disorder, Language disorders and Learning Disorders). We have decided to exclude children with Developmental Disorders because these children usually show drawing difficulties.

■ Measures

The distributions of sex, checked with the χ^2-test, have resulted homogeneous in the three assessed groups. The distribution of the age, I.Q., Bender test, checked with T-Test for independent groups, have not shown statistically significant results.

In analyzing the FDs we have developed an Specific Screening Inventory (Table 1: FDI-Family Drawings Inventory).
This Inventory takes into consideration such qualitative and quantitative variables:

- *Graphically-expressive maturity*: the aim is to measure, using Piaget's parameters [16, 26–30] whether the graphic level is compatible with the child basic cognitive organization;
- *Omitted subjects*: the omissions of some family members reflect a modality that the child may use to belittle a subject by removing an imaginary person and thus communicate something either unfulfilled or unaccepted by its family;
- *Body distortions*: This variable gives us a measure of the care and attention that the child puts into drawing human figures and of his capability to portray the body in a reasonable way in relation to shape, size and details;
- *Identification roles*: this concerns the choice of "persona" or the character that the child will choose when questioned: "who would you like to be?";

- *Emotional proximity*: the distance the child draws between itself and the other family members.

The screening categories for coding the FD were derived from the research of different authors [5, 6, 32, 40].

Family Drawing, according to different researches [39] can be used to identify children in distress by focusing upon the family dynamics drawn within the drawing.

The study utilized the convergence of the indicators to obtain diagnostic evidences concerning the quality of feelings, either of the depressive or of the relational anxiety/anguish type.

The categories about the quality of the feeling (depression, anxiety) were derived from the study of Luigi Castellazzi [5, 6].

Depressive feelings

At least three of the following criteria must be met:

- Thin lines;
- The drawing situated in the lower part of the paper;
- Small dimensions;
- Static-schematic family or drawn with basic "stick-like" lines.
- Menacing objects and/or clouds, dark sun.

Feelings of relationship anxiety and/or anguish

At least three of the following criteria must be met:

- Family drawn in a basic-schematic way;
- Family drawn in simple schematic way with essential marks (stick-like);
- Lines or objects (birds, clouds, various markings) drawn above the heads;
- Caricatural/grotesque or completely absent family;
- One or more subjects outlined or enhanced.

The FD test was administered in a standardised manner:

- Individually session without family members;
- Drawing material: white papers,one black-lead pencil, coloured pencils;
- The only instructions given to che subjects was: "draw a not real family".

The FD test was part of a larger assessment protocol for children who have been abused (physically and/or sexually).

All participants provided written informed consent before taking part in this study. Assessments were carried out by mental-health professionals (child and adolescent psychiatrists, psychologists) who were trained and experienced in conducting clinical inter-
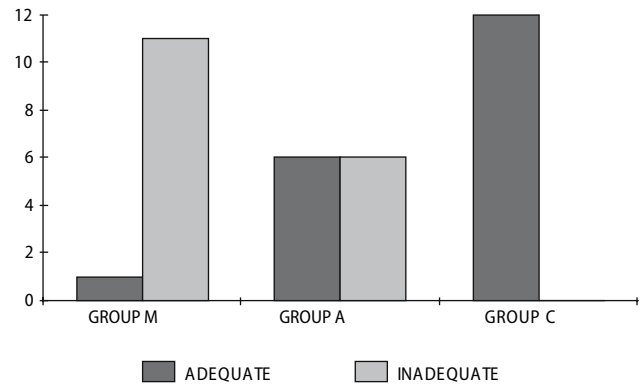
Graph 1 Representation maturity

views. Assessors were supported by clinical team and decisions were reviewed and confirmed through consensus of the team.

The distribution of each variable has been tested by comparing the groups with all possible coupling (M–A; M–C; A–C), using the χ^2-test. In case of charts with void columns, the χ^2-test has been applied only on those columns that showed some remarks.

Results

Graphic-representative maturity (Graph 1)

The FD graphic level of children who have been abused (physically and/or sexually) results below the basic cognitive organization.

Children who have been physically abused show a graphic-representative maturity significantly inferior compared to children who have been sexually abused ($\chi^2 = 5.042$; $P = 0.023$), and compared to the non-abused matched control group ($\chi^2 = 20.007$; $P = 0.001$).

Children who have been sexually abused: half of the subjects produce drawings suitable to their chronological age; even though they show a superior graphic-pictorial capacity compared to the physically abused children, their differences with the children of the matched control group are statistically significant ($\chi^2 = 8$; $P = 0.005$).

Children from the matched control group produce in fact drawings adequate to their chronological age in 12 cases out of 12.
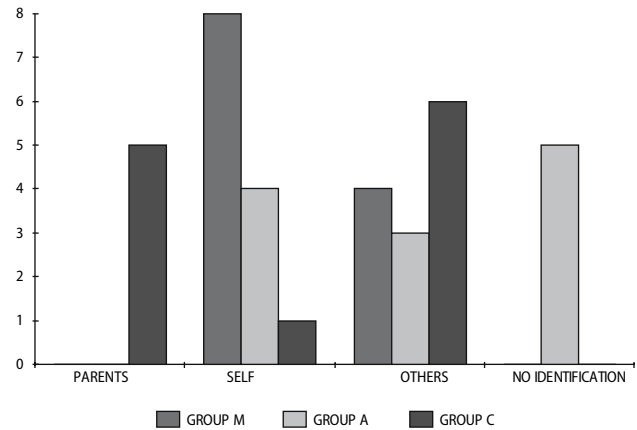
Graphic 1 shows the graphic level of the drawings in the three samples.

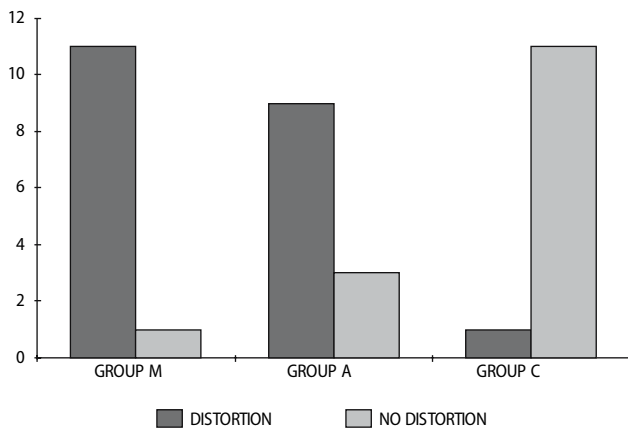### Omission of subjects (Graph 2)

Parents are the most absent figures in the drawings of both physically and sexually abused minors: 67% of

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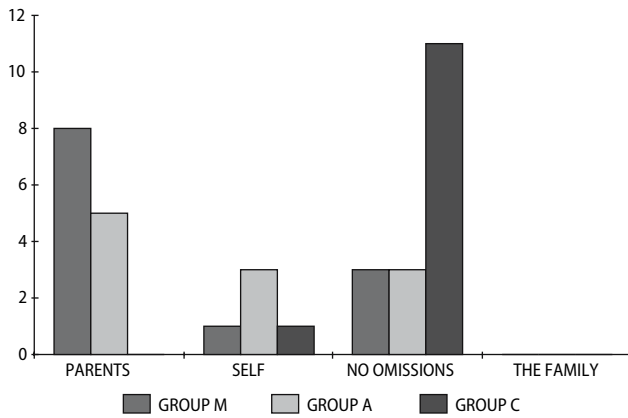
Graph 2 Omissions of figures

Graph 3 Body distortion

Graph 4 Identification

Research has proved the evidence of a statistically significant difference between group M and group C ($\chi^2 = 16.666$; $P = 0.001$) and between group A and group C ($\chi^2 = 10.971$; $P = 0.001$).

The experience of abuse (physical and/or sexual) results to be correlated in a statistically significant way to a modified and distorted graphic representation of the body image.

Graph 3 shows how the children (physically–sexually and normal children) distorted the graphic rapresentation of the body image.
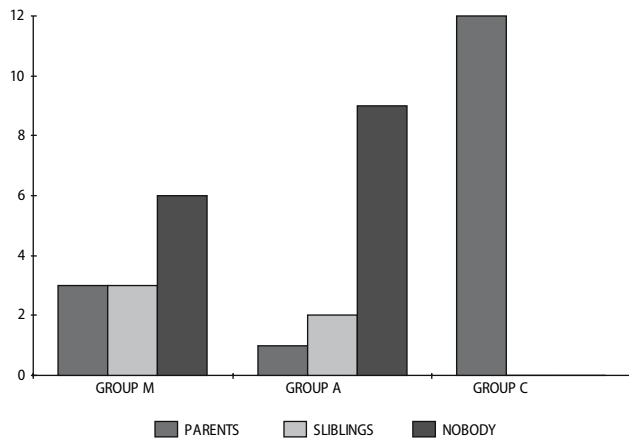
■ **Identification (Graph 4)**

A statistically significant difference results if we compare children of Group M with those of Group A ($\chi^2 = 6.476$; $P = 0.038$).

Physically abused minors tend to identify in the 67% of cases with *themselves*, 33% with *others* (animals, friends, brothers and sisters, etc.) and only 0% of the assessed cases identifies with their *parents* or with *nobody*; 42% of the sexually abused children will identify with *nobody*, 33% with *themselves*, 25% with *others*, and 0% with their *parents*.

The study furthermore reveals a statistically significant difference between Group M and Group C ($\chi^2 = 12.8$; $P = 0.005$). Children of the matched control group identify in 50% of cases with one of their *parents*, 42% with *others* (brothers, sisters), 8% with *themselves*, and 0% with *nobody*. Graph 4 shows the choice of identification in the three samples.

■ **Emotional proximity (Graph 5)**

Comparison between group M and group A does not bring to our attention any statistically significant difference ($\chi^2 = 1.8$; $P = 0.591$).

the physically abused children and 42% of the sexually abused ones.

No statistically significant difference results between the two clinical groups ($\chi^2 = 2.692$; $P = 0.556$). A statistically significant difference does show between children who have been physically abused and the matched control group ($\chi^2 = 12.571$; $P = 0.002$) and between the sexually abused children and control group ($\chi^2 = 11.571$; $P = 0.009$).

Graph 2 shows how the children of the three samples omitted some family members.

■ **Body distortion (Graph 3)**

On a graphic level we have reported the immaturity in the drawings of 17 of the children in our sample groups.

Distribution of the variable tested by χ^2 has not proved statistically significant in comparing physically abused and sexually abused children ($\chi^2 = 1.2$; $P = 0.273$).

Graph 5 Affective proximity

In Group C the totality of children, 12 out of 12, graphically locate themselves near, or between, the parent couple.

Assessment and comparisons of the drawings have highlighted a statistically significant difference between group M and group C ($\chi^2 = 14.4$; $P = 0.001$) and between group A and group C ($\chi^2 = 20.307$; $P = 0.001$).

Graph 5 shows the distance that the children draw between themselves and other family members.

◾ Depressive feelings

No statistically significant differences emerge between the clinical sample groups ($\chi^2 = 0.75$; $P = 0.609$). A significant difference does show in comparing groups M and C ($\chi^2 = 14.4$; $P = < 0.001$), and groups B and C ($\chi^2 = 9.882$; $P = 0.002$).

Both groups express their emotional distress in similar ways and both differ from the matched control group. Their mental affliction encompass feelings of sadness, loneliness and anguish: the threat is represented hanging over their heads, like sharp pointed shapes, black clouds or enormous menacing birds. Or a motionless figure that stands out alone on the white paper.

◾ Relationship anxiety/anguish feelings

No statistically significant difference emerges between the clinical standards ($\chi^2 = 0$; $P = 1.00$). There is a significant difference between group A and group C ($\chi^2 = 6.75$; $P = 0.009$) and between group A and group C ($\chi^2 = 6.75$; $P = 0.009$). The are no substancial diversities between the two clinical groups but they are both significantly different from the matched control group. Their suffering is shown by faces with

absolutely no details, by distorted bodies and by their drawing themselves small and isolated.

Discussion

The findings from the recent literature suggest that drawing techniques are largely concerned with evaluation of emotional states of children, because drawings are useful for the identification of emotional problems in children. Their use is all the more valid when one considers that children are able to convey in their drawings thoughts and feelings they cannot express in speech or writing. This may be particularly true of abused children (physically and sexually abused children) who feel fear to talk about the abuse. Only two drawing techniques specifically convinced for the assessment of physically and sexually abused children have been identified: The Favourite Kind of Day Drawing [38] and the Kinetic FDs [40].

We have decided to use the FD Test [8] because it is widely employed as a test in psychodiagnostic assessment and it aims to investigate the relationship that children have established with their parents and with other family members.

The FD is not a test to determine if a child has been abused or not, but it's a good "method of allowing abused children to communicate more freely" and to express their feelings about their family [37, 39]. The FD helps professionals to recognise emotional distress in children, but it cannot be used as an indicator of abuse (physical or sexual abuse).

Carpenter [4] has found that physically children were more likely to distort the bodies they draw. In our sample, physically abused children draw schematic bodies, often barely outlined or sketched. The drawings are poor of details and the use of perspectives is missing even in children older than seven years old. The most disturbing fact concerns the distortions and schematization of the body, the absence or deformity of the face. Distortion suggests a poor image of its own body.

Children who have been sexually abused don't show homogeneous characteristics, only half of them appear to be inadequate in the graphic representation.

A significant number of the assessed sexually abused children draw distorted bodies. Physical contact with adult sexuality generates an altered perception of their own body model. Puppets are devitalized by drawing faces void of any expression.

We think it noteworthy to emphasize how the "eroticization of the picture," one of the aspects generally considered important in the sexual abuse literature [39] in our study has emerged on two

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children only out of a total of 12. We think that sexual abuse creates a deformation much more complex and involving the whole body.

In the control group both distortion and schematization are absent. These children accomplish articulate drawings, the body is rich in details and the human figures are complete.

We may consider the graphic poverty and the immaturity of the drawings as a first indicator of the distress. The distress involves the mind functions in the symbolic-representative domain.

Intelligent children who draw in an immature way are seeking the specialist's attention, but only a comprehensive assessment will indicate the diagnostic and the therapeutic direction that needs to be undertaken.

The other important indicators of distress in our study are the omission of parents and the identification.

In the drawings of Physically abused children the parents are the most omitted figures. Outside figures not pertaining to the family group are added to the picture, mostly friends or children of the same age, animals and/or objects.

The omission of the parents shows problems in the identification process. To remove the caregiver is an important indicator of emotional distress *(D., (Fig. 1), instead of his family, draws a little fish that calls for "HELP," while a bigger fish is about to swallow it)*.

All physically abused children exclude their parents from their drawings. Their wish to be someone else is surmounted by a reality choice: *to be themselves.* The literature on the subject shows that it is all-important, in the years of growth, the choice of an "engram" revolving around the idea of a family with a father, mother and child, and that 75% of the children will choose this particular "engram" [31].

(*C. draws the picture of a little house in a corner and comments "the house of a **puppy**... father breaks down the house... they find a kitten, but the dog kills her"*).

Half of the assessed children draw themselves alone or isolated. Only three of them are standing by their mother and three of them are near a brother.

Sexually abused children will either erase themselves or their parents. In one instance the whole family is removed (*G.,* Fig. 2, *draws only a stylized house in the midst of a very rough sea; S. Draws three figures suspended in mid air, with no hands, and a male figure, but she leaves herself out of the picture*).

About the identification, all sexually abused children exclude their parents from their choices. Both the wish to be themselves and the wish to be "nobody" will count in equal measure.

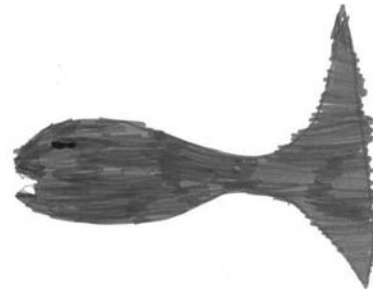It is interesting to note that both abusive and non-abusive parents are perceived as undesirable, this

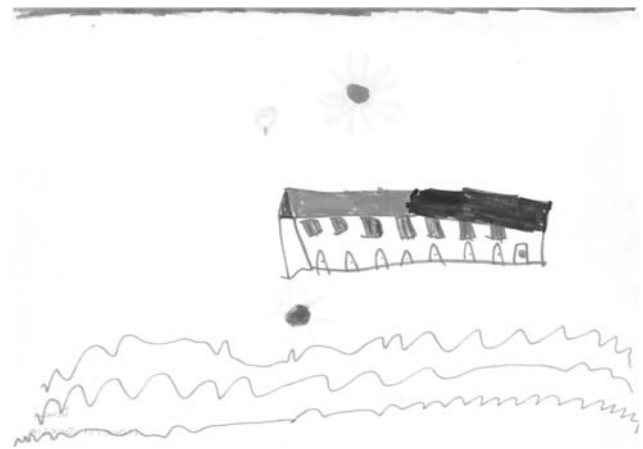**Fig. 1** Family drawing of a physically abused child

Fig. 2 Family drawing of a sexually abused child

confirms that sexual abuse involves the whole family. The wish to be themselves confirms the children's attempt to rely on their own resources, but the wish *not to be like anybody else* appears to be the extreme resource of a child crushed by reality who cannot even find a way to escape.

It is significant that almost the totality of the assessed sexually abused children portray themselves in total isolation. The wish of isolation from the family, and more specifically from the parents, may put these children at risk to miss the all important investments that are essential requisites for the identity process.

Castellazzi et al. [5, 6] have shown that usually normal/non-abused children draw not real and complete family, with all the family members. Our control group confirms these dates: children from the normal sample group never omit one of their parents. The Parent couple is eloquently enhanced. All normal children draw themselves next or in between their parents.

(*G.,, draws her parents that walk arm in arm while she smiles at them; L.,* Fig. 3, *draws a family group rich in details and the parents couple surrounds three differently aged children*).
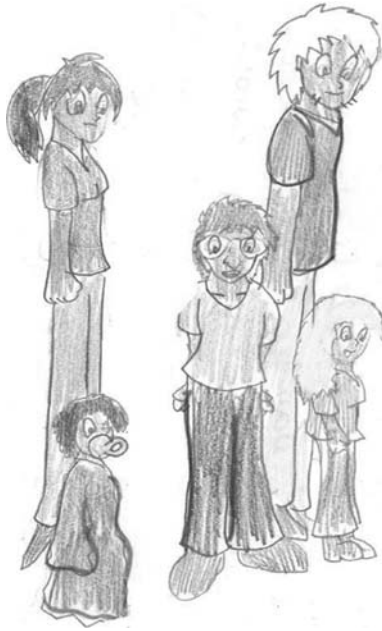
Fig. 3 Family drawing of a non-abused child

About identification, normal children are equally divided between the wish to be one of their parents or one of their brothers, these conclusions are confirmed by the literature on the subject [2] where it is shown the need of models but also the tensions of competition between both brothers and sisters, a compatible process with the normal family dynamics.

The Fig. 1 shows a FD of a physically abused child, the Fig. 2 of a sexually abused child and the Fig. 3 of a normal child (control group).

Conclusion

The limited number of assessed cases does not allow us to draw conclusions so we limit ourselves to suggest cues for reflections on the problem.

According to the most recent literature on the subject we have chosen to distance our study from Corman's traditional interpretation [8] and to privilege an interpretation that would reflect the emotional point of view the child has of itself and its family [1, 25, 26].

Our data, in concordance with literature [4–6, 12, 18], show that FD characterizes the normal from the emotionally stressed populations. All the variables that have been taken into consideration distinguish in a statistically significant percentage clinical cases from the control group.

Children who have suffered any form of abuse, (either physical or sexual) tend to project their inner drama in their drawings: their past experiences of loneliness, esclusion, anxiety, and inadequacy emerge both in the graphic and in the contentual analysis.

Our results and the last researches cited confirm that the FD is a good method to identify the child emotional distress in physically and sexually children. It seems that the most significant indicators of emotional distress are the body distortion, the omission of the parents and the identification.

In Sexually abused children the answer "nobody" gives us a clear signal of a rising disinvestments from emotional relations.

All children who have been exposed to violence and to the abuse of their bodies, but specially of their minds, reflect a pain, a distress, in the 'grand theatre of affectivity" [21].

Family Drawing cannot single out individual cases by traumatic events but can describe their effects and the psychopathological points of view and thus help the clinicians in their understanding of children mental distress.

One major limitation of this study is the small size that limits the interpretations of the results. A more comprehensive study involving more participants is required in order to evaluate the real significance of the FD Test with abused children.

The findings of this study confirm that FD is not suitable for the identification of abused children, but it is a good method to recognize the emotional distress in children. It should be used as a part of a larger assessment to help professionals (child and adolescent psychiatrists and psychologists) to understand better suffering children.

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