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Children's family drawings and internalizing problems

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ABSTRACT

The aim of this study was to examine the associations between specific indicators in children's family drawings and their internalizing problems among Two hundred twenty-two Israeli children ($M = 9.70$). Drawings were coded using Kaplan and Main's (1986) coding system. Indicators reflecting attachment insecurity, such as omitting and adding parts of the figures, adding bizarre marks and lack of femininity, were correlated with internalizing problems. In addition, different associations were found among boys and girls. Among girls, better grounding and centering of the figures, movement, feminine marks and distance from both parents were negatively associated with internalizing problems, while bizarre marks were positively associated. For boys, centering of the figures, sweetness, distance from mother and the addition of strange objects were positively correlated with maladjustment, while completeness of figures and gender differences were correlated negatively. Moreover, our study depicted a moderation of children's gender on the associations between specific indicators and children's internalizing problems. Discerning specific and relatively easily-coded features in children's family drawings may be a useful research and clinical tool to identify internalizing problems.

The aim of this study was to examine the associations between specific indicators in children's family drawings and their internalizing problems among Israeli children of low socioeconomic status. Note, however, that generalization from our study to other socio-cultural contexts should be made cautiously, and it is important that its findings also be replicated in other samples.

Children's internalizing problems

Internalizing problems (anxiety, depression, somatic complaints, and social withdrawal) is distressing, disabling and prevalent (e.g., Bell-Dolan, Last, & Strauss, 1990; Campo et al., 2004; Feldman, Ortega, Koinis-Mitchell, Kuo, & Canino, 2010; Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993; Schulte & Petermann, 2011; Weersing, Rozenman, Maher-Bridge, & Campo, 2012) among children and youth. Children who exhibit internalizing problems are at risk for poor outcomes including peer relationship difficulties, lower social competence, poor school achievements and poor teacher-student relationships (Baker, Grant, & Morlock, 2008; Henricsson & Rydell, 2004, 2006).

Specifically, symptoms of depression among children are associated with irritability, behavior problems, decreased academic performance, difficulties in interacting effectively with classmates and family members, cognitive changes, more school absenteeism and early school dropout (Frühe et al., 2011; Goodwin, 2006; Masip, Amador-Campos, Gómez-Benito, & del Barrio Gándara, 2010). Children and adolescents with symptoms of anxiety demonstrate low levels of well-being, impairments in school and social functioning and a high incidence of behavior problems (Essau, 2003; Katrien Verstraeten, Bijttebier, Vasey, & Raes, 2011; Muris, 2006). Similarly, children with somatic complaints such as recurrent abdominal pain, headaches and asthma (Feldman et al., 2010) are more likely to experience adjustment difficulties. For example, children's headaches showed strong, positive associations with loneliness (Løhre, Lydersen, & Vatten, 2010). Recurrent abdominal pain is associated with problems of school absence and performance, as well as co-morbidity rates of anxiety and depression (Campo et al., 2004; Garber, Zeman, & Walker, 1990; van der Veek, Derkx, de Haan, Benninga, & Boer, 2010, Walker, Garber, Van Slyke, Greene, 1995).

Furthermore, research on the development of children's internalizing problems demonstrates that, on average, the problems increase with age (Bongers, van der Ende, & Verhulst, 2003). Left untreated, anxiety and depression in youth may lead to the continuation of internalizing problems in adulthood (Pine, Cohen, Gurley, Brook, & Ma, 1998), health problems (Bittner et al., 2007; Brady

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& Kendall, 1992), lower educational attainment, poor vocational history and adult substance use (Keller et al., 1992; Lewinsohn, Rohde, & Seeley, 1998; Weissman et al., 1999). Reports of childhood somatic complaints predict adult psychopathology and enduring pain in adulthood (Gureje, Simon, & Von Korff, 1989).

Given the considerable harmful effects of children's internalizing problems on various life domains, it is important to identify early precursors of these problems, especially since they are internal in nature, less salient and often more difficult to detect. However, children's drawings may expose their inner world and offer an alternative to words for self-expression (Behrens & Kaplan, 2011; Cherney, Seiwert, Dickey, & Flichtbeil, 2006; Hamama & Ronen, 2009). Thus, using children's drawings may provide an additional channel to detect children's concealed distress.

Children's internalizing problems and drawing

Several studies have tried to identify indicators of internal distress in children's and adolescents' drawings, mostly using the Human Figure Drawing (HFD) or Draw A Person (DAP) tests. Numerous studies referred to the size of the figure, assuming that small and miniaturized figures might reflect low self-concept, depression and lack of energy (Saneei, Hadi Bahrami, & Haghegh, 2011); while others used the drawings to differentiate between normative and pathologic populations. For example, ADHD children drawn from public schools in Iran (Saneei et al., 2011; $n = 60$) drew significantly shorter people than their normative counterparts. Figure drawings of oncology-patient school children were significantly smaller in height, width and area than the drawings of non-hospitalized school aged children and children who underwent general surgery (Paine, Alves, & Tubino, 1985; $n = 24$).

Tharinger and Stark (1990) differentiated the DAPs of 39 children with mood and anxiety disorders from those of 13 control group children. Utilizing 38 Koppitz (1968) emotional indicators (e.g., broken or sketchy lines, poor integration of parts of figure, shading of all or part of the face, omission of body parts and special features such as tiny or large head, clouds, rain or snow) the researchers found that children with mood and mood/anxiety disorders scored higher on these indicators. However, children with anxiety disorders did not differ from the control group. In another study, anxiety scores and number of fears were correlated with the number of Koppitz emotional indicators among 8–12-year-old children (Carroll & Ryan-Wenger, 1999).

Finally, shaky, unstable, feathery lines, quick, impatient pencil lines, shadowy "bearded lines", inconsistency in body outline, slash lines in neck and on forearm and overall impression in HFDs were associated with suicidal behavior among 90 adolescent psychiatric patients (Zalsman et al., 2000). Nevertheless, size, detail and line weight in children's drawings were not associated with self-reported depression or anxiety among eighty 6–16 year old children and adolescent psychiatric inpatients (Joiner, Schmidt, & Barnett, 1996).

In sum, the research on children's internalizing problems is quite limited. Most studies did not directly examine children's internalizing problems, but rather focused on specific pathological populations (Anderson, 2001) and were based on relatively small sample sizes. Moreover, the evaluation was based mostly on the Human Figure Drawing or Draw a Person tests, and the possible role of gender was not examined.

Given this paucity, and in order to facilitate the identification of children's internalizing problems among non-clinical groups of children, the current study used Kaplan and Main's (1986) coding system, based on the attachment theory, to analyze family drawings to detect children's internalizing problems.

Attachment theory

The attachment theory posits that individuals' mental health is intimately tied to relationships with attachment figures that provide emotional support, comfort and protection. Children's actual experiences with their caregivers shape their representational models, which subsequently serve as a guide to their behavior in novel circumstances (Bowlby, 1969; Bretherton & Munholland, 2008). Children who experienced consistently responsive, available, helpful and warm caregiving are likely to develop a sense of security. They perceive others as trusted and supportive when needed; develop trust in others, comfort with closeness and adaptive ways of dealing with stress (Bretherton, 1985). In contrast, insecure attachment is expressed in discomfort with closeness and an inclination for self-reliance (avoidant attachment), or in an intense wish for closeness and concern about partner's availability (ambivalent attachment) (Mikulincer & Shaver, 2006).

Children with secure attachment function better emotionally, socially and academically than their counterparts (see Weinfield, Sroufe, Egeland, & Carlson, 2008). They display better peer acceptance and social functioning (Kerns & Stevens, 1995; Kerns, Kelpac, & Cole, 1996), as well as better behavioral adjustment and emotional regulation (Granot & Mayseless, 2001; Thompson & Meyer, 2007). Moreover, secure attachment was also associated with less anxiety and less depressive symptomatology (Abela et al., 2005; Brenning, Soenens, Braet, & Bosmans, 2011; Davies & Woitach, 2008; Essex, Klein, Cho, & Kraemer, 2003; Richaud de Minzi, 2006; Warren, Emde, & Sroufe, 2000; Yahav, 2007).

Family drawings – Kaplan and Main's coding system for analyzing children's family drawings

Kaplan and Main's coding system for analyzing children's family drawings contains a set of indicators that aim to classify children's family drawings according their attachment security. Drawings by securely attached children are realistic; their figures are complete, grounded, centered and individuated (figures appear unique and are not drawn exactly alike). There is a natural proximity among family members and an impression of happiness in the drawing. Drawings by insecurely attached children are characterized by a lack of individuation of the figures and lack of movement in the picture. The figure's arms may be missing or drawn in a way that does not allow holding. Moreover, the figures are extremely large or small, soft body parts and facial features are exaggerated and figures either overlap or are separated by barriers. Finally, drawings by insecurely attached children might include strange marks, threatening and fantasy themes, unfinished objects or figures, and sometimes excessive and irrational sweetness (Kaplan & Main, 1986).

Recently researchers have started using Kaplan and Main's (1986) coding system to assess children's attachment representations (e.g. Behrens & Kaplan, 2011; Fihrer & McMahon, 2009; Goldner & Scharf, 2011; Kaplan & Main, 1986; Madigan, Ladd, & Goldberg, 2003; Pianta, Longmaid, & Ferguson, 1999), or to examine the associations between children's attachment classifications as assessed by their family drawings and their adjustment, indicating better adjustment in the social, academic and behavioral realms among securely attached children.

For example, kindergarten children with drawings judged as secure were rated more sociable with their peers, more task oriented and more socially competent than insecurely ambivalent children (Pianta et al., 1999). The superior functioning of securely attached children was also evidenced in Goldner and Scharf's (2011) study among 9–12 year old Israeli children, which found that securely attached children exhibited higher levels of pro-social

behavior and lower levels of conduct problems than their counterparts.

The current study focused on the emotional realm and tried to identify specific markers in children's family drawings that are associated with their internalizing problems, as reported by the children themselves, their parents and their teachers. Based on previous studies demonstrating the associations between children's attachment security and their levels of anxiety and depressive symptoms, we hypothesized that high levels of markers in family drawings indicative of attachment insecurity, and lower levels of markers that are indicative of attachment security, would be associated with high levels of internalizing problems.

Gender differences in children's drawings

Gender differences in children's free drawings are demonstrated in motifs, figure compositions, colors and expression (Iijima et al., 2001). Boys tend to draw mobile objects, mechanical objects and buildings, whereas girls have a greater tendency to draw human motifs, domestic scenes, flowers, animals and butterflies. Boys' thematic choices also appear to be more supernatural, outside of the everyday and include fantasy objects such as spaceships, monsters and dinosaurs; whereas girls prefer to portray kings and queens (Arteche & Murray, 2011; Feinburg, 1977; Flannery & Watson, 1995; Iijima et al., 2001; Picard & Boulhais, 2011). Boys tend to depict more violent and aggressive scenes, whereas girls portray more peaceful and tranquil scenes (see Figs. 1 and 2; Feinburg, 1977; Reeves & Boyette, 1983).

Gender differences were also observed in figure composition, with boys using more aerial or bird's eye views and girls using more raw or frontal arrangements in their drawings. Moreover, color use has been shown to vary in representational drawings by boys and girls (Iijima et al., 2001; Milne & Greenway, 1999; Richards & Ross, 1967; Turgeon, 2008). Girls use a broader and warmer (pink, purple) range of colors, whereas boys use fewer, colder (dark) colors (see Figs. 3 and 4). These gender differences may result either from biological differences (e.g., hormones and the level of prenatal androgen exposure; see Iijima et al., 2001) or education (Flannery & Watson, 1995; Karniol, 2011).

Finally, gender differences in children's drawings have been also detected in their expressiveness. Girls scored higher than boys on the expressive drawing task. They tend to include more body parts and clothing in their figures (Koppitz, 1968). Furthermore, girls relied less on simple, literal, figurative strategies alone and were more likely to combine literal and figurative expression with metaphorical and abstract expression (Picard & Boulhais, 2011). They draw more happy faces on people and animals, and their drawings often include a smiling sun or trees with lowered limbs and frowns (Arteche & Murray, 2011; Flannery & Watson, 1995).

Because drawings are often determined, interpreted and used as a diagnostic tool, it is important to examine gender differences (Cherney et al., 2006). Since boys and girls differ in their ability to produce representational drawings, common, as well different, associations between the markers and internal distress across the two genders were expected. Hence, the moderating role of gender will be also examined.

Method

Two hundred twenty-two children, their parents and their homeroom teachers participated in the study. Children were drawn from nineteen elementary schools in low SES neighborhoods in the northern part of Israel, located in both peripheral and central areas. 55% of the children were boys ($n = 121$) and 45% were girls ($n = 101$). Mean age of the children was 9.70 years (range 8–12; $SD = 1.14$); mean age of the parents was 43 years ($SD = 7.30$). 53% of the children were from two-parent families, 28% were children from divorced families and 19% from single-parent families. 62% of the children were born in Israel, and the others were immigrants (most from the former Soviet Union). Children had an average of 2.38 siblings (range 1–11; $SD = 1.56$).

Procedure

After receiving permission from the Ministry of Education, and consent from the children and their parents, parents and children completed their questionnaires during home visits, in their natural surroundings, conducted by trained research assistants. Homeroom teachers completed their questionnaires in their free time.

Measure

Family drawing

Children were asked to draw their families, on white paper, using 8 colored felt-tipped pens. After they completed the drawings, the research assistants wrote the identity of each figure and any additional information the child noted. Two coders coded all drawings using Kaplan and Main's (1986) attachment classifications that focus on location of the figures (figures are grounded and centered), natural proximity among family members, genuine smile, size of figures (realistic, large or small), emphasis of soft body and facial parts (belly, lower body, eyes and nostrils), missing father or mother, degree of movement, individualized characteristics, completeness of figures, missing arms or arms drawn in a way that does not allow holding, exaggerated sweetness or overly bright drawings, addition of strange, bizarre, inexplicable or unfinished objects, omission of unexpected elements from the drawing, scratched out figures and restarts.

A detailed manual, based on Kaplan and Main's work, was adapted, delineating specific examples to diminish ambiguity. The training and adaptation of the manual, including reliability examination, was initially constructed based on another sample. The intra-class reliability between the two coders ranged between .70 and 1.00. Disagreements between coders were resolved by consensus.

Children's Depression Inventory (CDI: Kovacs, 1985) includes 27 items requiring children to choose one of three sentences that describe varying degrees of severity of symptoms. The depression score is calculated by summing the items. The Depression Inventory is widely used (Toblin, Schwartz, Hopmeyer Gorman, & Abou-ezzedine, 2005). Cronbach alpha is .86 in the original research and .76 in the current research.

To tap children's internalizing problems homeroom teachers and parents completed the emotional symptoms subscale from the *Strengths and Difficulties Questionnaire*, rated on a 3-point scale (*SDQ*; Goodman, 1997). The subscale contains aspects of sadness, anxiety and physical complaints (e.g., "Often complains of headaches, stomach-aches or sickness", "Many worries or often seems worried", "Often unhappy, depressed or tearful") and is highly correlated with the Child Behavior Checklist internalizing problems score and with the Revised Children's Manifest Anxiety Score (Muris, Meesters, & van den Berg, 2003). The internal consistency of the subscale has been shown to be good, with a mean alpha of .70 (Muris et al., 2003), and in the current study .71 for teachers and .58 for parents. The relatively low internal consistency for parents was also found in the study of Stone, Otten, Engels, Vermulst, and Janssens (2010), which found lower psychometric properties

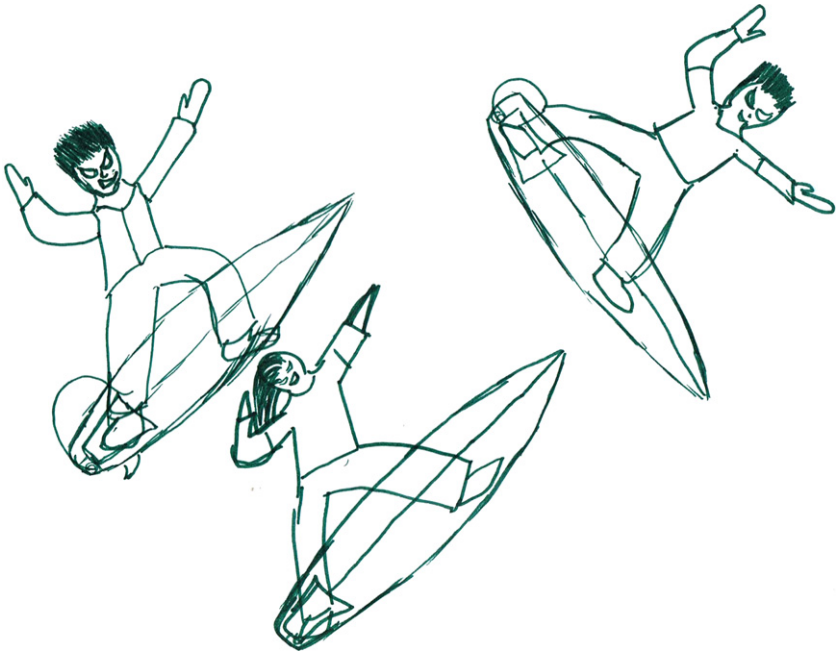

Fig. 1. An example for boys' figure composition, thematic, and color choice.

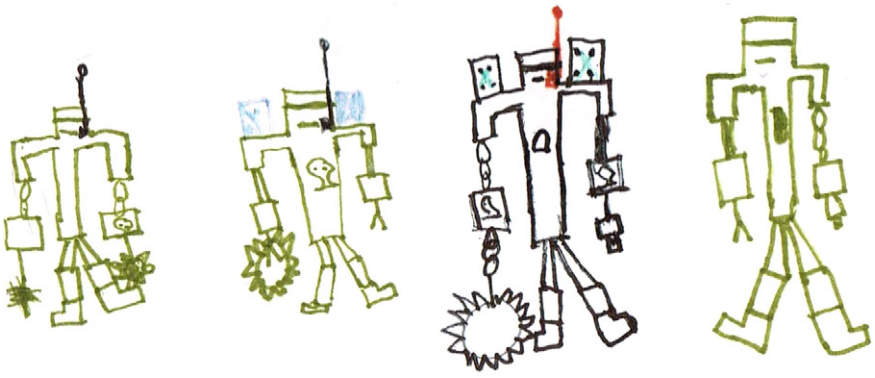

Fig. 2. An example for boys' thematic choice.

of the SDQ among parents than among teachers across 48 studies that used this inventory.

Results

The relationships between elements of drawing and internalizing problems

First, using partial Pearson correlations (ranging from +1 to −1, with a correlation of +1 meaning that there is a perfect positive linear relationship between variables), we examined the associations between elements of drawings and children's internalizing problems, controlling for child's gender. Only a small number of relatively small associations emerged. Omitting unexpected elements from the figures was positively associated with children's depression (.23, $p < .001$). Adding strange objects was positively associated with parents' (.12, $p < .05$) and teachers' (.13, $p < 05$) reports regarding emotional symptoms, whereas gender differences in the figure drawings and feminine indicators were negatively associated with teachers' (−.13, −.18 respectively, $p < 05$) and parents' reports (−.16, −.21 respectively, $p < 01$) regarding emotional symptoms. Finally, bizarre marks and distance from mother, were positively associated (.12, .15 respectively, $p < 05$) with parents' reports on children's emotional symptoms (see Figs. 5–7).

In sum, our hypothesis was partially confirmed. Indicators reflecting attachment insecurity were associated with high scores for internalizing problems. Specifically, omitting and adding unexpected parts of the figures, adding bizarre objects to the drawings and lack of femininity were prominent. However, the markers indicating attachment security were not associated with lack of internal distress.

The relationships between indicators of the drawing and internal distress among boys and girls

Next, Pearson correlations were computed to examine the associations between elements of drawing and children's internalizing problems for boys and girls separately. As can be seen in Table 1, omitting unexpected elements was positively associated with depression across both genders, while feminine markers were negatively associated with parents' reports regarding emotional symptoms. Among girls, better grounding of the figures

Fig. 3. An example for girls' thematic choice, over sweetness, and color choice.

was negatively associated with parents' reports regarding emotional symptoms, while bizarre marks were positively associated with these reports. Centering of the figures, movement and distance from mother were negatively associated with depression among girls. Finally, distance from father and feminine marks were negatively associated with teachers' reports regarding emotional symptoms.

Looking at boys, unexpected and better centering of the figures was positively associated with depression, while completeness of figures and exaggerated sweetness/brightness were negatively associated with depression. Adding strange objects was positively associated with parents' and teachers' reports regarding emotional symptoms. Gender differences in drawings were negatively associated with parents' reports regarding emotional symptoms. Finally,

Fig. 4. An example for girls frontal arrangement.

Fig. 5. An example for omitting facial parts and adding strange marks.

distance from mother was positively associated with teachers' reports regarding emotional symptoms among boys.

The moderation of gender

To examine the possible moderating role of gender, we examined the associations between markers in the drawings and internalizing problems separately for each gender. Using the Fisher *R*-to-*Z* transformation, *Z* value was calculated to assess the significance of the difference between the two correlation coefficients in boys and girls. Whereas better grounding was positively associated with parents' reports regarding distress among boys, it was negatively associated with distress among girls ($Z = 2.12$, $p < .05$). A similar picture was revealed regarding the relations between centering of figures and depression ($Z = 2.98$, $p < .01$) and teachers' reports on distress ($Z = 1.73$, $p < .05$), and between exaggerated

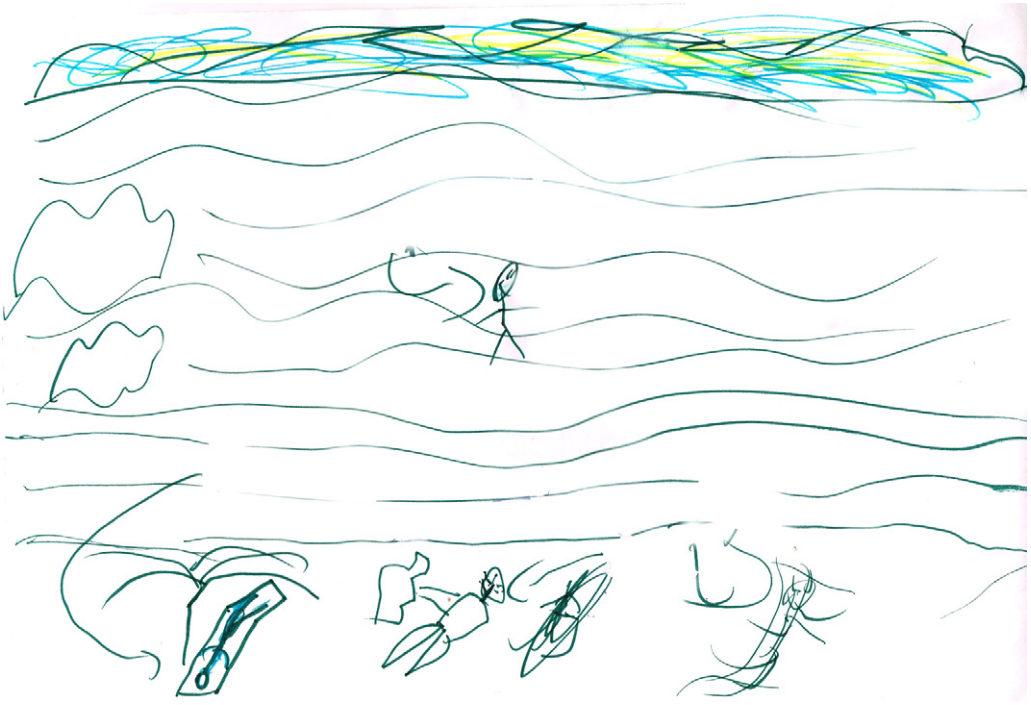

Fig. 6. An example for omitting facial parts and adding strange objects.

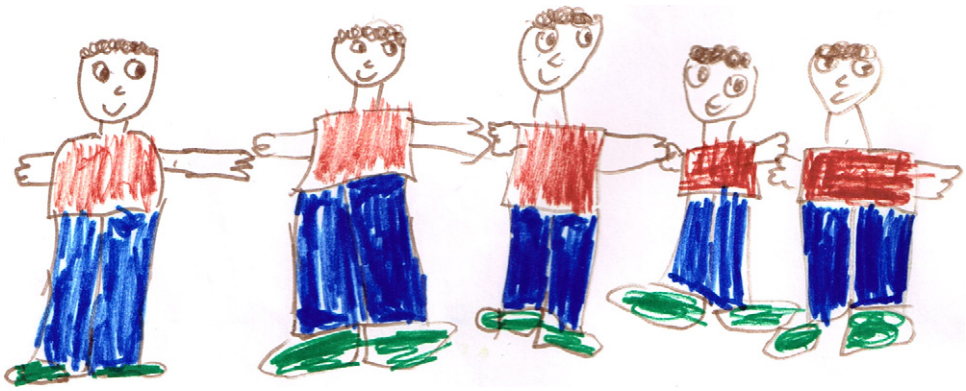

Fig. 7. An example for lack of feminine markers and gender differentiation.

Table 1
The relationships between drawing indicators and internal distress among boys and girls.

	Depression – children's report	Symptoms – parents' report	Symptoms – teachers report
Figures are grounded	.06	.03	.02
	−.14	**−.26****	**−.12**
Figures are centered	.18*	**−.03**	.12
	−.23*	**−.07**	**−.12**
Completeness of figures	**−.16***	**−.03**	.03
	−.06	**.06**	**.03**
Exaggerated size	**−.01**	**−.01**	.11
	−.08	**−.07**	**−.12**
Small/tiny size of figures	**−.05**	.01	**−.04**
	−.05	**−.10**	**.04**
Emphasis of soft body and facial parts	.09	**−.07**	**−.01**
	.09	**.08**	**.05**
Natural proximity	**−.01**	**−.01**	**−.09**
	.08	**.13**	**.04**
Genuine smile	.07	.08	**−.04**
	−.09	**.07**	**−.07**
Individuation	**−.03**	**−.04**	**−.07**
	−.15	**.03**	**−.08**
Movement	.01	.07	.11
	−.18*	**−.15**	**−.07**
Adding strange objects	.11	.16*	.20*
	.01	**.13**	**.13**
Omitting unexpected elements	.25**	**−.05**	.06
	.30**	**.02**	**.09**
Bizarre marks	.09	.11	.11
	.04	**.19***	**−.02**
Scratch out/restarts	.01	**−.02**	.11
	−.08	**.06**	**−.06**
Sweetness/exaggerated brightness	.22**	.05	**−.15**
	−.03	**−.03**	**.15**
Gender differences	**−.09**	**−.20***	**−.09**
	−.02	**−.13**	**−.18**
Feminine indicators	**−.06**	**−.17***	**−.10**
	−.03	**−.25***	**−.28****
Distance from mother	.14	.10	.19*
	−.21*	**.12**	**−.18**
Distance from father	.12	.13	.15
	−.01	**.01**	**−.23***
Arms do not enable holding	.05	**−.10**	**−.03**
	.07	**.06**	**.12**

Note: The first row of each indicator refers to boys. The bold numbers refer to girls.
$^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

figure size and teachers' reports ($Z = 1.65$, $p < .05$). Exaggerated sweetness/brightness was positively associated with depression among boys depression and negatively associated among girls $Z = 1.81$ $p < .05$). A contrasting picture was revealed regarding the association between exaggerated sweetness/brightness and teachers' reports regarding emotional symptoms ($Z = 2.16$, $p < .05$). Distance from mother was positively associated with depression among boys and teachers' reports regarding emotional symptoms, and negatively associated with depression among girls and teachers' reports regarding girls' emotional symptoms ($Z = 2.53$, $p < .01$; $Z = 2.68$, $p < .01$). Finally, distance from the father was positively associated with teachers' reports regarding boys', and negatively with girls', emotional symptoms ($Z = 2.76$, $p < .01$).

In sum, findings indicate that different indicators are associated with boys and girls internalizing problems. Moreover, our study evinced a moderation of children's gender on the associations between specific indicators in children's family drawings and their internalizing problems. Grounding and centering of figures were unexpectedly negatively associated with boys' adjustment and positively associated, as expected, with that of girls. Distance from both parents was associated with better adjustment for girls, whereas for boys it was related to maladjustment. Finally, the picture regarding the associations between sweetness and maladjustment was mixed in both genders. Sweetness was positively associated, as expected, with depression among boys, but not among girls. However, sweetness was positively associated with teachers' reports regarding girls' emotional symptoms and negatively with boys' emotional symptoms.

Discussion

The current study used Kaplan and Main's coding system to assess children's family drawings as a diagnostic tool to detect children's internalizing symptoms among low SES elementary-school children. Our research indicated that adding strange objects to the drawings, omitting unexpected elements from the figures and lack of feminine signs in female figures were associated with boys' and girls' internalizing problems (Leon, Wallace, & Rudy, 2007).

For example, a higher level of bizarreness was found in family drawings among children of depressed mothers compared to those of anxious mothers, or children from the control group (Arteche & Murray's study, 2011). Children with a high level of merging and enmeshment between parent and child in children's drawings scored lower on teachers' ratings for pro-social behavior and assertiveness, and higher on social problems (Leon et al., 2007). Inter-parental conflict frequency, efficacy of conflict resolution, and child involvement in conflicts reported by mothers were significantly associated with high ratings of role reversal in children's family drawings (Leon & Rudy, 2005). In other studies, omission

of family members (not body parts as in our study) was associated with children's externalizing and internalizing behavior, as reported by teachers and parents (Roe, Bridge, Dunn, & O'Connor, 2006; Dunn, O'Connor, & Levy, 2002).

It seems that drawing complete, individuated, and realistic figures among children with low levels of internalizing problems might indicate a good reality test when referring to, and looking at, the outside world. In contrast, omitting body parts and lack of feminine indicators among children with high levels of internalizing problems might imply an exaggerated internal preoccupation and possibly distorted observation due to emotional turmoil. This suggestion recalls previous findings demonstrating that depressed individuals have distorted self-images based on their concerns about their physical attributes and attractiveness. Patients who rated themselves as less physically attractive tended to be more external in locus of control and more anxious, socially introverted and depressed (for review see Noles, Cash, & Winstead, 1985). Distortions of body image have also been reported among psychotic patients (Chapman, Chapman, & Raulin, 1978; Priebe & Röhricht, 2001).

Furthermore, our study also detects distinctive markers for boys and girls. Among girls, better grounding and centering of the figures, movement, feminine marks and distance from mother and father were negatively associated with internalizing problems, while bizarre marks were associated with higher levels of perceived depression. Among boys, better centering of the figures, exaggerated sweetness/brightness, distance from mother and addition of strange objects were positively associated with maladjustment, while completeness of figures and gender differences in drawings were negatively associated with boys' emotional symptoms.

The difference between boys' and girls' family drawings were previously found in Behrens and Kaplan (2011) research, which found that Japanese girls scored higher than boys in scales that are indicative of attachment security, and lower in those indicating attachment insecurity. Girls scored significantly higher than boys in vitality, which was assessed based on creativity or extra attention to detail and care that the child invested in completing a picture, whereas boys scored significantly higher than girls in bizarreness (evaluated based on elements of unusual marks or symbols) and global pathology (judged based on overall degree of negativity in terms of the organization, completeness of figures, colors, detail, affect, and background scenes; Behrens & Kaplan, 2011).

The different indicators among boys and girls in our study could be explained by gender-related tendencies in their free drawings. As mentioned previously, boys and girls compose their drawings differently, with girls using more raw or frontal arrangements in their drawings and boys using more aerial or bird's eye views. Therefore, girls' natural inclination to use a raw and frontal arrangement might explain the positive association between grounding and centering of figures and the low level of internalizing problems.

However, among boys, who generally organize their drawings in a bird's eye view, probably due to their better visual–spatial perception than girls (Cherney et al., 2006), grounding and centering the figures seems to be a less subtle indicator in detecting internalizing problems. These indicators might reflect boys' spatial development and their ability to view the world aerially, rather than their inner distress. Instead, it seems that indicators that focus on deformation of the figures, such as incompleteness or bizarreness, are a more appropriate indication of boys' internalizing problems.

The associations between bizarre marks and girls' internalizing problems can also be explained by girls' tendency to draw realistic pictures containing human figures, domestic scenes, flowers, animals and butterflies, rather than supernatural fantasy objects and scenes (Arteche & Murray, 2011; Feinburg, 1977; Flannery & Watson, 1995; Iijima et al., 2001; Picard & Boulhais, 2011). For this reason adding bizarre marks may indicate vulnerability among girls and call for further examination.

Our appears between the indicators of family study also showed moderation by gender on the associations between children's drawings and children's internalizing problems. Grounding and centering of figures were negatively associated with boys' adjustment and positively, as expected, with that of girls. Distance from both parents was positively associated with girls' adjustment, whereas this was positively associated with maladjustment in boys. Finally, sweetness was associated, as expected, with depression among boys but not girls.

The positive associations between distance from mother and father and boys' internal distress could be explained by the feelings of sadness and anxiety that may accompany the processes of separation-individuation in early adolescence due to the changes in earlier security (Younnis & Smollar, 1989) and the transformation of the introjected parents (Blos, 1967; Laufer, 1966).

In contrast, the negative associations between distance from mother and father and girls' internal distress could be explained by girls' earlier pubertal development, which might facilitate their growth of autonomy and self-reliance (De Goede, Branje, & Meeus, 2009), and hence may ease the negative feelings that accompany the process of separation-individuation. This suggestion is akin to previous findings in early adolescence among girls, which show higher levels of conflict in parent–adolescent relationships as well as higher levels of autonomy compared to boys (for review see De Goede et al., 2009). Furthermore, girls usually tend to stay close to their families, thus lower levels of closeness might reflect adequate distance. Finally, contrary to our expectations, sweetness was not associated with girls' internal distress. This picture could be interpreted as girls' natural inclinations for sweetness in free drawings. They draw more happy faces on people and animals and often include flowers, butterflies, a smiling sun or trees, using pink and purple colors (Arteche & Murray, 2011; Flannery & Watson, 1995). Therefore, it is possible that sweetness is not a refined indicator for girls' internalizing problems.

In sum, our results suggested that specific and relatively easily-coded features of family drawings may be a useful research and clinical tool for identifying boys' and girls' internalizing problems, especially when used in combination with other methods of assessment. Use of an evidence-based tool in coding children's drawings might facilitate clinicians in screening and identifying at-risk children, as well as promote the evaluation of effective intervention during and after termination of therapy.

Moreover, because drawings are often determined and interpreted, in part, on the basis of realism identified by size and place of the figures, boys' or girls' drawings might be misinterpreted if they are interpreted uniformly. Therefore, clinicians and therapists who use family drawings should consider gender-related differences when interpreting the drawings. Likewise, it is also recommended that scholars who explore children's drawing examine their hypotheses among boys and girls separately as well as jointly.

Several limitations of our study should be acknowledged. First, the correlations are small to moderate; thus, the effect size is rather small and generalization from our study should be made cautiously and demands further exploration. The different assessment methods (projective measures versus questionnaires), as well as the different informants (children, teachers and parents), might partially explain the low degree of associations. Hence, it is more difficult to identify internal feelings (for children as well as for their parents and teachers) than to report on more salient behaviors such as aggression, academic functioning or attention and hyperactivity problems. Furthermore, though our sample includes a low socioeconomic population, it is not a sample of children who qualify for a diagnosis of psychopathology, but rather normative elementary school children. Should we examine a clinical sample, the effect

size might be larger and more salient. Additionally, other aspects such as children's temperament, cognitive abilities and general functioning could also be relevant in explaining children's internalizing problems. Future research should examine aspects other than the variables examined in this study in predicting internalizing problems.

The study was conducted in the Israeli cultural context, which is characterized by high family values and close family ties (Lavee & Katz, 2003). It is also important to bear in mind that the study was conducted among a sample of children from families with low socioeconomic status. The relationships between the indicators and internalizing problems might be different in children from different cultures or socio-economic backgrounds. Future studies should reexamine our findings to allow generalizations.

References

Abela, J., Hankin, B., Haigh, E., Vinokuroff, T., Trayhern, L., & Adams, P. (2005). Interpersonal vulnerability to depressive episodes in high risk children: The role of insecure attachment and reassurance seeking. Journal of Clinical Child &. *Adolescent Psychology*, *34*, 182–192. http://dx.doi.org/10.1207/s15374424jccp3401_17

Anderson, F. E. (2001). Needed: A major collaborative effort. *Art therapy*, *18*, 74–78. http://dx.doi.org/10.1080/07421656.2001.10129755

Arteche, A., & Murray, L. (2011). Maternal affective disorder and children's representation of their families. *Journal of Child and Family Studies*, *20*, 822–832. http://dx.doi.org/10.1007/s10826-011-9450-7

Baker, J. A., Grant, S., & Morlock, L. (2008). The teacher-student relationship as a developmental context for children with internalizing or externalizing behavior problems. *School Psychology Quarterly*, *23*, 3–15. http://dx.doi.org/10.1037/1045-3830.23.1.3

Behrens, K. Y., & Kaplan, N. (2011). Japanese children's family drawings and their link to attachment. *Attachment & Human Development*, *13*, 437–450. http://dx.doi.org/10.1080/14616734.2011.602252

Bell-Dolan, D., Last, C. G., & Strauss, C. C. (1990). Symptoms of anxiety disorders in normal children. *Journal of the American Academy of Child & Adolescent Psychiatry*, *29*, 759–765. http://dx.doi.org/10.1097/00004583-199009000-00014

Bittner, A., Egger, H. L., Erkanli, A., Costello, E. J., Foley, D. L., & Angold, A. (2007). What do childhood anxiety disorders predict? *Journal of Child Psychology and Psychiatry*, *48*, 1174–1183. http://dx.doi.org/10.1111/j.1469-7610.2007.01812.x

Blos, P. (1967). *The adolescent passage*. New York: International University Press.

Bowlby, J. (1969). *Attachment and Loss: vol. 1: Attachment*. New York: Basic Books.

Brenning, K., Soenens, B., Braet, C., & Bosmans, G. (2011). The role of depressogenic personality and attachment in the intergenerational similarity of depressive symptoms: A study with early adolescents and their mothers. *Personality and Social Psychology Bulletin*, *37*, 284–297. http://dx.doi.org/10.1177/0146167210393533

Bretherton, I. (1985). Attachment theory: Retrospect and prospect. *Monograph of the Society for Research on Child Development*, *50*(1–2, Serial No. 209), 3–35. http://dx.doi.org/10.2307/3333824

Bretherton, I., & Munholland, K. A. (2008). Internal working models in attachment relationships: Elaborating a central concept in attachment theory. In J. Cassidy, & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research and clinical applications* (2nd ed., pp. 102–129). New York: Guilford Press.

Bongers, I. L., Koot, H. M., van der Ende, J., & Verhulst, F. C. (2003). The normative development of child and adolescent problem behavior. *Journal of Abnormal Psychology*, *112*, 179–192. http://dx.doi.org/10.1037/0021-843X.112.2.179

Brady, E. U., & Kendall, P. C. (1992). Comorbidity of anxiety and depression in children and adolescents. *Psychological Bulletin*, *111*, 244–255. http://dx.doi.org/10.1037/0033-2909.111.2.244

Campo, J. V., Bridge, J., Ehmann, M., Altman, S., Lucas, A., Birmaher, B., et al. (2004). Recurrent abdominal pain, anxiety, and depression in primary care. *Pediatrics*, *113*, 817–824.

Carroll, N. K., & Ryan-Wenger, N. A. (1999). School-age children's fears, anxiety, and human figure drawings. *Journal of Pediatric Health Care*, *13*, 24–31. http://dx.doi.org/10.1016/S0891-5245(99)90097-4

Chapman, L. J., Chapman, J. P., & Raulin, M. L. (1978). Body-image aberration in schizophrenia. *Journal of Abnormal Psychology*, *87*, 399–407. http://dx.doi.org/10.1037/0021-843X.87.4.399

Cherney, I. D., Seiwert, C. S., Dickey, T. M., & Flichtbeil, J. D. (2006). Children's drawings: A mirror to their minds. *Educational Psychology*, *26*, 127–142. http://dx.doi.org/10.1080/01443410500344167

Davies, P. T., & Woitach, M. J. (2008). Children's emotional security in the interparental relationship. *Current Directions in Psychological Science*, *17*, 4269–4274. http://dx.doi.org/10.1111/j.1467-8721.2008.00588.x

De Goede, I. H. A., Branje, S. J. T., & Meeus, W. H. J. (2009). Developmental changes in adolescents' perceptions of relationships with their parents. *Journal of Youth and Adolescents*, *38*, 75–88. http://dx.doi.org/10.1007/s10964-008-9286-7

Dunn, J., O'Connor, T., & Levy, I. (2002). Out of the picture: A study of family drawings by children from step-, single-parent, and non-step families. *Journal of Clinical Child and Adolescent Psychology*, *31*, 505–512. http://dx.doi.org/10.1207/S15374424JCCP3104_9

Essau, C. A. (2003). Comorbidity of anxiety disorders in adolescents. *Depression and Anxiety*, *18*, 1–6. http://dx.doi.org/10.1002/da.10107

Essex, M. J., Klein, M. H., Cho, E., & Kraemer, H. C. (2003). Exposure to maternal depression and marital conflict: Gender differences in children's later mental health symptoms. *Journal of the American Academy of Child & Adolescent Psychiatry*, *42*, 728–737. http://dx.doi.org/10.1016/j.aip.2011.08.002

Feinburg, S. G. (1977). Conceptual content and spatial characteristics in boys' and girls' drawings of fighting and helping. *Studies in Art Education*, *18*, 63–72. Retrieved from:. http://www.jstor.org/stable/1319480

Feldman, J. M., Ortega, N. A., Koinis-Mitchell, D., Kuo, A. A., & Canino, G. (2010). Child and family psychiatric and psychological factors associated with child physical health problems; Results from the Boricua youth study. *Journal of Nervous & Mental Disease*, *198*, 272–279. http://dx.doi.org/10.1097/NMD.0b013e3181d61271

Fihrer, I., & McMahon, C. (2009). Maternal state of mind regarding attachment, maternal depression and children's family drawings in the early school years. *Attachment & Human Development*, *11*, 537–556. http://dx.doi.org/10.1080/14616730903282498

Flannery, K., & Watson, M. (1995). Sex differences and gender-role differences in children's drawings. *Studies in Art Education*, *36*, 114–122. Retrieved from:. http://www.jstor.org/stable/1320743

Frühe, B., Allgaier, A. K., Pietsch, K., Baethmann, M., Peters, J., Kellnar, S., et al. (2011). Children's depression screener (ChilD-S): Development and validation of a depression screening instrument for children in pediatric care. *Journal of Children Psychiatry and Human Development (electronic)*, http://dx.doi.org/10.1007/s10578-011-0254

Garber, J., Zeman, J., & Walker, L. S. (1990). Recurrent abdominal pain in children: Psychiatric diagnoses and parental psychopathology. *Journal of the American Academy of Child and Adolescent Psychiatry*, *29*, 648–656. http://dx.doi.org/10.1097/00004583-199007000-00021

Goldner, L., & Scharf, M. (2011). Children's family drawings: A study of attachment, personality, and adjustment. *Art Therapy*, *28*, 11–18. http://dx.doi.org/10.1080/07421656.2011.557350

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A research note. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, *38*, 581–586. http://dx.doi.org/10.1111/j.1469-7610.1997.tb01545.x

Goodwin, R. D. (2006). Association between coping with anger and feelings of depression among youths. *American Journal of Public Health*, *96*, 664–669. http://dx.doi.org/10.2105/AJPH.2004.049742

Granot, D., & Mayseless, O. (2001). Attachment security and adjustment to school in middle childhood. *International Journal of Behavioral Development*, *25*, 530–541. http://dx.doi.org/10.1080/01650250042000366

Gureje, O., Von Kroff, M., Simon, G. E., & Geter, R. (1989). Persistent pain and well-being. A world health organization study in primary care. *The Journal of the American Medical Association*, *280*, 147–151. http://dx.doi.org/10.1001/jama.280.2.147

Hamama, L., & Ronen, T. (2009). Children's drawings as a self-report measurement. *Child & Family Social Work*, *14*, 90–102. http://dx.doi.org/10.1111/j.1365-2206.2008.00585.x

Henricsson, L., & Rydell, A. (2004). Elementary school children with behavior problems: Teacher–child relations and self-perception. A prospective study. *Merrill-Palmer Quarterly*, *50*, 111–138. http://dx.doi.org/10.1353/mpq.2004.0012

Henricsson, L., & Rydell, A. (2006). Children with behaviour problems: The influence of social competence and social relations on problem stability, school achievement and peer acceptance across the first six years of school. *Infant and Child Development*, *15*, 347–366. http://dx.doi.org/10.1002/icd.448

Iijima, M., Arisaka, O., Minamoto, F., & Arai, Y. (2001). Sex differences in children's free drawings: A study on females with congenital adrenal hyperplasia. *Hormones and Behavior*, *40*, 99–104. http://dx.doi.org/10.1006/hbeh.2001.1670

Joiner, T. E., Schmidt, K. L., & Barnett, J. (1996). Size, detail, and line heaviness in children's drawings as correlates of emotional distress: (More) negative evidence. *Journal of Personality Assessment*, *67*, 127–141. http://dx.doi.org/10.1207/s15327752jpa6701_10

Kaplan, N., & Main, M. (1986). *Instructions for the classification of children's family drawings in terms of representation of attachment*. Berkeley, CA: University of California.

Karniol, R. (2011). The color of children's gender stereotypes. *Sex Roles*, *65*, 119–132. http://dx.doi.org/10.1007/s11199-011-9989-1

Katrien Verstraeten, K., Bijttebier1, P., Vasey, M. W., & Raes, F. (2011). Specificity of worry and rumination in the development of anxiety and depressive symptoms in children. *British Journal of Clinical Psychology*, *50*, 364–378. http://dx.doi.org/10.1348/014466510X532715

Keller, M. B., Lavori, P., Wunder, J., Beardslee, W. R., Schwartz, C. E., & Roth, J. (1992). Chronic course of anxiety disorders in children and adolescents. *Journal of American Academy of Child & Adolescents Psychiatry*, *31*, 595–599. http://dx.doi.org/10.1097/00004583-199207000-00003

Kerns, K. A., Klepac, L., & Cole, A. (1996). Peer relationship and Preadolescents' Perceptions of security in child mother relationship. *Developmental Psychology*, *32*, 457–466. http://dx.doi.org/10.1037/0012-1649.32.3.457

Kerns, K. A., & Stevens, A. C. (1995). Parent-child attachment in late adolescence: Links to social relations and personality. *Journal of Youth and Adolescence*, *25*, 323–342. http://dx.doi.org/10.1007/BF01537388

Koppitz, E. M. (1968). *Psychological evaluation of children's human drawings*. New York: Crune and Stratton.

Kovacs, M. (1985). *The children's depression inventory: A self-rating depression scale for school–aged youngsters*. Unpublished manuscript, North Tonawanda, New York.

Laufer, M. (1966). Object loss and mourning during adolescence. *Psychoanalytic Study of the Child*, *21*, 269–293.
Lavee, Y., & Katz, R. (2003). The family in Israel: Between tradition and modernity. *Marriage and Family Review*, *35*, 193–217. http://dx.doi.org/10.1300/J002v35n01_11
Leon, K., & Rudy, D. (2005). Family processes and children's representations of parentification. *Journal of Emotional Abuse*, *5*, 111–142. http://dx.doi.org/10.1300/J135v05n02_06
Leon, K., Wallace, T., & Rudy, D. (2007). Representations of parent-child alliances in children's family drawings. *Social Development*, *16*, 440–459. http://dx.doi.org/10.1111/j.1467-9507.2007.00392.x
Lewinsohn, P. M., Hops, H., Roberts, R. E., Seeley, J. R., & Andrews, J. A. (1993). Adolescent psychopathology: Prevalence and incidence of depression and other DSM-III—R disorders in high school students. *Journal of Abnormal Psychology*, *102*, 133–144. http://dx.doi.org/10.1037/0021-843X.102.1.133
Lewinsohn, P. M., Rohde, P., & Seeley, J. R. (1998). Major depressive disorder in older adolescents: Prevalence, risk factors, and clinical implications. *Clinical Psychology Review*, *18*, 765–794. http://dx.doi.org/10.1016/S0272-7358(98)00010-5
Løhre, A., Lydersen, S., & Vatten, L. J. (2010). School wellbeing among children in grades 1 – 10. *BMC Public Health*, *10*, 526.
Madigan, S., Ladd, M., & Goldberg, S. (2003). One picture is worth a thousand words: Children's representations of family as indicators of early attachment. *Attachment and Human Development*, *5*, 19–37. http://dx.doi.org/10.1080/1461673031000078652
Masip, A. F., Amador-Campos, J. A., Gómez-Benito, H., & del Barrio Gándara, J. (2010). Psychometric properties of the children's depression inventory in community and clinical sample. *The Spanish Journal of Psychology*, *13*, 990–999. Retrieved from:. http://america.sim.ucm.es/index.php/SJOP/article/view
Mikulincer, M., & Shaver, P. R. (2006). *Attachment in adulthood: Structure, dynamics, and change* (pp. 160–163). New York: Guilford Press.
Milne, L. C., & Greenway, P. (1999). Color in children's drawings: The influence of age and gender. *The Arts in Psychotherapy*, *26*, 261–263.
Muris, P. (2006). Maladaptive schemas in non-clinical adolescents: Relations to perceived parental rearing behaviours, big five personality factors and psychopathological symptoms. *Clinical Psychology & Psychotherapy*, *13*, 405–413. http://dx.doi.org/10.1002/cpp.506
Muris, P., Meesters, C., & van den Berg, F. (2003). The Strengths and Difficulties Questionnaire (SDQ): Further evidence for its reliability and validity in a community sample of Dutch children and adolescents. *European Child and Adolescent Psychiatry*, *12*, 1–8. http://dx.doi.org/10.1007/s00787-003-0298-2
Noles, S. W., Cash, T. E., & Winstead, B. A. (1985). Body image, physical attractiveness, and depression. *Journal of Consulting and Clinical Psychology*, *53*, 88–94. http://dx.doi.org/10.1037/0022-006X.53.1.88
Paine, P., Alves, E., & Tubino, P. (1985). Size of human figure drawing and Goodenough–Harris scores of pediatric oncology patients: A pilot study. *Perceptual and Motor Skills*, *60*, 911–914. http://dx.doi.org/10.2466/pms.1985.60.3.911
Pianta, R. C., Longmaid, K., & Ferguson, K. E. (1999). Attachment-based classifications of children's family drawings: Psychometric properties and relations with children's adjustment in kindergarten. *Journal of Clinical Psychology*, *28*, 244–255. http://dx.doi.org/10.1207/s15374424jccp2802_11
Picard, D., & Boulhais, M. (2011). Sex differences in expressive drawing. *Personality and Individual Differences*, *51*, 850–855. http://dx.doi.org/10.1016/j.paid.2011.07.017
Pine, D. S., Cohen, C., Gurley, D., Brook, J., & Ma, Y. (1998). The risk for early-adulthood anxiety and depressive disorders in adolescents with anxiety and depressive disorders. *Archive of General Psychiatry*, *55*, 56–64. Retrieved from: http://archpsyc.ama-assn.org/cgi/content/abstract/55/1/56
Priebe, S., & Röhricht, R. (2001). Specific body image pathology in acute schizophrenia. *Psychiatry Research*, *101*, 289–301. Retrieved from:. http://www.sciencedirect.com/science/article/pii/S0165178101002141
Reeves, J. B., & Boyette, N. (1983). What does children's art work tell us about gender? *Qualitative Sociology*, *6*, 322–333. http://dx.doi.org/10.1007/BF00986683
Richaud de Minzi, M. C. (2006). Loneliness and depression in middle and late childhood: The relationship to attachment and parental styles. *The Journal of Genetic Psychology*, *167*, 189–210. http://dx.doi.org/10.3200/GNTP.167.2.189-210
Roe, A., Bridges, L., Dunn, J., & O'Connor, T. G. (2006). Young children's representations of their families: A longitudinal follow-up study of family drawings by children living in different family settings. *International Journal of Behavioral Development*, *30*, 529–536. http://dx.doi.org/10.1177/0165025406072898
Saneei, A., Hadi Bahrami, H., & Haghegh, S. A. (2011). Self-esteem and anxiety in human figure drawing of Iranian children with ADHD. *The Arts in Psychotherapy*, *38*, 256–260. http://dx.doi.org/10.1016/j.aip.2011.08.002
Schulte, I. E., & Petermann, F. (2011). Somatoform disorders: 30 years of debate about criteria!: What about children and adolescents? *Journal of Psychosomatic Research*, *70*, 218–228. Retrieved from:. http://dx.doi.org/10.1016/j.jpsychores.2010.08.005
Stone, L. L., Otten, R., Engels, R. C. M. E., Vermulst, A. A., & Janssens, J. M. A. M. (2010). Psychometric properties of the parent and teacher versions of the strengths and difficulties questionnaire for 4–12-year olds: A review. *Clinical Child Family Psychology Review*, *13*, 254–274. http://dx.doi.org/10.1007/s10567-010-0071-2
Tharinger, D. J., & Stark, K. (1990). A qualitative versus quantitative approach to evaluating the Draw-A-Person and Kinetic Family Drawing: A study of mood- and anxiety-disorder children. *Psychological Assessment*, *2*, 365–375.
Toblin, R. L., Schwartz, D., Hopmeyer Gorman, A., & Abou-ezzedine, T. (2005). Social–cognitive and behavioral attributes of aggressive victims of bullying. *Applied Developmental Psychology*, *26*, 329–346. http://dx.doi.org/10.1016/j.appdev.2005.02.004
Thompson, R. A., & Meyer, S. (2007). The socialization of emotion regulation in the family. In J. Gross (Ed.), *Handbook of emotion regulation* (pp. 249–268). Guilford: New York.
Turgeon, S. M. (2008). Sex differences in children's free drawings and their relationship to 2D:4D ratio. *Personality and Individual Differences*, *45*, 527–532. http://dx.doi.org/10.1016/j.paid.2008.06.006
van der Veek, S. M., Derkx, H. H., de Haan, E., Benninga, M. A., & Boer, F. (2010). Abdominal pain in Dutch schoolchildren: Relations with physical and psychological comorbid complaints in children and their parents. *Journal of Pediatric Gastroenterology and Nutrition*, *51*, 481–487. http://dx.doi.org/10.1348/014466510X532715
Walker, L. S., Garber, J., Van Slyke, D. A., & Greene, J. W. (1995). Long-term health outcomes in patients with recurrent abdominal pain. *Journal of Pediatric Psychology*, *20*, 233–245. http://dx.doi.org/10.1093/jpepsy/20.2.233
Warren, S. L., Emde, R., & Sroufe, A. (2000). Internal representations: Predicting anxiety from children's play narratives. *Journal of the American Academy of Child & Adolescent Psychiatry*, *39*, 100–107. http://dx.doi.org/10.1016/j.aip.2011.08.002
Weersing, R. V., Rozenman, M. S., Maher-Bridge, M., & Campo, J. V. (2012). Anxiety, depression, and somatic distress: Developing a transdiagnostic internalizing toolbox for pediatric practice. *Cognitive and Behavioral Practice*, *19*, 68–82. http://dx.doi.org/10.1016/j.cbpra.2011.06.002
Weinfield, N. S., Sroufe, A. L., Egeland, B., & Carlson, E. (2008). Individual differencces in infant – caregiver attachment: Conceptual and empirical aspects of security. In J. Cassidy, & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research and clinical applications* (2nd ed., pp. 78–100). Guilford Press: New York.
Weissman, M. M., Wolk, S., Goldstein, R. B., Moreau, D., Adams, P., & Greenwald, S. (1999). Depressed adolescents grown up. *The Journal of the American Medical Association*, *281*, 1707–1713. Retrieved from: http://www.ncbi.nlm.nih.gov/pubmed/10328070
Yahav, R. (2007). The relationship between children's and adolescents' perceptions of parenting style and internal and external symptoms. *Child: Care, Health and Development*, *33*, 460–471. http://dx.doi.org/10.1111/j. 1365-2214.2006.00708
Younnis, J., & Smollar, J. (1989). Adolescents' interpersonal relationships in social context. In T. J. Berndt, & G. W. Ladd (Eds.), *Peer relationships in child development* (pp. 300–316). Hoboken, NJ: Wiley.
Zalsman, G., Natenel, R., Fischel, T., Frendenstein, O., Landau, E., Orbach, I., et al. (2000). Human figure drawings in the evaluation of severe adolescent suicidal behavior. *Journal of the American Academy of Child & Adolescent Psychiatry*, *39*, 1024–1031. http://dx.doi.org/10.1097/00004583-200008000-00018