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Abstract

This study developed and evaluated the Drawing-Based Emotional Processing Scale for Art Therapists (DRAWEP) for measuring emotional processing. We collected 120 drawings from participants (aged 18–87). The study was conducted in two phases: (a) tool development through expert focus group discussions of 20 drawings, content validity and interrater reliability assessment; (b) assessment of 100 drawings for construct validity (factor structure, convergent and discriminant validity). In Phase 1 The DRAWEP tool was constructed. In Phase 2, four emotional processing factors were identified: art creation, making sense, organizing, and embodiment. Convergent and discriminant validity and reliability were satisfactory. DRAWEP may provide art therapists with a tool for evaluating latent contents of emotional processing. Further testing with clinical populations is needed.

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Emotional processing (EP) is the process by which individuals generate, repress, reject, or accept their emotions (Greenberg & Safran, 1984; Weinfeld-Yehoudayan et al., 2024). During EP, cognitive, emotional, and somatosensory processes make meaning of events by integrating conscious and embodied unconscious emotions (Smith & Lane, 2016). EP entails emotional awareness, expression, and acceptance which may support psychological change (Greenberg & Safran, 1984; Pascual-Leone, 2018). *Emotional awareness* is the ability to articulate emotions, with varying degrees of precision and granularity (Lane & Schwartz, 1987). *Acceptance of emotions* is an accepting approach to positive and negative emotions (Pascual-Leone, 2018). *Emotional expression* is the extent to which feelings are conveyed to others (Keltner et al., 2016). Individuals can cope more effectively with stressors when they are aware of, express, and regulate their emotions (Greenberg, 2021).

EP is a promising construct in art therapy (AT) as artmaking, within the framework of a therapeutic relationship, may assist in experiencing difficult thoughts and emotions without becoming overwhelmed (Hinz, 2020; Lev-Wiesel et al., 2024). Explicitly articulating both conscious and unconscious emotional content may facilitate emotional recognition, thereby assisting EP by better understanding of how to adjust or deal with unpleasant emotions (Smith & Lane, 2016). For example, EP has been examined as a potential mechanism in reducing psychological (e.g., depression) and physical (pain and fatigue) symptoms through AT for breast cancer survivors (Czamanski-Cohen et al., 2020; Czamanski-Cohen & Weihs, 2023). EP is associated with lower depressive and somatic symptoms among breast cancer survivors (Czamanski-Cohen et al., 2019; Reed et al., 2016). However, individuals experiencing stressors may not acknowledge, express, or accept negative emotions (Cohen et al., 2022; Harris et al., 2017), employing maladaptive EP. For instance, stronger symptoms in breast cancer survivors were associated with less coping resources (Cohen, 2014), leading to EP associated increased symptoms (Levkovich et al., 2018) and identified in a meta-analysis as associated with depression, anxiety, and posttraumatic stress disorder (Akbari et al., 2022).

Weinfeld-Yehoudayan et al. (2024) proposed a theoretical model of how EP is integrated in AT but standard procedures for the assessment of drawings could be helpful for treatment planning and research. Assessment tools commonly measure EP verbally, thus capturing mainly conscious aspects, while nonverbal mediums, whereas art may capture conscious and unconscious aspects of EP (Greenberg, 2021; Smith & Lane, 2016). Although existing tools include elements of EP, additional aspects of EP are needed to establish baselines for comparison of clinical and nonclinical samples (Deaver, 2016). Thus, the aim of this study is to develop and initially validate the Drawing-Based Emotional Processing Scale for Art Therapists (DRAWEP).

Method

Research Design

To determine DRAWEP efficacy, we conducted a quantitative validation study to identify relevant aspects of artistic elements for evaluating EP (Phase 1) and examine the consistency across AT experts (Phase 2). All authors are experienced in AT, validation, and clinical research. This study was approved by the Ethics Committee of the University of Haifa (No. 364/20).

Pre-Development Phase: Drawing and Measures Collection

Participants. For this study we collected data from 88 participants, 18 of whom were excluded due to noncompliance with the study protocol (e.g., uncompleted measurements, not required materials, and drawings that arrived damaged). Thus, a total of 70 participants' data was used. Most participants were undergraduate students ($n = 56$) at a university in Israel. They received extra credit for participation. An additional 14 participants were recruited via social media (Table 1).

Measures. Both measures were previously validated in Hebrew and Arabic. An *emotional approach and avoidance-oriented coping* scale (Stanton et al., 2000) was used to measure coping strategies. The 36-item scale (Stanton et al., 2000) was adapted from the Coping Orientation to Problems Experienced scale (Carver et al., 1989). The scale has two subscales: 24 items for approach-oriented coping (e.g., EP, emotional expression, and acceptance) and 12 items for avoidance-oriented coping (i.e., denial, behavioral and mental disengagement). Internal consistency for the current study was good: Cronbach's α = .73 for approach-oriented coping and .74 for avoidance-oriented coping. *Depressive symptoms* were measured using the revised Center for the Epidemiologic Studies Depression Scale (CES-D R) (Radloff, 1977), a 10-item self-report tool with a 4-point Likert-type scale ranging from 0 = *never* to 4 = *to a great extent* (Irwin et al., 1999). Internal consistency was Cronbach's α = .85. We collected demographic information, including age, marital status, number of children, religion, education, employment, and art practice (Table 1).

Procedures. We distributed an online survey at two time points one month apart to collect drawings and measures for our study. Participants answered the self-report questionnaires in an anonymized and secure Qualtrics survey and were order-randomized to either draw whatever they liked or a situation that elicited strong emotions. A month later, they received an email to draw the second option. Participants were asked to draw with oil pastels, pens, crayons, felt-tip pens, or pencils on A4 printer paper. When completed, participants uploaded a photograph of their drawing to the survey and then mailed the physical drawing to the laboratory in prepaid envelopes. All drawings were scanned in the lab for further use in both phases. In total, we collected 120 drawings and self-report measures from 70 individuals (Table 1).

Phase 1: Content Validity (Item Identification and Creation of the Initial DRAWEP Tool)

Participant Experts. In this phase members of our extended research team who had expertise for the different study components agreed to participate in two panels. One panel consisted of eight art therapists (aged 28 to 55) with master's degrees and 5–20 years of experience working with adults. In addition to speaking Hebrew, two of them also spoke Arabic and three were fluent in English. The second panel included six professionals from various professions including: three AT researchers, two healthcare professionals (clinicians), and one art historian. These individuals were (aged 54 to 61) with at least 10 years of experience in their fields.

Procedures. The first author conducted two 5-hour online focus groups with the first panel of eight AT experts to identify, design, and generate indicators for DRAWEP. First, various definitions and aspects of EP were reviewed. Second, an online questionnaire formulated by the first two authors was distributed to the experts, in which they were asked to rate 20 drawings randomly selected (see Table 1 for associated demographics). Experts analyzed the drawings in two ways: (a) five questions for rating EP, emotional awareness, emotional expression, acceptance of emotions, and avoidance on a Likert scale of 1–6, 1 = *not at all* to 6 = *extremely*, such as, "To what extent do you think the artist uses

Table 1. Participant Demographics

	Whole Sample 120 Drawings ($n = 70$) n (%)	Phase 1 20 Drawings ($n = 20$) n (%)	Phase 2 100 Drawings ($n = 50$) n (%)
Language			
Hebrew	61 (87.2)	18 (90.0)	43 (86.0)
Arabic	8 (11.4)	2 (10.0)	6 (12.0)
English	1 (1.4)	0 (0.0)	1 (2.0)
Gender			
Female	63 (90.0)	19 (95.0)	44 (88.0)
Male	7 (10.0)	1 (5.0)	6 (12.0)
Age			
18–24	41 (58.6)	8 (40.0)	33 (66.0)
25–34	14 (20.0)	2 (10.0)	12 (24.0)
35–44	1 (1.4)	1 (5.0)	0 (0.0)
45–54	3 (4.3)	0 (0.0)	3 (6.0)
55–64	8 (11.4)	6 (30.0)	2 (4.0)
65–74	2 (2.9)	2 (10.0)	0 (0.0)
75–84	0 (0.0)	0 (0.0)	0 (0.0)
Older than 85	1 (1.4)	1 (5.0)	0 (0.0)
Birth country			
Israel	60 (85.7)	14 (70.0)	46 (92.0)
Other	10 (14.3)	6 (30.0)	4 (8.0)
Marital status			
Single	53 (75.7)	10 (50.0)	43 (86.0)
Married	13 (18.6)	9 (45.0)	4 (8.0)
Divorced	2 (2.9)	0 (0.0)	2 (4.0)
Widowed	1 (1.4)	1 (5.0)	0 (0.0)
Other	1 (1.4)		1 (2.0)
Children			
None	55 (78.6)	11 (55.0)	44 (88.0)
2	5 (7.1)	1 (5.0)	4 (8.0)
3	9 (12.9)	7 (35.0)	2 (4.0)
4	1 (1.4)	1 (5.0)	0 (0.0)
Employed			
Yes	47 (67.1)	16 (80.0)	31 (62.0)
No	23 (32.9)	4 (20.0)	19 (38.0)
Income level			
Below average	16 (22.9)	7 (35.0)	9 (18.0)
Average	43 (61.4)	10 (10.0)	33 (66.0)
Above average	11 (15.7)	3 (15.0)	8 (16.0)
Religion			
Jewish	55 (78.6)	18 (90.0)	37 (74.0)
Muslim	9 (12.9)	0 (0.0)	9 (18.0)
Christian	3 (4.3)	1 (5.0)	2 (4.0)
Druze	1 (1.4)	0 (0.0)	1 (2.0)
Other	2 (2.9)	1 (5.0)	1 (2.0)
Religiosity			
Secular	39 (55.7)	10 (50.0)	29 (58.0)
Religious	14 (20.0)	7 (35.0)	7 (14.0)
Traditional	14 (20.0)	3 (15.0)	11 (22.0)
Orthodox	2 (2.9)	0 (0.0)	2 (4.0)
Other	1 (1.4)	0 (0.0)	1 (2.0)
Art practice			
Yes, professionally	1 (1.4)	0 (0.0)	1 (2.0)
Yes, as a hobby	37 (52.9)	16 (80.0)	21 (42.0)
No	32 (45.7)	4 (20.0)	28 (56.0)

Note. 230 individuals expressed interest, 214 signed informed consent.

drawing as a means of processing emotions?"; (b) dichotomous matrix questions, asking which of the 26 art elements they relied on most for rating each EP aspect. The 26 elements included formal art elements, (e.g., color, line, shape, and space) and principles of art (e.g., contrast, manifested as complementary colors; pattern, seen as repetitive lines or shapes; balance, reflected in color position, symmetry, distribution of shapes) derived from an established method of formal analysis of art and a conventional approach in art history (Cetinic et al., 2020) and AT research (Gantt & Anderson, 2009; Schoch & Ostermann, 2022). The use of written words in the drawings was incorporated as an additional element (see Table 2 for details).

The second panel of six professionals met with the first author to examine the indicators for content validity. This step ensured the indicators measured EP and adequately addressed EP aspects in the drawings. They were asked to evaluate the feasibility, readability, consistency of formatting, and clarity of language in the questionnaire, in the context of AT and art evaluation, and found indicators to adequately cover all key aspects of EP. The language of several items describing the indicators was slightly adjusted following their feedback.

Table 2. Artistic Elements

Item	Area of Content	Description	%[a]
Color			
1	FEA	Bold colors (saturated)	82
2	FEA	Light colors	60
3	AP	Complementary colors	30
4	AP	Color position	60
5		Color not related[b]	2
Line			
6	FEA	Light lines	43
7	FEA	Dark lines	65
8	FEA	Dashed lines	39
9	AP	Repetitive lines	53
10	AP	Diagonal lines[b]	29
11	AP	Horizontal lines[b]	16
12		lines not related[b]	8
Shapes			
13	AP	Repetitive	80
14	AP	Scattered	45
15	AP	Encapsulation	30
16	FEA	Rounded[b]	29
17	AP	Empty	49
18	AP	Filled in	62
19		Not related[b]	0
Space			
20		Most used	80
21	FEA	Little used	51
22		Not related[b]	2
Words			
23		Positive	31
24		Negative	16
25		Appearance	14
26		Not related	36

Note. AP, art principles; FEA, formal elements of art.
[a]Percentage of experts who indicated the artistic elements and EP are related.
[b]Excluded.

Validity. To ensure the rigor of the study we employed several safe-guards to ensure accurate data collection. The focus-groups were recorded and transcribed and their content was described in supervision sessions with the second author. The first author conducted several training sessions for three hours dedicated to coding training. In addition, the first author met with the panel of AT experts individually and reviewed the accuracy and precision of their coding.

Data Analysis. From our analysis, we formulated the DRAWEP tool (Appendix). We modeled it on several AT assessment tools (Gantt & Anderson, 2009; Schoch & Ostermann, 2022) and history of art conventions (Cetinic et al., 2020). Based on experts' scoring analysis, the DRAWEP was designed as 14-indicators on a 6-point Likert scale from 1 = *low EP* to 6 = *high EP*, collated by theme from the 26 artistic elements that experts identified as most and least related to EP. For example, art elements that were related to color choice were collated into two separate indicators (The use of colors and hues and complementary colors). We used the format of the Formal Elements Art Therapy Scale (Gantt & Anderson, 2009) as an example; however, because it is designed to identify structural elements of art that indicate mental states and does not produce a total score, we did not use it for validation purposes.

Phase 2: Examination of Construct Validity

Participants Experts. All experts from Phase 1 were invited to participate in Phase 2. Four of the AT experts agreed.

Procedures. To continue reliability tests of the DRAWEP tool among experts and validating the scale we conducted construct validity and reliability analyses. We provided the experts with 100 drawings (those not included in Phase 1). The four experts rated each drawing based on the DRAWEP tool developed and refined in Phase 1.

Validity. To examine construct validity of the DRAWEP as a measurement tool for EP, we performed: (a) exploratory factor analysis (EFA), to examine whether the items are grouped into distinct factors that represent different aspects of the EP and ensure internal consistency; (b) convergent validity to safeguard that the DRAWEP positively correlates with other measures that are theoretically related to EP; and (c) discriminant

Table 3. Interrater Reliability

Indicator	ICC
Color and hue	.94
Complementary colors	.68
Line quality	.87
Space	.94
Harmony	.81
Composition	.79
Encapsulation	.65
Perseveration	.80
Diagrammatic drawing	.77
Fragmentation	.74
Investment in materials	.86
Investment in drawing	.88
Direct contact with materials	.80
Written words	.96
Abstract	.83

Note. ICC, intraclass correlation.

validity to assess difference from other measures (Taherdoost, 2016; Taherdoost et al., 2022).

Data Analysis. The values of each of the experts scores from the DRAWEP indicators were averaged. Interrater reliability was computed using two-way random interclass correlation coefficients, with average measures and consistency (Ten Hove et al., 2022). The reliability of the indicators ranged from moderate (.65) to excellent (.96; Table 3).

The construct validity analysis included: (a) EFA, which examined the factor structure of each indicator; (b) convergent validity, established by examining Pearson correlations between the experts ratings and self-report questionnaires about emotional approach and avoidance-oriented coping scales completed by the participants; and (c) discriminant validity, established by examining Pearson correlations between the expert ratings and self-reported depressive symptoms among the artists. To examine whether art experience was a factor, we conducted a Student's t-test of differences in all psychological variables and DRAWEP, using two categories of art experience (yes or no). Reliability was examined for each of the factors received in the EFA analysis.

Results

Phase 1: DRAWEP Indicators

The 14 DRAWEP indicators were chosen to be those rated by at least 30% of the AT experts, as related to EP, as follows: color and hue, complementary colors, line quality, space, harmony, composition, encapsulation, perseveration, diagrammatic drawing, fragmentation, investment in materials, investment in drawing, direct contact with materials, and written words. The indicators were scored on a 6-point Likert scale, from 1 = *low EP* to 6 = *high EP*, were derived from artistic elements that experts rated to indicate as most and least EP-related.

Figure 1. High Organization and Low Embodiment Scores

Our experts indicated that high levels of encapsulation, perseveration, diagrammatic drawing, fragmentation, and written words indicated lower EP; therefore, we expected to find negative relationships between them and the other EP indicators. Figure 1 is an example of a drawing depicting high levels of encapsulation, perseveration, and fragmentation. Three indicators—harmony, space, and fragmentation—were scored on a scale of 1–5. Therefore, scores were standardized (in subsequent research, we propose that DRAWEP have a 6-level scale for each indicator). The drawing in Figure 2 is an example in which the experts rated the extent of emotional expression (expressiveness) as low compared to the drawings in Figures 3 and 4, which received a high EP score for emotional expression.

Phase 2: DRAWEP Validation

The DRAWEP showed no significant relationship with background variables, including artmaking experience. Hence, there were no differences between

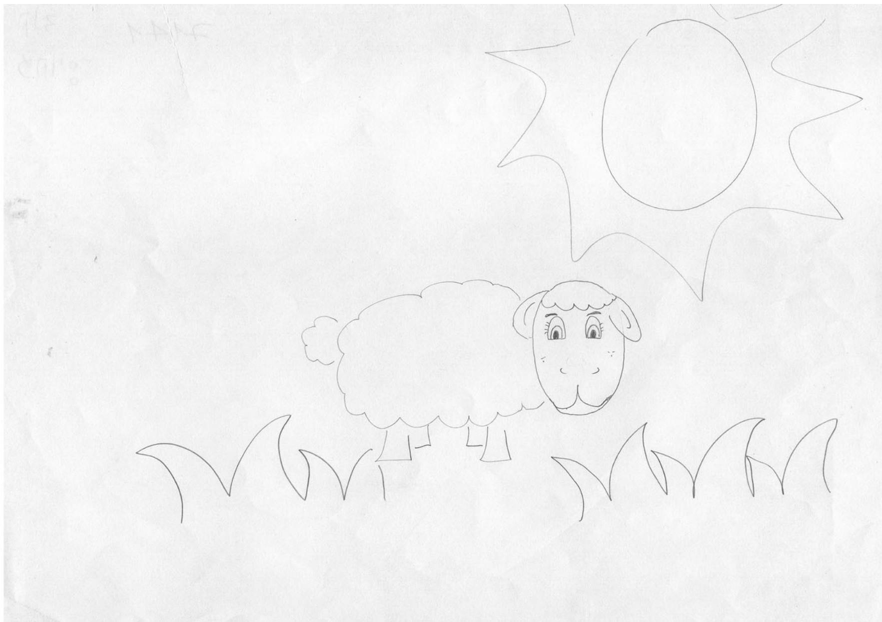

Figure 2. Low Scores in Each of the Five Indicators Comprising Art Creation, Except Diagrammatic Drawing

Figure 3. High Scores on the Making Sense Indicators

participants with or without artmaking experience in all variables.

Exploratory Factor Analysis. EFA of the ratings of 100 drawings by four experts was conducted using the Oblimin rotation method. The Kaiser-Meyer-Olkin test (.74) and Bartlett's test of sphericity (p < .001), indicating suitability of the data for factor analysis (Taherdoost et al., 2022). Four factors were extracted based on an eigenvalue greater than 1 and a scree plot: (a) art creation, with six indicators (investment in materials, investment in drawing, color and hue, diagrammatic drawing, line quality, and complementary colors; Cronbach's α = .82, eigenvalue = 4.77); (b) making sense, with three indicators (composition, harmony, and space; Cronbach's α = .91, eigenvalue = 2.10); (c) organizing, with three indicators (fragmentation, encapsulation, and perseveration; Cronbach's α = .72, eigenvalue = 1.86); and (d) embodiment, with two indicators (written words and direct contact with materials; Cronbach's α = .40, eigenvalue = 1.05).

The four factors explained 70.7% of the variance. Table 4 provides details for each factor and its indicators. Positive and significant associations were found for art creation with making sense (r = .50, p < .001), organizing (r = .26, p = .009), and embodiment (r = .38, p < .001); and for making sense with organizing (r = .34, p < .001) and embodiment (r = .23, p = .020). The association between organizing and embodiment was not statistically significant (p = .830; see Table 5).

Figure 4. High Scores on the Making Sense Indicators

Table 4. Exploratory Factor Analysis

	Factor Loading	α
Art creation		.82
Investment in materials	.82	
Investment in drawing	.69	
Color and hue	.69	
Diagrammatic drawing	.60	
Line quality	.63	
Complementary colors	.63	
Making sense		.91
Composition	.94	
Harmony	.86	
Space	.86	
Organizing		.72
Fragmentation	.81	
Encapsulation	.83	
Perseveration	.70	
Embodiment		.40
Written words	.86	
Direct contact with materials	.70	

Note. Total variance explained = 70.70% (KMO = .74, Bartlett's test of sphericity $p < .001$).

The results of the EFA structure were satisfactory. For example, Figure 2 illustrates low scores in each of the five indicators comprising art creation, except diagrammatic drawing. In contrast, Figures 3 and 4 exemplify relatively high scores in all indicators of making sense. Figure 1 demonstrates high scores in all indicators

Table 5. Pearson Correlations between the Four Factors

	1	2	3
1. Art creation			
2. Making sense	.50***		
3. Organizing	.26**	.34***	
4. Embodiment	.38***	.23*	.02

$^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

of organizing, along with a low score for direct contact with materials indicator and high score for written words, which comprise embodiment.

Convergent Validity. Positive associations were found between approach-oriented coping and art creation ($r = .32$, $p < .001$) and making sense ($r = .41$, $p < .001$), whereas the associations with the other two factors were not statistically significant. In addition, avoidance-oriented coping was significantly associated with organizing ($r = .21$, $p = .019$; Table 6). Thus, convergent validity was partially supported.

Discriminant Validity. As expected, there were no statistically significant correlations between depression and art creation ($r = .04$, $p = .362$), making sense ($r = -.05$, $p = .327$), organizing ($r = .12$, $p = .115$), and embodiment ($r = -.12$, $p = .116$). Thus, discriminant validity was supported (Table 6).

Table 6. Discriminant and Divergent Validity

	Art Creation	Making Sense	Organizing	Embodiment
Depression	.04	−.05	.12	−.12
Coping strategies				
Approach	.32***	.41***	.09	.10
Avoidance	.12	−.14	.21*	−.01

*$p < .05$. **$p < .001$. *** $p < .001$.

Discussion

This two-phase study proposed and preliminarily validated a new tool for measuring EP using drawings based on 14 indicators, creating four subscales: art creation, making sense, organizing, and embodiment. In Phase 1, DRAWEP indicators were identified, and the tool was generated, producing satisfactory content validity and interrater reliability. In Phase 2, EFA and discriminant and divergent validation tests were conducted, showing acceptable psychometric properties. The DRAWEP tool, therefore, can be deemed to be preliminarily validated for the assessment of EP in drawings.

The EFA yielded a four-factor structure representing aspects of art-based emotional experience. The first factor, art creation, is characterized by the artist's engagement with the artistic process and its products, reflected by choice of art materials. The indicators represent the integration of conscious, unconscious, and somatosensory experiences that occur in art creation and entail self-engagement, reflected by the investment in choosing and manipulating materials and colors for self-expression. These results are in accordance with AT knowledge, suggesting that through tactile engagement in the artistic process, implicit material becomes explicit (Schaverien, 1999). Making sense (second factor) indicates the level of effort used to create a holistic appearance, incorporating formal and esthetic principles and using space and composition. Examining and articulating intentions, purposes, expectations, hopes, and desires allow us to gain a deeper understanding of emotional experiences and make sense of them (Greenberg, 2021). Breast cancer survivors reported that drawings enabled them to articulate and make sense of emotions not previously acknowledged (Bell, 2006).

Organizing (third factor) expressed by shapes, colors, or lines and was positively correlated with art creation, making sense and avoidance coping. This is surprising but can be understood as a way of making sense of potentially overwhelming emotional content of which the creator is not consciously aware. Hence, the indicators of this factor are counterintuitive and in opposition to conscious behavioral self-report. Perseveration, for example, can manifest through recurrent lines or forms without an apparent controlled strategy (Gantt & Anderson, 2009). Similarly, in a study of drawings of military trauma, encapsulation was interpreted as a boundary between the articulated adverse event and the process of coping (Ram-Vlasov et al., 2019). Hence, the adverse event was encapsulated in drawing and deemed an effective coping strategy. In another study, encapsulation and fragmentation in drawings of adult survivors of childhood sexual abuse was understood to depict experiences of dissociation (Lev-Wiesel et al., 2024). This is consistent with understanding that unconscious emotions may be conveyed in artwork, allowing the communication of both productive and unproductive processes (Schaverien, 1999). These need to be explored in further research.

Embodiment (fourth factor) involved including words in drawings, which is a cognitive component of visual expression and embodied self-expression as direct contact with art materials, which is sensorimotor. These findings are supported by The Expressive Therapies Continuum, proposing that creativity occurs on three levels and represents their integration (Lusebrink & Hinz, 2020). Optimally, the components of the model interact and the connections between the levels allow processing of information, including emotions (Lusebrink & Hinz, 2020). We postulate that individuals add words to artwork to ensure understanding. However, this notion should be examined in future research. To summarize, these factors illuminate the complexity inherent in artmaking and encourage future exploration and consideration. The weak correlations of DRAWEP with approach coping and depression may be explained by the inherent differences between performance and self-report measures. DRAWEP assesses conscious and unconscious aspects in drawings, whereas self-report is based on mainly conscious perspectives.

Practical Implications

DRAWEP contributes new perspectives to AT practice and research by providing a reliable assessment of EP in drawings, with the potential to capture latent EP. Clinicians may use drawings to identify less productive EP and guide their interventions. In addition, DRAWEP may foster a more holistic view of EP, leading to the development of clinical practice and EP research.

Limitations

Although the DRAWEP tool shows promise, it has limitations. Despite the sample and AT experts being diverse representatives of the population of Israel, the tool's applicability in different cultures should be assessed. Furthermore, the study involved healthy volunteers and should be further evaluated with clinical populations. Because DRAWEP requires attention to detail, it is imperative that raters are trained. Considering the preliminary nature of this study, follow-up research should reassess all indicators using an adjusted 6-point scale to examine the validity of the DRAWEP tool in larger studies and various populations.

Conclusion

We formulated and preliminarily validated the DRAWEP, a 14-indicator, 4-factor scale for measuring EP in drawings. Further research is needed to examine the use of DRAWEP with clinical populations. We hope that art therapists will use DRAWEP to examine EP in drawings, thus improving our understanding of EP and its contribution to the health of our clients.

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Data Availability

Data will be made available on request.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

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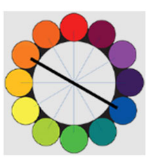
Appendix. Emotional Processing Measurement Tool through Drawings for Art Therapy (DRAWEP)

Description	Indicators for Evaluation	Scale
1 **The use of colors and hues:** **This indicator measures the number of colors used in the drawing, and their intensity**	Black or white colors are used (for example, using a solid black or white pen / marker).	1
	Monochrome - the use of a single color in all its ranges and shades. There is a range / gradation or variety hues - light and dark shades (For example: variety in pencil or pen, creating shading).	2
	At least two light-tone colors (for example, light tone red painted may appear pink, or light tone blue may appear light blue).	3
	At least two colors ranging from light to dark tone are used.	4
	At least two dark tone colors (saturated) are used.	5
	An extensive use of colors in all their shades, sometimes layered over one another. The drawing appears to be painted in layers, either using a single material or a combination of several materials (for example, a panda drawn in layers upon layers, or a panda painted with pencil).	6
2 **Complementary colors:** **This indicator measures complementary colors - colors located opposite each other on the color wheel and are (pairs of 2 colors for example: blue / orange, yellow / purple, black / white or red / green)** 	**Non** or **monochromatic** drawing. Monochromatic color that **isn't** complementary to the background paper's color (for example, a blue pen on a white background).	1
	Light tone monochromatic, with reduced intensity. The monochromatic color **is** complementary to the background paper's color (for example, a light tone pencil drawing on a white paper).	2
	At least one pair of complementary colors drawn in pale intensity. The complementary colors are located separately and **not adjacent to each other** (for example, blue sea and orange sun, red roof and green grass).	3
	At least one pair of complementary colors drawn in pale intensity. The complementary colors are adjacent / **located next to each other** (for example, green grass and red flowers, green tree with red apples).	4
	At least one pair of complementary colors - ranging from medium to dark/intense tone. The complementary colors are located separately and **not adjacent to each other** (for example, a tree with green leaves and red flowers at its base).	5
	At least one pair of complementary colors - ranging from medium to dark/intense tone. The complementary colors are adjacent / **"touching"** / **located next to each other** (for example, purple animals with yellow dots, orange fish in a blue sea) **Or** Over 25% of the drawing uses complementary colors - ranging from medium to dark/intense tone which is complementary to the background paper's color (for example, image drawn in intense black on a white colored paper).	6

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Description	Indicators for Evaluation	Scale
3 **Line quality:** **This indicator measures how the lines are drawn in the drawing (please refer to the way the line describes the objects in the drawing)**	**Light tone / low intensity** (almost invisible) lines.	1
	A **range of light tone to medium-intensity** lines are drawn. Most lines are dashed, incomplete, discontinuous, hesitant or "shaking".	2
	Medium-intensity lines are drawn. Most lines are clear, stable, and continuous.	3
	A range of medium to strongest intensity lines are drawn. Most of the lines are clear or bold (for example, wide lines, dark, or intensely drawn).	4
	Very expressive lines. Lines are dense, thick, drawn by repetitive movement, and/or prominent in color.	5
	Range or variety of lines. **Or** **No lines** because they have merged into unified surfaces or colors (for example, applying panda / pastel paint to a uniform surface).	6
4 **Space:** **This indicator measures the amount of space used in the drawing**	Objects are drawn on **0–15**% of the page space.	1
	Objects are drawn on **15–30**% of the page space.	2
	Objects are drawn on **30–45**% of the page space.	3
	Objects are drawn on **45–60**% of the page space.	4
	Objects are drawn on **60–80**% of the page space.	5
	Objects are drawn on **80–100**% of the page space.	6
5 **Harmony:** **This indicator refers to the level of harmony achieved by placing the elements on the page in a way that creates balance and by using various artistic means: colors / shapes / lines / texture, etc.**	**No** sense of harmony among the drawn details, nor is there any balance between the elements / shapes / colors / lines or textures. It seems to have been done unintentionally (for example, a drawing consisting of a group of people or a highlighted figure on the side of the paper and nothing else in the other).	1
	A **very low level** sense of harmony is apparent among the drawn details, the drawing is unbalanced whereby elements / shapes / colors / lines or textures are concentrated in one area only. Little or no attention for other parts hence, the drawing is unbalanced (For example, a house and its surroundings are concentrated and emphasized on one side and other parts are drawn in a light tone / low intensity).	2
	Low level sense of harmony is apparent among the drawn details. Low uniformity between shapes and colors, low reference to the different sizes, details are related to each other in a small extent (For example, a tree and its surroundings are concentrated on one side and smaller items/ colors/shapes in the other parts of the paper that do not balance it).	3
	Medium level sense of harmony is apparent among the drawn details. Attention is drawn to central area only, in a way that the drawing looks unbalanced (for example, a tree in the center of the paper with no references to its surrounding made by colors / lines or shapes).	4
	High level sense of harmony is apparent among the drawn details. There is a feeling that the elements in the drawing form a good coherent whole altogether (for example, a face in the center of the painting and there is a balanced reference between details around it).	5

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Description	Indicators for Evaluation	Scale
	A **very high-level** sense of harmony is apparent among the drawn details. Colors and hues are balanced in tone and intensity. There is a cohesion between the details / shapes size and their proportions are equal even if drawn in different places on the paper. The drawing appears to have a very good sense of unity (for example, the page is drawn in its various parts / all and each is evenly balanced or no other elements in the surrounding that draw attention).	6
6 **Composition:** **The indicator measures the relationship between objects and the drawing frame, as well as the relationship between objects themselves, as reflected in colors, shapes, lines, etc.**	The entire drawing is painted uniformly, and it is impossible to distinguish between objects, shapes, or lines.	1
	The composition is **not organized**. No attention is paid to the relationship between objects, space and the drawing frame (for example, an object appears "floating" without a ground, sky, or horizon line, which makes it difficult to conclude how it is connected to other objects).	2
	There is a **low degree** of organization in the composition (for example, apart from the painted object, there is only a ground / sky / detail in the background).	3
	A **medium-level** compositional organization (for example, figures in separate spaces without the pictorial information necessary to understand their compositional relationship).	4
	High-level organization of composition. A relationship exists between objects and / or between the objects and the frame. Details are considered by their size or location, but not in the entire painting (for example, a house, tree, and garden are depicted at the base of the drawing, but a flower appears to be "floating" in the air).	5
	The composition is **extremely well organized**. It is apparent that the objects are integrated with the drawing and / or with the frame. There is a clear relationship and organization between artistic elements - color, line, and shape (for example, landscape with a train on tracks, where the elements that are "close" are clearer and larger than those that are "far", thus the ratio between the elements is balanced by using light hues, lines, or smaller objects as distant elements)	6
7 **Encapsulation:** **This indicator measures encapsulated shapes, meaning "Packaged" shapes (shapes that are outlined with a defined contour / outline containing other shapes inside them).**	**No** objects that are defined as encapsulated shapes in the drawing. Objects depicted with or without distinct outlines (for example, elements are merged in a landscape or a landscape with adjacent elements).	1
	The drawing contains only a **single** encapsulated object, which is **not a central** object (for example, a landscape detail or an item of clothing).	2
	The drawing contains **at least two** encapsulated objects which are **not central**. The encapsulated shapes are outlined / contoured and filled with uniform or intensive patterns, such as dashed lines, dots, circles etc. (for example, dashed apples, doted balls, or detailed doors).	3

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Description	Indicators for Evaluation	Scale
	The drawing contains **at least two** encapsulated and **central** objects. The encapsulated shapes are outlined / contoured and filled with uniform or intensive patterns, such as dashed lines, dots, circles etc. (for example, multiple dots or dashed lines depicting a fabric dress and multiple clouds in the sky or skyscraper windows intensely filled, and a road depicting its stones).	4
	The drawing contains **a main** encapsulated and **central** object. The encapsulated shape is outlined / contoured and filled with a variety of smaller, hollow or full shapes (for example, drawing of a pupil eye filled with hollow circles or a drawing of a skyscraper with window frames filled with details such as flowers / curtains / people).	5
	The **drawing is constructed as an encapsulated object** that is geometric or amorphic shapes packing other shapes within outlines and defined contours. Shapes can be either hollow or filled with solid color (for example, the drawing is made entirely of only hollow shapes or surfaces of solid-colored shapes).	6
8 Perseveration / repetition: This indicator measures the repetition of certain elements or patterns in a drawing without any obvious reason or purpose, as if done in an unintentional manner and without control (for example, repetition of lines or shapes that depict an object that can also be described in a simpler way)	There is **no** perseveration depicted in the drawing.	1
	Very mild perseveration depicted in the drawing. Only one area is drawn with repeated shapes, dots, circles, squares, or lines, in contrast to the treatment of other areas in the painting (for example, floor tiles, waves in the lake/ water).	2
	Mild perseveration depicted in the drawing. Up to two areas where lines and/or shapes appear repetitive (for example, tiles in a roof and a group of people drawn in a similar manner).	3
	Moderate perseveration depicted in the drawing. At least three areas where lines and/or shapes appear repetitive, but not throughout the entire drawing.	4
	Extreme perseveration depicted in the drawing. The whole image or object is drawn with repeated shapes, dots, circles, squares, or lines.	5
	Severe perseveration depicted in the drawing. Done in an unintentional manner and without control (for example, drawing or coloring at one area until the paper becomes worn out or tears).	6
9 Diagrammatic drawing: This indicator measures drawing as a pattern, a familiar scheme that has been used in the past	The drawing **is not** depicted in a diagrammatic manner.	1
	The drawing is **slightly** diagrammatic. **A single object** is drawn as a familiar pattern scheme, or fixed form, in contrast to the treatment of the other areas of the drawing.	2
	The drawing is **mildly** diagrammatic. **Up to two objects** are portrayed as a familiar pattern scheme, or fixed form. Not the entire drawing.	3
	The drawing is **very** diagrammatic. **Three objects** are portrayed as a familiar pattern scheme, or fixed form. Not the entire drawing.	4
	The drawing is **extremely** diagrammatic. Most objects are depicted as a known pattern, scheme, or fixed form (for example: grazing cows that look similar to each other and are depicted schematically).	5

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Description	Indicators for Evaluation	Scale
	The drawing is **excessively** diagrammatic. The **whole** image is drawn as a pattern or familiar scheme that appears to have been used previously (for example, a central and single animal or figure presented in a familiar stencil or schematic form. It is likely that the creator is familiar with this pattern and may have used it previously).	6
10 **Fragmentation:** **This indicator measures the division of forms into smaller parts or layers throughout a single complex. It may appear as "broken" or a description from several perspectives or angles simultaneously**	There is **no fragmentation**. The object is drawn from a single point of view (for example, a figure that is not divided into smaller forms and appears relatively uniform).	1
	About 10% or less fragmentation.	2
	About 30% fragmentation.	3
	About 50% fragmentation.	4
	About 75% fragmentation.	5
	100% fragmentation. There appears to be a division of the entire object into parts / layers (for example, a figure composed of geometric shapes).	6
11 **Investment in drawing in terms of materials:** **This indicator measures the amount of investment the creator has made in terms of materials. Material selection and replacement during painting**	The drawing is made with **a pencil or a pen** and there is **no variation in the intensity** of materials used.	1
	Single material is used - **up to two different colors** of that same material (for example, orange and green pencil colors).	2
	Single material is used - at least **three different colors** of that same material (for example, orange, pink and green pencil colors).	3
	At least two materials are used (pencil and marker / pencil and pencil colors).	4
	Single material is used – and the **intensity is varied** (for example, pencil drawn in different tones and shading).	5
	At least three materials are used (for example, pencils, markers and colored pencils). Intensity of the selected materials may or may not be diverse.	6
12 **Investment in drawing in terms of themes and details:** **This indicator measures the creator's investment in the chosen subject**	The investment level is **very poor** - the painting appears to have been done carelessly.	1
	The investment level is **poor** - a schematic drawing which does not include a detailed description.	2
	The investment level is **fair** - detailing one element of the painting while other elements of the drawing's theme are not detailed to the same degree (for example, detailing the teeth or cornea of the eyes in a portrait as opposed to an empty background).	3
	The investment level is **good** - two elements or single grouped elements are detailed in the drawing's theme.	4
	The investment level is **very good** - the description of the background / environment, its contents, and the different areas of the drawing's theme is provided.	5
	The investment level is **excellent** - the theme is explored through different layers or viewpoints.	6
13 **Direct contact with materials:** **This indicator measures the direct and unmediated contact of the creator with the material chosen**	**No direct contact** with the materials is evident in the drawing (for example, hands or fingers are **not** used for creating texture).	1
	Direct contact with the material is used **very rarely (less than 25%)**.	2

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Description	Indicators for Evaluation	Scale
for the drawing using body parts (applying material with hands and fingers)	Direct contact with the material is used **rarely (about 25**%**)**.	3
	Direct contact with the material is used **occasionally (about 50**%**)**.	4
	Direct contact with the material is used **frequently (about 75**%**)**.	5
	Direct contact with the material is used **very frequently (about 100**%**)**. The drawing appears to depict evidence of **unmediated contact** / direct contact with the materials (for example, applying materials directly by hand / smearing the materials / using fingers to create a texture).	6
14 **This indicator measures written words in the drawing (regardless of size or language)**	Apart from the creator's signature, the drawing does not contain **any inscriptions**.	1
	The drawing contains **letter / letters**.	2
	The drawing contains **word / words**.	3
	The drawing contains **sentence / sentences**.	4
	The drawing contains **short texts / text captions / poems**.	5
	Nearly the entire page is **filled** with written words.	6