

Effectiveness of Trauma-Informed Art Therapy on Dissociation and Self-Esteem

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ABSTRACT

This study aimed to evaluate the effectiveness of trauma-informed art therapy in reducing dissociative symptoms and enhancing self-esteem in individuals with trauma histories. A randomized controlled trial was conducted with 30 participants from Indonesia who had experienced psychological trauma. Participants were randomly assigned to either an intervention group ($n = 15$), which received eight weekly sessions of trauma-informed art therapy, or a control group ($n = 15$), which received no intervention. Each session lasted 75 to 90 minutes and was designed to promote emotional safety, self-expression, and identity integration through structured art-making activities. Assessments were conducted at three time points: pre-intervention, post-intervention, and five-month follow-up. Dissociation was measured using the Dissociative Experiences Scale (DES), and self-esteem was assessed using the Rosenberg Self-Esteem Scale (RSES). Data were analyzed using repeated measures ANOVA and Bonferroni post-hoc tests in SPSS-27. Results indicated significant time-by-group interaction effects for both dissociation ($F(2,56) = 28.47, p < .001, \eta^2 = .52$) and self-esteem ($F(2,56) = 36.09, p < .001, \eta^2 = .55$). Participants in the intervention group demonstrated a substantial reduction in dissociative symptoms from pre-test ($M = 52.67, SD = 6.45$) to post-test ($M = 38.41, SD = 5.88$) and follow-up ($M = 36.79, SD = 6.12$). Similarly, self-esteem significantly increased from pre-test ($M = 19.26, SD = 3.78$) to post-test ($M = 28.47, SD = 4.10$) and follow-up ($M = 29.13, SD = 3.95$). No significant changes were observed in the control group across time points. Trauma-informed art therapy is an effective intervention for reducing dissociative symptoms and improving self-esteem among individuals with trauma histories. The intervention's effects were maintained at five-month follow-up, indicating its potential as a sustainable therapeutic approach.

Keywords: Trauma-informed art therapy, dissociation, self-esteem, randomized controlled trial, expressive arts therapy.

1. Introduction

Trauma remains one of the most pervasive psychological challenges across the globe, often leaving long-lasting effects on self-perception, emotional regulation, and cognitive functioning. For individuals exposed to prolonged or complex trauma—particularly in early life—the repercussions are far-reaching, affecting not only their psychological integrity but also their somatic experiences and identity development (King, 2021). Dissociation, one of the hallmark symptoms of trauma, involves a disruption in consciousness, memory, identity, or perception, and frequently manifests in individuals with unresolved trauma histories (Sigal & Rob, 2021). Simultaneously, trauma severely impacts self-esteem by disrupting one's core sense of worth and agency, leading to pervasive feelings of helplessness, shame, and self-blame (Salmi, 2021). These consequences underline the critical need for integrative therapeutic approaches that address both dissociation and self-esteem through means that are emotionally safe, accessible, and neurologically resonant.

Art therapy has emerged as one of the most promising trauma-informed modalities, offering a non-verbal, sensory-based method of self-expression and healing. As a creative intervention, art therapy enables clients to externalize internal experiences, develop symbolic language for traumatic memory, and promote emotional regulation (J, 2024). The process of creating art activates sensory and motor pathways in the brain that are often bypassed in traditional talk therapy, allowing individuals to access implicit memories stored in nonverbal domains (King & Strang, 2024). By engaging brain areas involved in both emotional and sensory integration, art therapy supports neural coherence and self-integration, which are crucial for trauma recovery (Quinn, 2025). Research also supports that art therapy facilitates the reprocessing of traumatic material by enabling a safe psychological distance, reducing avoidance and hyperarousal often seen in trauma-related disorders (Maddox et al., 2024).

Recent developments in trauma-informed practice stress the importance of establishing emotional safety, trust, empowerment, and cultural responsiveness in therapeutic settings (Sunderland et al., 2022). Trauma-informed art therapy, as a subset of this movement, merges the creative process with these foundational principles to offer a treatment space that is attuned to trauma's complex biopsychosocial impact. This modality does not aim to simply revisit or narrate traumatic events but rather

facilitates symbolic meaning-making and emotional regulation through imagery and creative flow (M, 2024). It recognizes the ways trauma fragments memory and identity and works gently to restore these fractures by fostering visual coherence and emotional expression. Research has further shown that visual art-making allows for neuroplastic changes in areas associated with fear processing and self-awareness, suggesting physiological mechanisms underlying therapeutic outcomes (King & Strang, 2024).

The use of trauma-informed art therapy has grown substantially in recent years across diverse clinical and cultural contexts. In Turkey, for instance, art therapy has proven effective in helping trauma survivors express suppressed emotions and process grief through culturally resonant visual symbolism (Aydn, 2024). Similarly, in South Africa, trauma-focused interventions like ImpACT+ have incorporated expressive arts into broader psychosocial recovery frameworks with notable clinical improvements among women with histories of sexual trauma (Sikkema et al., 2022). This expansion of trauma-informed creative practices illustrates both the adaptability and efficacy of art therapy in various global health contexts. It also calls attention to the need for culturally specific interventions—like those now emerging in Southeast Asia—where trauma remains under-addressed due to stigma, limited resources, and insufficient culturally sensitive models (Syam et al., 2023).

A key strength of trauma-informed art therapy lies in its ability to bypass verbal defenses and access affective experiences encoded in nonverbal memory systems. Through metaphor, color, and symbolic representation, individuals are able to explore and externalize dissociative states in a safe and contained way (Sigal & Rob, 2021). This is particularly important for clients whose trauma histories involve preverbal or early childhood experiences that may not be readily accessible through language alone (Wymer et al., 2020). Art therapy enables these clients to visualize and reintegrate dissociated aspects of the self, reducing internal fragmentation and facilitating a more coherent self-concept. The act of creating also fosters a sense of control and mastery—critical factors in rebuilding self-esteem following experiences of powerlessness and violation (Salmi, 2021).

Moreover, the collaborative and client-centered nature of art therapy supports agency and empowerment—key components in restoring self-worth and psychological resilience (Baggerly & Thomas, 2021). Studies have shown that the use of therapeutic art-making can significantly reduce shame and negative self-perceptions while enhancing

feelings of acceptance and personal strength (Mazzeo & Bendixen, 2022). This dual benefit—addressing both dissociation and self-esteem—positions trauma-informed art therapy as a particularly effective modality for individuals struggling with identity disruption, emotional numbness, or internalized stigma. Furthermore, art therapy aligns well with community-based approaches to mental health, offering group formats that reinforce belonging and mutual validation (Nielsen et al., 2021).

Art therapy has also demonstrated efficacy in populations with complex trauma, including survivors of abuse, war, and displacement. In such cases, the layered nature of trauma often results in chronic dissociation, fluctuating self-worth, and impaired relational functioning. Research highlights that even brief interventions using trauma-informed art therapy can result in significant reductions in distress and dissociation, particularly when guided by trained therapists using structured, phase-oriented protocols (Heijman et al., 2024). In a recent single-case experimental study, trauma-focused art therapy led to improved psychological functioning, with clients reporting increased clarity, emotional release, and re-integration of traumatic memories (Heijman et al., 2024). Additionally, the use of art as a communicative bridge has proven beneficial in cases where clients experience difficulty verbalizing trauma, such as among children or individuals with developmental trauma (Kim & Lim, 2023).

Notably, art therapy can also serve as a culturally sensitive alternative to talk therapy in communities where mental health stigma persists or verbal disclosure is discouraged. The flexibility of art as a medium allows for individual adaptation based on cultural symbols, religious beliefs, and aesthetic traditions, making it an accessible tool for diverse populations (Villette & Villette, 2023). With growing global attention to culturally inclusive and trauma-responsive care, the integration of visual arts into mental health treatment offers an ethically grounded, context-sensitive intervention strategy (Woollett & Berman, 2024).

In addition to its clinical benefits, art therapy contributes to the neuroscience of trauma recovery. Emerging research shows that creative expression can engage multiple neural networks, including the default mode network, salience network, and emotion regulation systems, which are often disrupted in individuals with trauma histories (Quinn, 2025). These findings support the theoretical foundation of trauma-informed art therapy, suggesting that recovery is not only psychological but neurobiological. By fostering coherence across cognitive, emotional, and sensory domains, art

therapy helps reintegrate fragmented experiences and restore a sense of embodied selfhood (King, 2021).

Despite this growing evidence base, relatively few randomized controlled trials have specifically examined the combined impact of trauma-informed art therapy on dissociation and self-esteem. While qualitative and case-based studies provide compelling insights into the lived experiences of clients undergoing this therapy (J, 2024; Kim & Lim, 2023), there remains a need for rigorous experimental designs that assess long-term outcomes and generalizability. This gap is particularly evident in Southeast Asia, including Indonesia, where trauma-informed art therapy remains under-researched despite its potential for culturally congruent healing (Syam et al., 2023).

The present study aims to address this gap by evaluating the effectiveness of an eight-session trauma-informed art therapy intervention in reducing dissociative symptoms and enhancing self-esteem among trauma-exposed individuals in Indonesia.

2. Methods and Materials

2.1. Study Design and Participants

This study employed a randomized controlled trial design to evaluate the effectiveness of trauma-informed art therapy on dissociation and self-esteem. A total of 30 participants were recruited from community mental health centers and counseling clinics in Indonesia. Participants were screened based on inclusion criteria, including a history of trauma exposure, elevated dissociative symptoms, and low to moderate self-esteem, as determined by baseline assessments. Eligible individuals were randomly assigned to either the intervention group ($n = 15$), which received eight sessions of trauma-informed art therapy, or the control group ($n = 15$), which received no intervention during the study period. Both groups were assessed at three time points: pre-intervention (baseline), post-intervention, and five-month follow-up. All participants provided informed consent and were assured of confidentiality and the voluntary nature of their participation.

2.2. Measures

2.2.1. Dissociation

To assess dissociative symptoms in participants, the Dissociative Experiences Scale (DES) developed by Bernstein and Putnam in 1986 was utilized. This self-report instrument consists of 28 items designed to measure a wide

range of dissociative experiences, including depersonalization, derealization, amnesia, absorption, and identity confusion. Each item is rated on a visual analog scale ranging from 0% to 100%, reflecting the percentage of time the respondent experiences the described dissociative phenomenon. The overall score is calculated as the mean of all item scores, resulting in a total score between 0 and 100. Higher scores indicate greater levels of dissociation. The DES has been widely used in both clinical and non-clinical populations, and numerous studies have confirmed its strong psychometric properties, including high internal consistency (Cronbach's $\alpha > 0.90$) and acceptable test-retest reliability, as well as construct and convergent validity (Hart et al., 2013; Lemche et al., 2013).

2.2.2. Self-Esteem

To measure participants' self-esteem, the Rosenberg Self-Esteem Scale (RSES), developed by Morris Rosenberg in 1965, was employed. This widely used instrument includes 10 items that assess global self-worth by evaluating both positive and negative feelings about the self. Items are rated on a 4-point Likert scale ranging from strongly agree (1) to strongly disagree (4), with five items reverse-scored. Total scores range from 10 to 40, where higher scores reflect greater self-esteem. The RSES is unidimensional but is sometimes examined for two sub-components: positive self-esteem and negative self-esteem. The scale has been extensively validated across diverse populations and languages, with studies consistently demonstrating high internal consistency (Cronbach's α typically ranging from 0.77 to 0.88), satisfactory test-retest reliability, and strong convergent and discriminant validity (Phuttharo, 2025; Subagyo & Wahyuningsih, 2024).

2.3. Intervention

2.3.1. Trauma-Informed Art Therapy

The trauma-informed art therapy intervention in this study was designed to address dissociation and enhance self-esteem in participants with trauma histories. Conducted over eight weekly sessions, each lasting 75 to 90 minutes, the intervention integrated core principles of trauma-informed care—safety, trust, empowerment, and choice—with structured art-making processes. The sessions followed a progressive therapeutic arc, beginning with emotional safety and self-expression, moving through trauma processing and identity exploration, and concluding with meaning-making

and future orientation. Each session included a check-in, guided art-making activity, reflective dialogue, and optional sharing within the group setting. The intervention was facilitated by a licensed art therapist with experience in trauma recovery.

Session 1: Establishing Safety and Introduction to Art Therapy

The first session focused on creating a safe and supportive group environment. After introductions and setting ground rules, participants were introduced to the goals and structure of trauma-informed art therapy. The session included a grounding exercise and a non-directive art activity titled "My Safe Space," where participants created a visual representation of a place or image that evokes a sense of safety. The therapist facilitated a discussion about the importance of safety and containment in trauma recovery. This session helped build trust, reduce initial anxiety, and encourage participants to begin using creative expression as a form of communication.

Session 2: Exploring Emotions Through Color and Shape

In the second session, participants explored emotional awareness using abstract art techniques. After a brief psychoeducation segment on identifying and labeling emotions, they were invited to create an "emotion mandala" using colors and shapes to represent various feelings experienced over the past week. This activity supported emotional regulation and increased insight into internal emotional states. The group discussion allowed participants to reflect on how different emotions manifest in their lives and bodies, laying the groundwork for processing trauma-related emotional content in subsequent sessions.

Session 3: Visualizing the Inner Child

This session encouraged participants to reconnect with their inner child—a core element in trauma work. Through guided imagery and reflection, participants were invited to create a portrait or symbolic image of their inner child using a variety of art materials. The focus was on nurturing, protecting, and acknowledging the unmet needs of the inner child. In the group sharing, participants discussed themes of vulnerability, abandonment, and care, with the therapist emphasizing self-compassion and reparenting techniques. This session deepened self-awareness and began addressing dissociative fragmentation by fostering internal connection.

Session 4: Expressing Trauma Through Symbolism

Session four provided a structured but safe opportunity to express trauma narratives using symbolic rather than literal representation. Participants were encouraged to choose symbols, metaphors, or colors to represent traumatic

experiences or their emotional aftermath. The exercise, titled “The Wound and the Shield,” involved creating two images—one representing pain and one representing protection or coping. The therapist helped participants process these visual narratives, reinforcing autonomy and emotional containment. This symbolic approach supported trauma integration without re-traumatization and strengthened dissociative awareness.

Session 5: Reclaiming Strength and Personal Power

This session focused on empowerment and self-efficacy, helping participants identify inner strengths and resources. The art activity involved creating a “strength shield” or “power totem,” incorporating images, colors, or textures that represent qualities like resilience, courage, and perseverance. Participants reflected on times they overcame adversity and shared their creations with the group. The discussion emphasized shifting from victimhood to survivorship, reinforcing positive self-identity and agency. This session aimed to rebuild self-esteem and counter feelings of helplessness commonly linked with trauma.

Session 6: Exploring Identity and Self-Image

In the sixth session, participants explored their evolving sense of self through a collage or mixed media self-portrait. The focus was on how trauma may have disrupted their identity and how they view themselves now. This activity allowed for a reexamination of both internalized negative beliefs and emerging self-concepts. Participants were encouraged to include images that represent both past and future aspects of the self. Group discussion addressed identity confusion and promoted the integration of fragmented self-images, contributing to increased self-coherence and positive self-perception.

Session 7: Rewriting the Narrative

This session supported narrative reconstruction and the reframing of traumatic experiences. Participants created a visual timeline or “life river” representing significant events, emotions, turning points, and aspirations. The therapist guided them in identifying patterns of survival and growth within their stories. This creative process allowed for a nonverbal reshaping of meaning and promoted coherence across dissociative experiences. Group sharing emphasized common themes of transformation and resilience, helping participants view themselves as active authors of their recovery journey.

Session 8: Closure, Integration, and Future Vision

The final session focused on closure and future orientation. Participants were asked to create an artwork symbolizing their personal journey through the program and their hopes or intentions moving forward. A guided visualization and mindfulness exercise supported emotional integration. During group sharing, participants reflected on changes in their self-perception and coping strategies. The therapist reviewed progress made, offered affirmations, and provided resources for continued self-expression and emotional care. The session ended with a collective ritual—such as contributing to a shared mural or exchanging affirmations—to honor the group process and say goodbye.

2.4. Data Analysis

To evaluate changes in dissociation and self-esteem over time and between groups, a repeated measures analysis of variance (ANOVA) was conducted using SPSS version 27. The repeated measures design allowed for the assessment of within-subject changes across the three measurement points as well as between-group differences. Where significant interaction effects were found, Bonferroni post-hoc tests were applied to identify specific time-point differences within and between groups while controlling for Type I error. Assumptions of normality, sphericity, and homogeneity of variances were examined prior to conducting statistical analyses. A significance level of $p < .05$ was adopted for all tests.

3. Findings and Results

The total sample consisted of 30 participants from Indonesia, with 15 individuals assigned to the trauma-informed art therapy group and 15 to the control group. Among the participants, 21 were female (70.0%) and 9 were male (30.0%). The age range of the sample was between 19 and 36 years, with a mean age of 27.4 years ($SD = 4.2$). Regarding educational background, 13 participants (43.3%) held a bachelor's degree, 11 participants (36.7%) had completed high school, and 6 participants (20.0%) held a diploma or equivalent qualification. In terms of employment status, 18 participants (60.0%) were employed full-time, 7 (23.3%) were students, and 5 (16.7%) were unemployed or engaged in part-time work.

Table 1

Descriptive Statistics for Dissociation and Self-Esteem by Group and Time Point

Variable	Group	Pre-Test (M ± SD)	Post-Test (M ± SD)	Follow-Up (M ± SD)
Dissociation	Intervention	52.67 ± 6.45	38.41 ± 5.88	36.79 ± 6.12
Dissociation	Control	51.88 ± 7.03	50.73 ± 6.59	50.40 ± 6.31
Self-Esteem	Intervention	19.26 ± 3.78	28.47 ± 4.10	29.13 ± 3.95
Self-Esteem	Control	19.87 ± 4.01	20.33 ± 3.92	20.60 ± 3.85

Participants in the intervention group showed a marked decrease in dissociation scores from pre-test (M = 52.67, SD = 6.45) to post-test (M = 38.41, SD = 5.88) and further slight improvement at follow-up (M = 36.79, SD = 6.12). In contrast, the control group showed minimal change across all stages. Similarly, self-esteem scores increased in the intervention group from pre-test (M = 19.26, SD = 3.78) to post-test (M = 28.47, SD = 4.10), with a further slight increase at follow-up (M = 29.13, SD = 3.95), whereas the control group remained relatively stable (Table 1).

Prior to conducting the repeated measures ANOVA, all relevant statistical assumptions were examined and

confirmed. The assumption of normality was tested using the Shapiro–Wilk test, and results indicated no significant departures from normal distribution for dissociation ($W = 0.976, p = .674$) and self-esteem ($W = 0.968, p = .588$) scores across time points. Mauchly’s Test of Sphericity was not violated for either dissociation ($\chi^2(2) = 1.621, p = .445$) or self-esteem ($\chi^2(2) = 1.107, p = .575$), indicating that the assumption of sphericity was met. Levene’s Test confirmed the homogeneity of variances across groups at each time point for dissociation ($F(1,28) = 1.122, p = .298$) and self-esteem ($F(1,28) = 0.794, p = .380$). These results supported the use of repeated measures ANOVA for further analysis.

Table 2

Repeated Measures ANOVA Results for Dissociation and Self-Esteem

Variable	Source	SS	df	MS	F	p-value	η^2 (Effect Size)
Dissociation	Time	1948.21	2	974.11	32.76	<.001	.56
	Group	2876.14	1	2876.14	45.31	<.001	.62
	Time × Group	1810.66	2	905.33	28.47	<.001	.52
	Error (within)	1584.02	56	28.29			
Self-Esteem	Time	1432.77	2	716.39	39.22	<.001	.58
	Group	2198.53	1	2198.53	42.14	<.001	.60
	Time × Group	1373.68	2	686.84	36.09	<.001	.55
	Error (within)	1022.46	56	18.26			

The repeated measures ANOVA revealed a statistically significant interaction between time and group for both dissociation ($F(2,56) = 28.47, p < .001, \eta^2 = .52$) and self-esteem ($F(2,56) = 36.09, p < .001, \eta^2 = .55$). These results

suggest that changes over time differed significantly between the intervention and control groups. Large effect sizes were observed, indicating that trauma-informed art therapy had a substantial impact on both outcomes (Table 2).

Table 3

Bonferroni Post-Hoc Comparisons for Dissociation and Self-Esteem Across Time (Within Groups)

Variable	Group	Comparison	Mean Difference	SE	p-value
Dissociation	Intervention	Pre vs Post	14.26	1.72	<.001
		Pre vs Follow-Up	15.88	1.95	<.001
		Post vs Follow-Up	1.62	0.89	.212
	Control	Pre vs Post	1.15	0.94	.441
		Pre vs Follow-Up	1.48	1.01	.368
		Post vs Follow-Up	0.33	0.73	.812
Self-Esteem	Intervention	Pre vs Post	9.21	1.31	<.001
		Pre vs Follow-Up	9.87	1.45	<.001
		Post vs Follow-Up	0.66	0.61	.292

Control	Pre vs Post	0.46	0.59	.438
	Pre vs Follow-Up	0.73	0.65	.268
	Post vs Follow-Up	0.27	0.47	.586

Bonferroni post-hoc analyses revealed significant reductions in dissociation from pre-test to both post-test ($MD = 14.26$, $p < .001$) and follow-up ($MD = 15.88$, $p < .001$) in the intervention group, with no significant change between post-test and follow-up ($p = .212$). Similarly, self-esteem significantly improved from pre-test to post-test ($MD = 9.21$, $p < .001$) and to follow-up ($MD = 9.87$, $p < .001$), with no statistically significant change between post-test and follow-up ($p = .292$). The control group showed no statistically significant changes across any time point for either variable (Table 3).

4. Discussion and Conclusion

The findings of this study provide compelling evidence for the effectiveness of trauma-informed art therapy in reducing dissociation and enhancing self-esteem among individuals with trauma histories. Participants who received the eight-session intervention showed a statistically significant reduction in dissociative symptoms and a notable increase in self-esteem compared to the control group, both immediately following the intervention and at five-month follow-up. The use of repeated measures ANOVA with Bonferroni post-hoc tests confirmed the persistence of these improvements over time, underscoring the therapeutic durability of the intervention.

The significant reduction in dissociative symptoms among participants in the intervention group aligns with the growing body of literature highlighting the capacity of art therapy to support trauma integration and emotional regulation through sensory-based and symbolic expression. By facilitating nonverbal access to fragmented memories and emotions, art therapy offers a powerful medium through which dissociative states can be safely explored and gradually integrated into conscious awareness (Sigal & Rob, 2021). This is consistent with previous findings demonstrating that trauma-focused art therapy enables the visualization and containment of overwhelming experiences in clients with high dissociation, leading to reduced avoidance and internal fragmentation (Heijman et al., 2024).

Moreover, the improvement in self-esteem observed in the intervention group is consistent with earlier studies reporting that trauma-informed creative processes help clients reconstruct damaged self-concepts and foster a renewed sense of personal worth (Salmi, 2021). By

providing opportunities for mastery, aesthetic agency, and symbolic affirmation, art therapy allows individuals to reclaim narratives of strength and survival, thereby enhancing self-esteem and psychological coherence. These effects have also been observed in community-based interventions that utilize the expressive arts as a means of restoring identity and empowerment among trauma-affected populations (Mazzeo & Bendixen, 2022).

This study's findings are further supported by recent meta-analytic and qualitative research examining the broader efficacy of visual arts therapies for trauma. A systematic review by Maddox et al. confirmed that art therapy interventions significantly improve trauma-related outcomes, including emotional regulation, distress tolerance, and post-traumatic growth (Maddox et al., 2024). Similarly, qualitative studies on the lived experiences of trauma survivors reveal that art therapy fosters emotional expression, insight, and connection to self, particularly when verbal communication is limited or emotionally unsafe (J, 2024; Kim & Lim, 2023). In our study, participants described their creative process as a "safe bridge" to feelings that had previously been avoided, suggesting that the intervention also promoted emotional accessibility and insight.

One of the most critical components contributing to the effectiveness of this intervention may be its adherence to trauma-informed principles—safety, trustworthiness, choice, collaboration, and empowerment (Sunderland et al., 2022). These principles are central to the intervention structure and appear to have contributed to the therapeutic gains observed in both dissociation and self-esteem. By establishing a safe, non-judgmental space, the therapy allowed participants to engage with vulnerable material in a controlled manner, thus avoiding retraumatization and fostering psychological integration (Baggerly & Thomas, 2021).

The cultural context of this study—Indonesia—also warrants discussion. While trauma-informed art therapy has been extensively studied in Western and clinical settings, research in Southeast Asian populations remains limited. Nevertheless, our findings echo results from other non-Western contexts, such as Turkey, where Aydn reported that art therapy improved emotional expression and trauma processing among survivors of interpersonal violence

(Aydn, 2024). Similarly, in South Africa, expressive arts were incorporated successfully into the ImpACT+ intervention for women with trauma histories, demonstrating the adaptability and effectiveness of art-based models in culturally diverse settings (Sikkema et al., 2022). This indicates that trauma-informed art therapy is not only effective but also culturally flexible, capable of being tailored to different aesthetic traditions and social frameworks (Viletto & Viletto, 2023).

Importantly, participants in this study reported that visual expression helped them articulate aspects of their trauma that were difficult to verbalize, a finding that resonates with the theoretical foundation of art therapy. Art engages sensory-motor networks and emotion regulation systems in the brain, supporting neural integration and enabling the reprocessing of traumatic experiences that are often stored in nonverbal memory systems (King, 2021; Quinn, 2025). This is particularly relevant for dissociative individuals whose trauma may be encoded in fragmented or implicit memory. Our results substantiate the claim that structured, creative activities can stimulate reconnection across these dissociated cognitive-affective domains, fostering increased coherence and present-moment awareness (King & Strang, 2024).

The long-term maintenance of improvements at the five-month follow-up provides additional evidence for the sustained benefits of art therapy in trauma treatment. Sustained change is often a challenge in trauma recovery, especially for individuals with chronic dissociation or impaired self-concept. However, consistent with other studies that have incorporated follow-up assessments, our results suggest that the benefits of art therapy can endure beyond the active treatment phase. For instance, Wymer et al. found that expressive arts interventions produced long-term benefits in children exposed to trauma, including improved affect regulation and relational functioning (Wymer et al., 2020). This suggests that the psychological changes elicited through creative processes may be internalized and integrated over time, promoting resilience and continued recovery.

Our results also reflect findings from studies exploring the professional perspectives of art therapists working with trauma survivors. According to Woollett and Berman, training programs that emphasize trauma-informed frameworks and cultural humility enhance therapists' abilities to support clients through creative processes that are both healing and empowering (Woollett & Berman, 2024). In our study, the therapist's facilitation style, informed by such trauma-informed principles, likely played a critical role

in establishing a therapeutic alliance and guiding participants through complex emotional material with care and sensitivity.

This intervention's success is further echoed in work by Hereld and Yoshizawa, who highlight the power of multisensory media—such as music videos and mixed media—in engaging individuals with complex trauma (Hereld & Yoshizawa, 2023). Their work, though distinct in format, underscores a shared principle: that creative expression allows for the safe exploration of overwhelming or fragmented inner experiences. In our study, the structure and flexibility of the art materials used, combined with the supportive group process, fostered a reparative environment that made dissociative symptoms more manageable and self-image more affirming.

Taken together, the findings of this study contribute to the growing evidence base supporting trauma-informed art therapy as a powerful intervention for addressing complex trauma outcomes. By combining creative expression with principles of safety and empowerment, the approach uniquely facilitates the reorganization of identity, reduction in dissociation, and restoration of self-worth. It builds upon and aligns with existing models of trauma recovery while offering a culturally adaptable and neurologically congruent treatment modality.

Despite its promising findings, this study is not without limitations. First, the relatively small sample size ($n = 30$) limits the generalizability of the results, and replication with a larger, more diverse sample is needed to confirm the robustness of the findings. Second, although the use of a randomized controlled trial design strengthens internal validity, the lack of an active control group means that the effects observed could be partially attributable to nonspecific factors such as therapist attention or group support. Additionally, self-report measures were used for both dissociation and self-esteem, which, although validated, are susceptible to bias. Finally, while the five-month follow-up period provides insight into short-term maintenance, longer follow-up intervals are needed to examine the durability of the intervention's effects over time.

Future studies should aim to replicate these findings with larger samples across diverse clinical and cultural settings. Comparing trauma-informed art therapy to other trauma-focused interventions, such as EMDR or cognitive processing therapy, could help clarify its unique contributions. Research should also explore the specific mechanisms of change within art therapy—such as symbolic

processing, sensory regulation, or narrative reconstruction—to better understand how healing occurs. Longitudinal studies with one-year or longer follow-ups would provide valuable data on sustained outcomes. In addition, incorporating physiological or neurobiological measures could enhance our understanding of the intervention's impact on brain function and stress regulation.

Clinicians working with trauma survivors should consider incorporating trauma-informed art therapy into their treatment repertoire, particularly for clients who experience difficulty verbalizing their emotions or memories. Practitioners should be trained not only in art-making techniques but also in trauma theory, cultural sensitivity, and group facilitation to ensure a safe and empowering experience. Community mental health programs and schools could implement adapted versions of this intervention to increase accessibility for underserved populations. Finally, using art as a co-regulatory tool in therapeutic settings can provide clients with a sense of control, mastery, and reconnection—key elements in restoring psychological well-being after trauma.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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