

Art Therapy for Adolescents with Posttraumatic Stress Disorder Symptoms: A Pilot Study

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Abstract

This study examined the efficacy of an adjunctive trauma-focused art therapy intervention in reducing chronic child posttraumatic stress disorder (PTSD) symptoms in an inpatient psychiatric facility for youth. We compared 2 treatment conditions, each delivered in one 1-hour group sessions over 16 weeks: (a) a trauma-focused expressive art therapy protocol (TF-ART) and (b) a treatment-as-usual (TAU) control condition, the standard arts-and-craft-making activity used at the two participating facilities. Youths were randomized to either treatment condition, and assessed before and after treatment. The principal outcome measure was the severity of PTSD symptoms measured using the UCLA PTSD Reaction Index, administered as an interview. There was a significant treatment-by-condition interaction indicating that adolescents in the TF-ART condition had greater reduction in PTSD symptom severity than youths in the TAU condition. TF-ART was not found to be associated with more behavioral problems during the treatment period. Results indicate that TF-ART may be a promising adjunctive treatment for inpatient adolescents with PTSD symptoms.

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This study received the prestigious 2007 Research Award from the American Art Therapy Association and grant to fund further research. The study was partially supported by NIMH grant 5R24MH063910 (Claude M. Chemtob, PI). The authors express their sincere appreciation to the many staff at Bronx Children's Psychiatric Center and Sagamore Children's Psychiatric Center who assisted with patient recruitment and IRB review, as well as the graduate assistants from the College of New Rochelle who assisted with data management. Rohini Luthra, Yoko Nomura, and Yanping Wang from the Mount Sinai School of Medicine also assisted with data management. The authors express their thanks to the youths who gave of themselves by participating in this study.

Introduction

Events causing posttraumatic stress disorder (PTSD) symptoms range from a one-time traumatic event, such as a natural or man-made disaster, to chronic traumatization in which a person is exposed to multiple stressors such as community violence, physical injury, and maltreatment (physical/sexual abuse) over months and years (Anderson, 2005, ¶ 1). Children and adolescents respond differently to trauma-inducing stressors when compared to adults, particularly in how their behavior reflects their re-experience of the trauma, avoidance of trauma-producing situations, and hyper-arousal response.

Perrin, Smith, and Yule (2000) observed that children manifest their symptoms in metaphoric modalities such as play, drawing, and story-telling, and in separation anxiety. Behavioral symptoms in both children and adolescents can include disruptiveness, impulsivity, inattentiveness, poor socialization, and low academic achievement. For over 30 years, art therapists have observed that drawing and painting are useful in the assessment and treatment of traumatic disorders in children and adolescents (Gantt & Tinnin, 2007; Sember, 1977). Because verbal recollection of the trauma is often difficult or beyond a child's capacity, approaches that do not rely heavily on verbal access to trauma material, such as art therapy, are potentially important treatments.

There are many case studies in the literature on the use of art therapy to reduce trauma symptoms and some proposals for art therapy treatment protocols for PTSD in children and adults (Cohen, Barnes, & Rankin, 1995; Collie, Backos, Malchiodi, & Spiegel, 2006; Rankin & Taucher, 2003; Raymer & McIntyre, 1987; Sweig, 2000). Far fewer reports describe treatment of PTSD symptoms in adolescents (Backos & Pagon, 1999; Hanes, 2000; Pifalo, 2002, 2006). Few empirical studies actually assessed whether art therapy reduces PTSD symptoms. Pifalo (2006) studied art therapy combined with cognitive behavioral therapy (CBT) used to treat sexually abused latency-aged children ($n = 41$) in weekly 1-hour sessions over 8 weeks. Pre- and post-testing using the Trauma Symptom Checklist for Children (TSCC) (Biere, 1995, as cited in Pifalo, 2006) showed statistically significant reductions on 9 of the 10 clinical subscales. However, because the study design did not include a comparison group, results could have been due to generalized improvement or to increased treatment attention. The fact that art therapy was combined with CBT does not permit testing the effectiveness

of art therapy alone as a specific treatment in reducing trauma symptoms.

To our knowledge, there is only one randomized controlled study that examined the efficacy of art therapy for traumatized children. Chapman, Morabito, Ladakakos, Schreier, and Knudson (2001) treated 85 children, ages 7–17 years, who were admitted to a trauma center for mild to moderate physical injuries and who required at least a 24-hour hospital stay. Children with diagnoses of abuse, burns, and severe head injury were excluded as were non-English-speaking children. Pre- and post-tests were the child, adolescent, and parent versions of the UCLA PTSD Reaction Index (UCLA-RI) (Rodriguez, Steinberg, & Pynoos, 1997); the Post Traumatic Stress Disorder Diagnostic Scale (Foa, 1995); the Family Environment Scale (Moos & Moos, 1994); and a Nursing Checklist that was a modified version of the UCLA-RI. A one-session intervention (CATTI) was used to treat incident-specific medical trauma. Participants were randomly assigned to either CATTI ($n = 31$) or to the control group and treated with standard hospital care ($n = 27$). Hospital care was defined as the normal and usual course of pediatric care including Child Life services, art therapy, social work, and psychiatric consults (Chapman, et al., 2001). No significant differences were found between treatment conditions as measured by the UCLA-RI. The Chapman et al. (2001) study had a number of strengths: participants were randomly assigned to treatment groups, a measure validated for PTSD symptoms (Rodriguez, Steinberg, & Pynoos, 1997, 1999) was used to track pre- and post-treatment change in children, and the authors used a treatment manual to standardize treatment. Although no significant group differences were found in treatment efficacy associated with the art therapy condition, this finding could have been due to insufficient treatment dosage (only one session of therapy) or to specific aspects of the particular protocol that was used. Another weakness of the study design was that assessors were not “blind” to treatment condition. Finally, restricting inclusion criteria to children with traumas that were secondary to their physical injuries limited generalizability.

Our exploratory study followed guidelines for conducting psychotherapy trials (Foa & Meadows, 1997) to examine the efficacy of a structured art therapy treatment protocol with adolescents with high levels of PTSD symptoms. Adolescents who had been exposed to a wide range of traumatic experience were drawn from two specialized inpatient treatment facilities. Those who met criteria for high levels of PTSD symptomatology were randomly assigned to either a structured art therapy trauma treatment protocol or to an adjunctive treatment-as-usual condition. The treatment-as-usual condition controlled for the effects of therapeutic attention and, more specifically, for creative arts activity. Evaluators, who were unaware of the treatment condition to which children were assigned, administered the UCLA-RI as an interview before and after treatment to measure PTSD symptoms.

We hypothesized that the participants receiving trauma-focused art therapy (TF-ART) would show significantly greater decreases in PTSD symptoms post-treatment than

the treatment-as-usual condition (TAU). There is a concern among some clinicians that directly addressing trauma-related memories and reactions could be clinically destabilizing for vulnerable youths receiving inpatient psychiatric treatment. Therefore, we sought to assess whether receiving TF-ART increased behavioral acting-out compared to the TAU arts activity. We included several behavioral measures of milieu functioning that were drawn from the clinical record for the period during which the youths were receiving the treatment. We hypothesized that the groups would not differ in milieu behavioral acting out.

Method

Treatment Setting and Recruitment

The study was conducted at two medium term, state-funded inpatient facilities for youth in the Greater New York City metropolitan area. Most of the patients were Medicaid eligible minority teens with multiple prior hospitalizations. In the Bronx facility, the children/adolescents building housed approximately 80 inpatient psychiatric residents. Inpatients received various treatments including medication, individual psychotherapy, group psychotherapy, recreation therapy, special education services, behavior therapy, and creative arts therapy. All participants received all modalities of inpatient treatment characteristic of the facilities in which they were being treated. Assessment sessions and group therapy took place in a private room with minimal distraction.

The second facility, located in Long Island, housed approximately 70 children and adolescents ranging in age from 10 to 18, all of whom were inpatients. These participants received the same forms of treatment as the participants in the first facility; they were provided assessment and therapy groups that took place in a private room with minimal distractions. This study was reviewed, approved, and monitored by the Institutional Review Board at both treatment facilities.

Participants

Inclusion criteria at the Bronx facility were as follows: participants were between 13 and 18 years of age, were able to sustain a school program for 2 weeks running, and were expected to stay at the hospital for at least 16 weeks from the date of parent or guardian consent. Inclusion criteria at the Long Island facility were the same with one additional criterion: Participants who were court-mandated were excluded. As new patients were admitted to the adolescent units, their guardians were invited to consent to the inclusion of their children in the research study. When consent was not obtained on admission, the site principal investigator (site PI) inquired at follow-up treatment rounds about the clinical status of each new admission and whether a guardian was available for consent. Guardians or parents were invited to give consent for their child after the treatment team advised the site PI that the patient stay met the inclusion criteria and that treatment was not contraindicat-

ed. After parental/guardian permission was given, the patient was invited to assent to participation in the art therapy study.

Therapists

The same therapist at each site provided treatment for both conditions to prevent the possibility that different therapists might provide a different quality of treatment services. Treatment was provided by a Registered Art Therapist with an art therapy master's degree and at least 2 years of art therapy practice in the setting. Treatment group leaders were assisted by an art therapist or an art therapy intern with at least 1 year of graduate art therapy training.

Measures

The UCLA PTSD Reaction Index for *DSM-IV*, Child Version (Rodriguez, Steinberg, & Pynoos, 1999) was designed to measure PTSD symptoms in children ages 7 to 12 years of age. The scale has been used in the assessment of PTSD and traumatic stress in children and adolescents (Goenjian, Pynoos, Steinberg, & Najarian, 1995; Pynoos et al., 1987). The child version was used in our study with children and adolescents to facilitate the participants' understanding of each test item. The scale's reported Cronbach's α is 0.90 and test-retest reliability ranges good to excellent (Steinberg, Brymer, Decker, & Pynoos, 2004). The scale comprises 22 self-report items based on *DSM-IV* PTSD symptom criteria (e.g. reexperiencing symptoms, as in "I act or feel like it is happening all over again"), avoidance symptoms (e.g., "I have trouble remembering important parts of what happened"), and hyperarousal symptoms (e.g., "I watch out for danger or things I'm afraid of"). Respondents are asked to indicate the frequency of symptoms experienced on a 5-point Likert scale ranging from 0 (never) to 4 (most of the time). A posttraumatic severity score is computed as the sum of the responses to 20 (of 22) items on the survey (Rodriguez et al., 1999). We also computed three separate scores from these 20 items for intrusive symptoms, avoidance symptoms, and hyperarousal symptoms. Either a Registered Art Therapist or an art therapy intern with training administered the UCLA PTSD Reaction Index using a structured interview format in accordance with author guidelines (Rodriguez et al., 1997, 1999). These raters were "blind" to the treatment condition to which cases were assigned.

In addition to the measurement of PTSD symptoms, we abstracted from the clinical record a count of incident reports, seclusion incidents, uses of restraints, and use of "as needed" medication orders, typically used in crisis management. An assessor who was unaware of the treatment condition to which the adolescent had been assigned conducted the record reviews.

Procedures

As described above, as soon as possible after intake (if guardian consent had not already been obtained on admission), the clinical team advised the primary investigator

regarding the patient's capacity for assent, the availability of a guardian or parents for consent, the patient's anticipated length of stay, and the patient's ability to sustain a school program for 2 weeks running (as per inclusion criteria). Following consent and assent procedures, participants were scheduled for individual assessment sessions, which were attended by their case coordinators. After assessment, participants joined the group to which they had been randomized. Treatment ended upon completion of the 16-week treatment protocol. Because group attendance could be preempted by medical appointments or illness, family meetings, behavioral crises, and the like, it was often the case that the 16 sessions did not occur on consecutive weeks. Groups consisted of 2 to 5 participants.

Description of Treatment Conditions

Treatment-As-Usual (TAU) Condition

The TAU condition consisted of the standard arts-and-craft-making activity group used at the two participating facilities. Before and during each craft-making activity, each participant had an opportunity to see craft examples and receive individualized instruction on specific craft-making skills. Discussion that arose spontaneously was limited to recent events associated with the group members or the milieu. Discussion that related to personal or family history was referred for follow-up with the youth's primary therapist. At the beginning of each group session, group members were asked to do a "feelings check-in" by describing how they were each feeling at the moment, using a single word or sentence. At the end of each session, they were asked to do a "feelings check-out" in similar fashion. Any participant who described significant distress at the end of the group was seen individually by either the art therapist or another clinician to assess the need for therapeutic intervention, although this was rarely needed.

The 16-session protocol of arts and crafts for the control group clients included 2 sessions each of the following activities: sewing pillows; beading necklaces, earrings and/or bracelets; making a ceramic coil-bowl and slab-box; creating a mosaics tile tray; making lanyard craft; creating decoupage and stained wooden plaques; stitching leather purses; and making decorations for the holidays or the change of seasons. Tea and a small treat were served in honor of each participant on completion, giving everyone an opportunity to say goodbye and for peers to give and receive feedback. Patients who completed the group received a post-treatment assessment in the week that followed.

Trauma-Focused Art Therapy (TF-ART) Condition

The manual for the treatment protocol scripted trauma-specific art activities (directives) for each session. As in the TAU condition, the order of directives was not fixed, but each directive was given to each individual within the 16-session period. Each participant completed at least 13 collages or drawings compiled in a hand-made book format to express a narrative of his or her "life story." Artworks were

made on 12" x 18" sheets of white paper, laid horizontally, and bound together with yarn. For each session, before art making, a 5 to 20 minute discussion provided participants with an opportunity to discuss the topic of the day. After the art making period, during which minimal discussion took place, the youth were encouraged to display their artwork to peers. They were encouraged but not required to discuss dreams, memories, and feelings related to their trauma history and symptoms.

As in the TAU condition, each adolescent was asked at the beginning of the session to do a "feelings check-in" describing how he or she was feeling in the moment using a single word or sentence, and a "feelings check-out" at the end of the session. Anyone who described significant emotional distress, from trauma memories that might have been triggered during the production of art work or during discussion, was seen individually after the session to assess the need for therapeutic intervention. As with the TAU group, this was rarely necessary.

The 16-session protocol of art and discussion topics for the TF-ART condition is described below. The organizing rationale focused on enhancing the adolescent's capacity to monitor and regulate feelings of safety and danger. The activities sought to support the youth in reflecting on several questions: What is the difference between feeling safe and unsafe with (a) your peers in the hospital; (b) peers on the street; (c) a staff member; (d) adults in your community; (e) peers at home; and (f) adults at home? When are feelings of fear and anger helpful and how can they lead to increasing safety? What makes a place safe or dangerous? Can you contrast dangerous activities that you have engaged in during the past with safe activities? What made them safe or dangerous?

A second phase of the protocol focused on sharing trauma-related experiences and describing coping responses. For example, we asked the participants to share "some of the words that others have used to hurt you or help you in the past;" to describe nightmares, bad dreams, distressing memories, and flashbacks, as well as strategies used to cope with them; and to discuss traumatic "triggers" that served as reminders of trauma memories or feelings, along with coping strategies. The directives were completed in any sequence.

When an individual participant joined the group, the other group members oriented him or her to confidentiality and behavioral expectations. After each member completed the 13 directives, he or she was given time to organize his or her book and make front and back covers for it. Each participant was given two 1-hour sessions to complete the covers and binding of the book. Additional work created during two of the three last sessions could be included as well. On the last session, each presented the book in its entirety to his or her peers. Tea and a small treat were served in the departing teen's honor, and each participant was given an opportunity to say goodbye and give and receive feedback to and from peers. Participants who completed the group received a post-treatment assessment session by an independent rater within 7 days of the last session.

Results

Participants

The total number of patients referred for the study was 142. Of those 142 patients, 56 did not meet the inclusion criteria. Of those 56, 14.8% were excluded for anticipated short length of stay, 11.3% were excluded for lack of guardian consent, 4.9% were excluded for lack of patient assent, and 8.5% were excluded for clinical reasons determined by the treatment team. Of the 86 patients remaining who met all inclusion criteria, only 9 (6.3%) tested below the UCLA PTSD Reaction Index cut-off of 26 (associated with a PTSD diagnosis). Twenty-three patients (16.2%) were randomized to groups but were discharged prior to completion of treatment. Five patients (3.5%) withdrew assent prior to completing the treatment groups. Three patients (2.1%) were withdrawn from treatment by the treatment team for clinical reasons. By the end of a 2-year period, a total of 14 (11.3%) patients completed treatment in the TF-ART group and 15 (10.6%) patients completed treatment in the TAU condition. The study is ongoing; 15 (10.6%) patients are in treatment at the time of this report.

The average treatment participant's age was 15.07 in a range of 13 to 17 years of age. The treated sample was 55.2% male. Patient ethnicity was highly diverse: 40.1% African-American, 35.2% Latino/a, 18.3% White, 0.7% Caribbean American, 4.9% mixed ethnicity, 0.7% Bangladeshi. Economic status was determined by Medicaid eligibility as follows: 87.7% of the patients were Medicaid eligible and 11.6% were not eligible (0.7% patients' economic status was unknown). The average full-scale IQ of the patients was 84. Participant trauma exposure is shown in Table 1. Participants assigned to TF-ART did not differ from the TAU participants in age (14.8 vs. 15.1 years),

Table 1
Trauma Exposure (n = 78)

Type of Trauma (based on self-report)	Percent of participants
Death, serious injury of a loved one	71.8%
Physically abused or threatened with physical abuse at home	61.5%
Witnessing physical abuse at home	50.0%
Being in a bad accident	50.0%
Witnessing shooting, beating, or threats in neighborhood	47.4%
Sexual abuse	45.5%
Beaten, shot at, or threatened in neighborhood	44.9%
Serious medical problem	39.7%
Being in a disaster (weather, fire, etc)	19.2%
Being in a war zone	7.7%
Other types of incidents not listed above	56.4%
Total cases	78

Table 2
Mean pre-treatment and post-treatment scores
on the UCLA PTSD Reaction Index
by treatment condition

Treatment Condition	<i>N</i>	<i>M</i>	<i>SE</i>	95% Confidence Interval	
TAU					
Pre-treatment		58.1	3.9	50.10	66.02
Post-treatment	15	55.6	2.8	49.78	61.29
TF-ART					
Pre-treatment		58.1	4.0	49.83	66.31
Post-treatment	14	37.3	2.9	31.29	43.21

gender (proportion of males: 64.3 vs. 46.7) or ethnicity. Importantly, participants in the two conditions did not differ on full scale IQ (TF-ART 88 vs. TAU 79, $t(26) = .11$).

Impact of Treatment on Trauma Symptoms

The total scores on the pre- and post-treatment UCLA PTSD Reaction Index were our primary measure of trauma symptoms. Scores were entered into a repeated measure ANOVA. As can be seen in Table 2, there was a significant effect of treatment over time for both groups ($F(1,27) = 11.6$, $p = .002$) across treatment conditions. This is not surprising given the multiple treatment modalities received by all participants by virtue of being inpatients. Importantly, however, there was a significant treatment by condition interaction ($F(1,27) = 7.1$, $p = .01$) showing that TF-ART was significantly more effective in reducing trauma symptoms from pre-treatment to post-treatment. Table 2 presents pre- and post-treatment means by treatment condition.

Milieu Behavioral Measures

We obtained a count of the number of incident reports, seclusion incidents, use of restraints, and "as needed" medication orders (administered during a behavioral crisis) from the clinical chart for the period during which the treatment was being delivered. See Table 3 for the mean number of reports by treatment condition. There were no significant differences, except for a trend showing reduced likelihood of instances of seclusion being used with the adolescents who were in the TF-ART condition ($p = .06$). Trauma-focused art therapy did not result in an increase in behavioral problems; the average number of behavioral problems displayed by patients in the TF-ART group was less across all indicators. This was especially the case in regard to seclusions, which showed a trend toward significance.

Discussion

There were two main findings. First, although both treatment groups improved, the TF-ART condition was associated with substantially more PTSD symptom reduction (see Figure 1). Pretest scores were the same for both

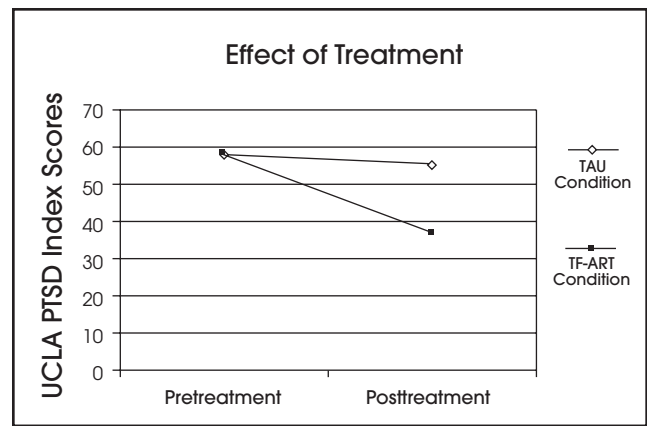


Figure 1

groups, but when pretreatment and posttreatment PTSD symptom scores were compared, a statistically significant difference was found: As can be seen in Table 2, UCLA PTSD Reaction Index mean scores decreased 20.8 points for TF-ART group compared to the TAU group whose mean scores decreased 2.5 points. This is noteworthy given that the expressive arts therapy adjunctive treatment was but one of the many treatments received by all of the study participants. We also controlled for the effects of increased attention and arts activity by randomly assigning control participants to a treatment-as-usual (TAU) arts activity condition.

Second, participation in TF-ART did not result in more behavioral acting out, although it required processing of trauma-related emotions. Indeed, the trend was in the direction of reduced behavioral acting out. The capacity of trauma-focused art therapy to result in greater PTSD symptom reduction against a background of multiple treatment modalities in inpatient settings therefore may have important implications for the treatment of PTSD and calls for further research.

To our knowledge, this pilot study is the first randomized controlled study to evaluate the efficacy of a trauma-focused art therapy protocol with adolescents exposed to a wide variety of traumatic events. The inpatient adolescents who were treated had mental health problems severe enough to necessitate hospitalization. They also had high

Table 3
Milieu Behavioral Measures by Treatment Condition
During Treatment Period

Measure	Treatment Condition	<i>N</i>	Mean (SD)
Number of incidents	Control group	14	2.43 (2.3)
	Treatment group	13	1.31 (2.3)
Total seclusions	Control group	14	2.21 (2.8)
	Treatment group	13	.54 (1.4)
Total restraints	Control group	14	.86 (1.4)
	Treatment group	13	.46 (1.4)
Total PRN orders	Control group	14	9.64 (14.6)
	Treatment group	13	7.92 (16.2)

levels of PTSD symptoms. Most participants reported exposure to multiple trauma events (Table 1). The mean UCLA PTSD Reaction Index score was high: 58.1 for all patients (N=82) who were pre-tested. It is noteworthy that 87% of the participants potentially eligible for participation exceeded the threshold score of 26 that is associated with a PTSD diagnosis on the UCLA PTSD Reaction Index. Participants were ethnically and racially diverse. We regard the comparability of the participants in each treatment condition on demographic variables and in terms of IQ scores as study strengths. We were able to conduct the study at two separate sites, which suggests that the treatment protocol has the potential for further dissemination.

Lyshak-Stelzer and Chemtob (2007) developed the conceptual rationale for TF-ART. Trauma-focused art therapy is structured to help youth explore their fundamental experiences associated with safety and threat. Treatment is framed by the recognition that traumatized youth have difficulty recognizing safety and danger because of trauma exposure. TF-ART creates an opportunity for ways of orienting to safe and dangerous situations using non-verbal representations. These imaginal representations are then used as the basis for verbalizing the associated experiences in a supportive social context. Using art products as the starting point for sharing traumatic experiences reduces the threat inherent in sharing experiences of trauma by permitting a constructive use of displacement via the production of imagistic representations.

This exploratory study's findings should be considered in view of several limitations. The participants were inpatients with relatively limited IQ. Trauma-focused art therapy may not be efficacious with outpatients with less severe disorders, and may be generally more effective with relatively healthier and more cognitively capable participants. The number of treatment participants was low. Because participants were inpatients, recruitment was difficult in view of greater requirements to ensure that their rights were carefully protected because of patient vulnerability. Attrition was relatively high because patients were discharged prematurely relative to completing our protocols.

Although we randomized participants, it is possible that the greater efficacy of TF-ART is an artifact of attrition or other unrecognized variables. Finally, in large part because participants were often discharged within weeks of completion of treatment, we were not able to conduct long-term follow-up assessments to examine persistence of treatment effects. Although encouraging, these results await replication in a larger sample of traumatized youths with high levels of PTSD symptoms who can be followed up after treatment is completed. Despite these cautionary remarks, our findings point to the feasibility and importance of conducting treatment outcome studies of art therapy for PTSD symptoms.

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