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Drawn Together Through Group Art Therapy: Intervention Responses of Adults With a Traumatic Brain Injury
Le rapprochement créé par l'art-thérapie de groupe : les réactions d'intervention d'adultes ayant un traumatisme cérébral

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ABSTRACT
The authors explored the experiences of adults living with a traumatic brain injury (TBI) in group art therapy. Integral to this study was a replicable methodology, including an original group art therapy treatment protocol for research that may be useful for practice-based applications. The treatment protocol consisted of a selected series of therapeutic art exercises for a short-term, 12-session art therapy course of treatment. Thirteen adults living with a TBI participated in the study, divided into two treatment groups comprised of six and seven adults (four female, nine male), respectively. Several quantitative measures and assessment tools were chosen to rate pre-therapy and post-therapy differences in self-esteem, coping, cognitive capacity, and affect. These included the Neurobehavioral Cognitive Status Examination (or Cognistat), the Coopersmith Self-Esteem Inventory (adult form), Rosenberg's Self Esteem Scale, the COPE Inventory, and the Affect Rating Scale. The study included a pre-intervention interview, the Diagnostic Drawing Series (DDS), a comparative analysis of formal characteristics of the artwork, student observation notes, commentary on select imagery illustrating therapeutic transformations within the treatment process, and a satisfaction survey. Analyses of the quantitative data revealed

a significant reduction in anxiety with positive clinical trends noted in domains of affect, cognitive functioning, and coping styles. The authors concluded that the study should be replicated with additional variables included.

RÉSUMÉ
Les auteurs ont étudié les expériences d'adultes vivant avec un traumatisme cérébral dans le cadre d'une art-thérapie de groupe. L'étude comporte une méthodologie reproductible, notamment un protocole original de traitement par l'art-thérapie conçu pour la recherche et qui peut se révéler utile pour les cas d'utilisation dans la pratique. Le protocole de traitement consiste en une série d'exercices d'art-thérapie choisis et conçus pour un court traitement par art-thérapie de 12 séances. Treize adultes atteints d'un traumatisme cérébral ont participé à l'étude; on les a répartis dans deux groupes de traitement composés de six et de sept adultes (quatre femmes et neuf hommes). Divers outils d'évaluation et de mesure quantitative ont été choisis pour évaluer les différences observables avant et après la thérapie en ce qui concerne l'estime de soi, la capacité d'adaptation, la capacité cognitive et l'affect. Au nombre de ces outils, citons le Cognistat (ou test de dépistage cognitif *Neurobehavioral Cognitive Status Examination*), l'inventaire d'estime de soi de Coopersmith (version pour adultes), l'échelle d'estime de soi de Rosenberg, l'inventaire COPE et l'échelle d'évaluation de l'affect. L'étude comporte une entrevue pré-intervention, le DDS (*Diagnostic Drawing Series*), une analyse comparative des caractéristiques formelles du travail artistique, les notes d'observation des étudiants, des commentaires sur des imageries choisies illustrant les transformations thérapeutiques dans le cadre du traitement et un sondage sur le taux de satisfaction. Les analyses des données quantitatives ont révélé une réduction considérable de l'anxiété et des tendances cliniques positives dans les domaines de l'affect, du fonctionnement cognitif et des styles d'adaptation. Les auteurs en ont conclu que l'étude devrait être reproduite en y intégrant des variables supplémentaires.

This multiple-methods pilot study explored the creative expressions and effects of group art therapy with adults affected by a traumatic brain injury (TBI). This project was developed from the premise that engagement in creative visual expression in the context of a group art therapy process can enhance understanding of the subjective world of TBI survivors, expand therapeutic communication, serve as a forum for meaningful group interaction, and act as a catalyst for positive change. Currently, there is a lack of evidence-based research supporting the effectiveness of art therapy with a TBI (Guay, 2018; Kline, 2016; Reynolds, 2012). This study addresses this evidence gap by exploring, through a multiple-methods design, the experiences and therapeutic processes of adults affected by a TBI through short-term group art therapy intervention with a replicable treatment protocol.

Background

A TBI is the result of a sudden hard blow to the head, being struck by or against objects such as from a fall, a motor vehicle crash, a sports injury, a bicycle accident, or a gunshot wound (Northern Brain Injury Association, n.d.-b). It can also result from explosions such as by bomb blasts, causing secondarily induced neurotrauma (Cernak, 2017). TBIs cause more deaths and disabilities than other types of physical injury worldwide. In Canada, 452 persons experience serious brain injury each day (Northern Brain Injury Association, n.d.-a). It is a major public health problem, affecting an estimated 1 in 500 North Americans annually (Canadian Institutes of Health Research, 2012; Northern Brain Injury Association, n.d.-a; Billette & Janz, 2015).

TBIs can impact function in various ways, producing physical, behavioural, cognitive, or emotional impairment. They can cause significant psychosocial challenges and physical effects (e.g., altered mobility, paralysis, ataxia, fatigue, and changed speech; Headway, n.d.). They can lead to sensory dysfunction and cognitive impairment to memory and self-awareness (Cernak, 2017; Prigatano, 2005), emotional dysregulation or over-regulation (Prigatano, 2005), depression and suicidality (Simpson & Tate, 2002), and relationship disintegration and family strain (O'Callaghan et al., 2012).

TBIs and Inner Experience

Variance in overall functioning can be challenging for individuals with a TBI as they may or may not be aware of these changes in comparison to their pre-injury functioning (Prigatano, 2005). However, those who are aware of such changes may also report feeling different from their pre-injury selves while experiencing a unique sense of loss and confusion about who they are and who they can be concerning their newly acquired injury (Carroll & Coetzer, 2011; Cloute et al., 2008; Thomas et al., 2014). Furthermore, persons with a TBI, their family members, and their friends tend to note distinct personality differences resulting from the injury and related changes in functioning (Yeates et al., 2008). As a result, persons with a TBI may also lose social support networks, leading to further isolation and difficulties in continued recovery (Kreutzer et al., 2009).

The inner experience and the effects of head trauma may be difficult or impossible for persons with a TBI to convey verbally due to the extent of physical impairment and alterations in personal awareness (McGraw, 1989; Wald, 1989). Cahill et al. (2014) noted three characteristic themes in the narratives of university and post-secondary students with a TBI: "balancing act, reality versus injury, and square peg in a round hole" (p. 93). Cahill et al. suggested that these themes reflected an inner experience of turmoil, with constant struggles of adjustment and difficulty belonging. The effects of brain injury can be far-reaching. When

individuals with a TBI begin experiencing loss of self, of identity, of relationships, and of social supports, they need new ways to make sense of themselves following their injury.

Prigatano (1992) wrote that "patients respond less favourably to rehabilitation efforts that fail to incorporate their perceptions of their personal tragedy" (p. 21). For many adults with a TBI, one of the most enduring perceptual changes they experience relates to their subjective identity (Carroll & Coetzer, 2011; Douglas, 2013; Ownsworth & Haslam, 2016). Effects can be so profound as to strip away memory, learning, personal identity, and self-empowerment. Some researchers have described this change as a loss of self (Carroll & Coetzer, 2011; Thomas et al., 2014). Myles (2004) stated that this phenomenon occurs widely, wherein the survivor's awareness of not being the same person as pre-injury can be associated with negatively charged and distressing self-evaluation post-injury.

TBI Verbal Mental Health Intervention

As modes of intervention that may be oriented verbally, behavioural therapy and cognitive behavioural therapy approaches are used widely in TBI mental health treatment. Generally, they seek to achieve specific changes or goals, such as "ways of feeling," "ways of becoming more outgoing," "ways of thinking," and "ways of dealing with specific problems." These therapies concentrate on views and beliefs of an individual's present experience rather than those of the past (Association for Behavioural and Cognitive Therapies [ABCT], n.d.).

Adding to the discussion of "loss of self," Myles (2004) developed a study on relational frame theory. Identified as a behavioural analytic approach, it seeks to assist the TBI survivor in adjusting to post-injury changes in functioning while concurrently focusing treatment on the development of a new self-concept. While mental health therapies for survivors can be diverse, Bergersen et al. (2017) concluded that it was premature to make a specific recommendation on a treatment approach for a mild TBI based on their study. The findings indicated that collaborative research involving an increased volume of studies with sound methodological clinical trials was needed.

Art Therapy and TBIs

The creative arts overall enable individuals to express their thoughts and feelings in an approach that is different from verbal communication alone. By way of art, dance, music, and drama, these treatment modalities have unique properties that use non-verbal therapeutic interventions and that demonstrate effectiveness in enhancing therapeutic engagement and improving focus while helping to alleviate anxiety and depression (Hunter, 2019; see also Le Navenec & Bridges, 2005). People with a TBI may have difficulty with verbal expression, and words may not even be available to them (e.g., anomic aphasia). McGraw (1989) noted that for people with such difficulties, "Art therapy can be a supportive,

non-confrontational activity-centred treatment that evokes personal expression and serves as an alternative to or a catalyst for verbal therapy" (p. 37).

Art therapy, having roots in psychodynamic theory, has evolved in becoming more eclectic in utilizing a broad spectrum of theoretical models (e.g., humanistic, existential, developmental, and cognitive behavioural). At the same time, the field also generates its own set of theories (Malchiodi, 2012). There are several ways in which persons with a TBI may benefit from art therapy relating to fundamental concepts of the field.

Art therapy is an activity therapy involving physicality and engagement of the senses, which encourages the TBI survivor to take an active role in their personal development. Artmaking can be less threatening than verbal communication. It is often a pleasant experience, a motivating factor that can serve in reducing treatment resistance. Art production provides direct transmission of the inner world of feelings, unlike verbal expression, which is a secondary referent pointing to it. TBI survivors have experienced the trauma of a physical insult, often a shattering of their former lives involving a struggle with loss, identity, and other issues. Symbolic expression in art serves to contain and to express safely all range of feeling and experience, putting form to feeling in a way that defences are maintained.

Pioneers of the art therapy field such as Edith Kramer and Margaret Naumburg wrote that creative processes may lead to artistic sublimation, transforming for instance intense emotion to useful accomplishment (Kramer, 1987, 2000). Furthermore, art may affect cathartic release (Naumburg, 1947/1973). Through art therapy, persons with a TBI may benefit holistically in making connections between their past (including the trauma of injury), their present experience, and ways they can envision the future. Creating tangible works of art can provide an opportunity for reflection, increased self-understanding, and the potential for gaining insight. For persons with a TBI, artmaking in the art therapy milieu can play a role in securing or restoring individual identity, contributing to the integration of the personality and activating an internal healing process.

Group Art Therapy and TBIs

Group art therapy with the TBI population has been noted to offer several benefits. Sell and Murrey (2006) suggested that group interactions with adults with a TBI during art therapy support not only positive social skills but also self-understanding. Wald (1989) supported the use of group art therapy with adults living with a severe head injury in addressing loss and psychosocial issues. Wald noted that group art therapy supported self-expression, interpersonal exchanges, and the development of friendships. Participants shared their problems, discussed alternative solutions, worked on problem-solving, and practised social skills. Wald observed people living with a TBI might have limited interactions with others during general rehabilitation, highlighting the importance of interpersonal support within an art therapy group.

Guay (2018) examined group art therapy as a means for increasing communication and socialization and for enhancing the quality of life of adults with an acquired brain injury. As Guay (2018) wrote, "Qualitative findings from observations, artwork, and feedback questionnaires indicated that group art therapy increased socialization and improved emotional state for participants" (p. 156). Guay noted that deeper, more meaningful friendships developed as a result of participation in group art therapy, which may contribute to enhancing self-esteem.

Recent qualitative studies have been conducted on art therapy programs involving military service members with a TBI and with post-traumatic stress disorder (PTSD) (Jones et al., 2018; Jones et al., 2019). These studies found that art therapy programs enabled participants to identify and to articulate the complexity of their ongoing trauma symptoms, thereby improving communication with treatment providers and with loved ones, leading to an improved overall quality of life. The service members reported being able to externalize their experiences in concrete ways and to gain a better understanding of themselves while establishing a basis for safety and containment.

Method

Ethical approval for this study was obtained from the university's ethics board.

The aim of our study was to discover how, through the creation of symbolic visual expression, adults with a TBI may communicate situations that are of significance to them. This category may include how they perceive themselves, their injury, their personal concerns, their internal conflicts, their inner worlds of emotion, their strengths, and their means of coping. Also, the verbal and nonverbal exchanges that adults with a TBI have with others are explored through interactive art exercises. The research questions were as follows: "How do adults with a traumatic brain injury depict their subjective experiences through their creation of and discussions about their artwork through the treatment period? What significant changes and what positive clinical trends occur in their affect, their cognitive functioning, their self-esteem, and their coping styles through the treatment period?" This study was conducted in an urban centre in Western Canada in a university-based art studio. The studio was adequate in size with nothing on the walls to stimulate or to distract.

Participants

Inclusion criteria for this sample were participants who (a) had a medical diagnosis of a TBI for a minimum of two years, (b) had a minimum score of 6 on the Levels of Cognitive Functioning Scale, (c) had sufficient upper limb mobility and dexterity to manipulate art materials, (d) could follow basic instructions in English, (e) were 18 years or older, (f) had no current addiction to alcohol or to non-prescription drugs, (g) were able to provide informed consent or had a legal

guardian who would provide it, and (h) had a family member or significant other who could provide information about the participant's social situations.

A non-probability purposive sampling approach was used to obtain individuals with a severe form of TBI. Participants were recruited by contacting rehabilitation agencies. The one salient criterion for selecting the agencies/centres was their focus on rehabilitation for this population. A range of rehabilitation agencies/centres (at least six) in the city area were contacted via letter to ask the executive director to forward the invitation letter to families of clients with a TBI of at least two years' duration to participate in the study. The referring party determined the level of cognitive functioning of potential participants and circulated an invitation letter to those that they thought met the inclusion criteria.

Although 17 persons responded, only 13 participated. The target sample size was to have eight persons in each of the two groups. The four who were not admitted to the study did not meet the criteria for participation.

Except for two, none of the participants was working full-time, although most of them had done so before their accident. None reported major health conditions; however, many were taking medications for diabetes, epilepsy, bladder control, and/or mood changes. Most experienced challenges with balance and ambulation, specifically involving the danger of falling caused by double vision, tinnitus, or migraines. All participants had been in rehabilitation programs before the study (see Table 1 for participant characteristics).

Interdisciplinary Team

Our interdisciplinary research team was comprised of individuals from nursing, psychology, mathematics, and art therapy. The nursing investigators, which included the principal investigator, (a) focused on project planning and development, (b) conducted the participant interviews, (c) coordinated student-assisted observation of the treatment groups, and (d) collected the data. The pre- and post-psychological testing was administered by the psychologists. A statistician and the psychologists analyzed the data collaboratively. An art therapist with Diagnostic Drawing Series (DDS) specialization rated the DDS data externally. The focus of the art therapists working directly on the project included the development of a clinical protocol, the facilitation of the research treatment groups, and the review of DDS and qualitative data.

Treatment Framework

The treatment framework included weekly 90-minute group art therapy sessions conducted by two master's level art therapists spanning over 12 weeks. Two groups were created with sensitivity to group size and to convenience for participant attendance, with sessions offered on two different days of the week. These were short-term, closed, and cohesive groups with a stable number of

Table 1
Characteristics of 13 Study Participants

Gender	
Male	9
Female	4
Age range at time of study	
Males	32–71 (*Mean* = 45.3; *Median* = 41.0)
Females	31–65 (*Mean* = 50.5; *Median* = 53.0)
Age range at on-set of TBI	
Males	17–68 (*Mean* = 35.33)
Females	19–61 (*Mean* = 39)
Years since on-set of TBI	
Males	*Mean* = 9.88
Females	*Mean* = 11.75
Education	
Some High School	4
High School	5
Some University Credit	1
University Degree	3
Marital Status	
Married	4
Single	9

attendees (Skaife & Huet, 1998) who were referred by two head injury rehabilitation programs.

Each session involved a warm-up exercise, a primary exercise from the treatment protocol, and opportunities for personal reflection (e.g., journaling; see Appendix A). The sessions also included personal and group processing in varying configurations such as dyads, triads, and the larger group. There was an opportunity for sharing imagery and for discussion if desired.

A supportive therapeutic approach was taken toward maintaining ego defences. It was thus paced gently while serving to support coping and stress tolerance. Due to the variability of participants' injuries and impairments, an educative approach was utilized. For example, one participant utilized a keyboard-to-voice converter to communicate verbally. The art exercises selected and the overall treatment

process could also contribute to the prospect of developing insight and increased personal awareness (see Appendix B).

Data Collection

Qualitative Data

The qualitative data were obtained from five sources.

1. Photographs were taken of the artwork done during each session.
2. The Diagnostic Drawing Series (DDS) (Cohen et al., 1988) tool was used in Sessions 1 and 11. This tool has been used in other evaluation studies (e.g., Cohen et al., 1994; Feder & Feder, 1998; Ritnour et al., 2015). The DDS tool includes 23 criteria, which are descriptive and structural, providing a graphic analysis profile of artwork created by participants (Cohen & Mills, 2000). As per the DDS tool, the formal characteristics of three drawings are rated using a standardized description. In this study, the two sets of arts-based data from each of the study participants were analyzed comparatively. The DDS analysis was carried out by an independent DDS rater.
3. At each session, four research assistants recorded field notes consisting of observational data (i.e., appearance, presentation, interactions, level of engagement, course of session, art participation, and themes expressed) and verbal data in noting what participants had said. They recorded these data on an Art Project Contact Notes form.
4. Sessions were audio-recorded, and a video recording was made of Sessions 3 and 10, serving as a research resource to review session content.
5. At the end of the final session, a satisfaction survey was administered to participants from each of the two art therapy treatment groups.

Quantitative Data

Five tools of analysis were used in the study.

1. Neurobehavioral Cognitive Status Exam or Cognistat (Novatek Medical Data Systems, n.d.; Kiernan et al., 1987; Schwamm et al., 1987), a tool that gives a rapid appraisal of neurocognitive functioning in three areas: level of consciousness; orientation to person, place, and time; and attention. It also provides an assessment of competencies in five ability areas: language, constructional ability, memory, calculation skills, and executive skills. Assessments were administered and scored by a psychometrist.
2. Coopersmith's Self-Esteem Inventory, adult form (Coopersmith, 1981).
3. Rosenberg's Self-Esteem Scale (Rosenberg, 1965).
4. A coping style measure, the COPE Inventory (Carver et al., 1989).
5. Affect Rating Scale (Lawton et al., 1996).

Data Analysis

Qualitative Data Analysis

Qualitative analysis of the drawings was completed using the *Diagnostic Drawing Series Rating Guide* (Cohen, 1994; see also Cohen, 1986, 2012). Content was also extracted from the Art Project Contact Notes forms, and the post-session discussions with the team facilitated the identification of key themes. The similarities and the salient differences as each participant within the groups moved through the 12 sessions were noted. The descriptive case material included in this paper, accompanied by selected imagery, provides a narrative synthesis of some key features and transformational events within the treatment process based on the cumulative qualitative data, the art therapist facilitators' observations, and expertise.

The satisfaction survey given to each participant of the two art therapy treatment groups at the close of the treatment consisted of an identical questionnaire comprised of two sections: a closed question section using 10-point Likert scales for expressing an opinion and an open question section to encourage comments. The statistical outcomes of the closed questions can be found in Appendix C. The responses to the open questions can be found in Appendix D.

Quantitative Data Analysis

For the mental status, self-esteem, and coping styles data, paired t-tests were used to determine the difference between pre-test and post-test scores. Specific to the COPE inventory, a one-way repeated measures analysis of variance was conducted to examine differences between the factors within the pre-test data (before Session 1) and the post-test data (completion of Session 12). To facilitate analysis, the weeks were divided into three phases: an early phase during Weeks 1 to 4, a middle phase during Weeks 5 to 8, and a late phase during Weeks 9 to 12). Mean scores were calculated for the six types of affect (pleasure, anxiety, anger, depression, interest, and contentment) for each participant during these three phases. Due to the ordinal nature of the scores and to the small sample size, a non-parametric repeated measure was used, namely Friedman's test (with exact probabilities). Because of the significant findings pertaining to anxiety, further analysis was needed. Specifically, a pairwise non-parametric comparison called the Wilcoxon signed-rank tests was used to clarify the results.

Results

Qualitative Findings

DDS Results

The salient findings related to structural differences in space usage, line quality, line length, and colour use. Observed most often between the participants' two sets of DDS images (Session 1 & Session 11) was an increase in the use of

space on the paper. This might reflect participants becoming less inhibited and more comfortable through the group process as well as becoming more familiar with the art activities, the materials, and the session format. As a projection of personality, Hammer (1980, 2014) offers the concept that size of drawing within the page and space usage corresponds to a person's sense of significance, which may factor into self-esteem.

Analysis of the qualitative (observational) data with reference to the DDS evaluation results allowed us to identify changes in visual imagery created by participants' initial drawings compared to those created during the latter sessions, as observed by two art therapists on the research team.

Symbolic Aspects of the Artwork. This refers to the import of the visual imagery as a symbolic metaphor, including its expressive quality. Generally, the initial drawings tended to reveal a sense of isolation or of being lost, a depressive affect, a disconnection from feeling, the presence of trauma, shock, and powerlessness. In the later sessions, there was noted movement toward more animated expression including a wider range of emotions. Also noted were features suggestive of a stronger sense of self and identity, a coming to terms with disability, a social connectedness, the development of a group identity, more sense of personal empowerment, and a sense of hope and spirituality.

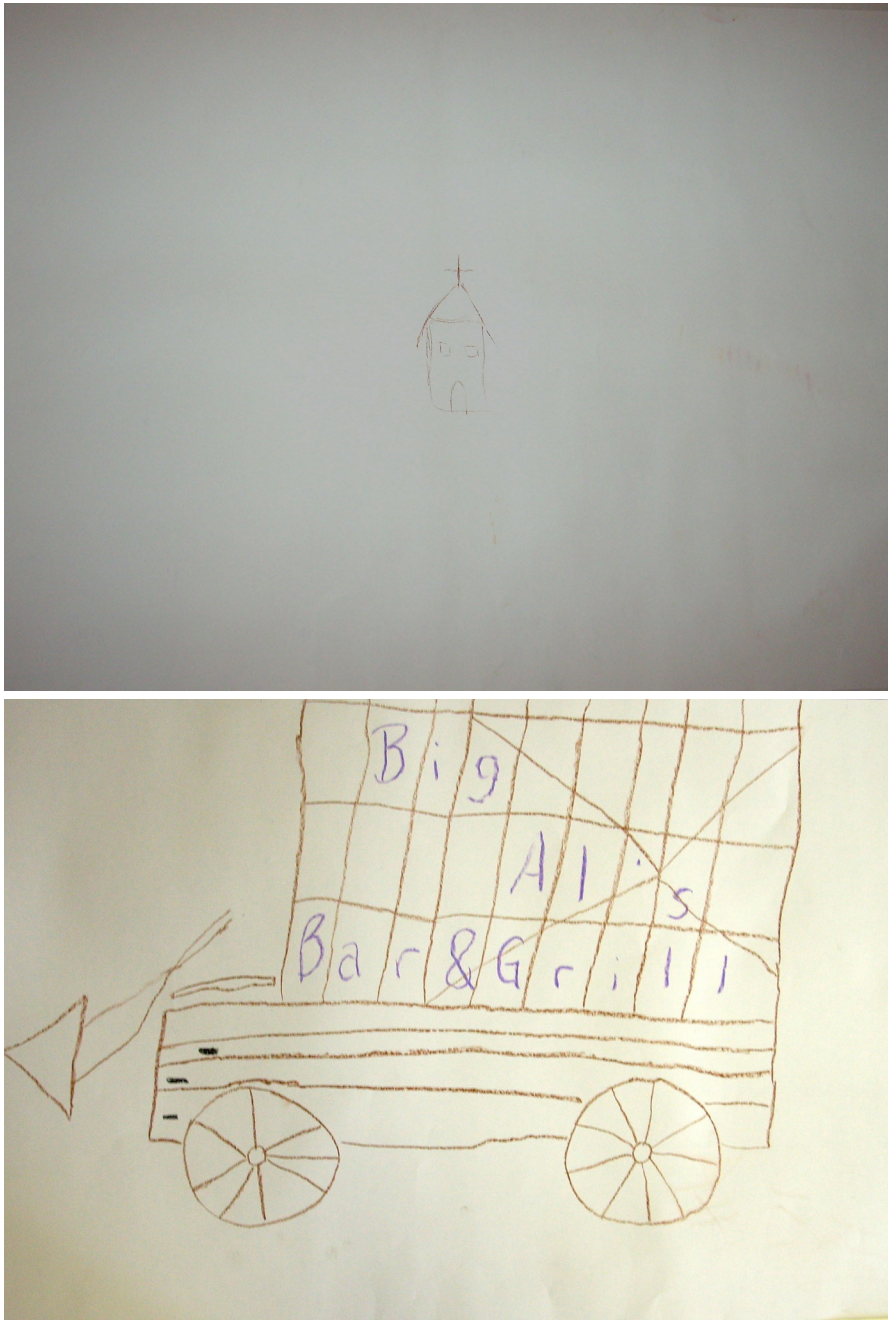
Structural Aspects of the Artwork. This refers to the form and the organization of the imagery. In general, participants' artwork initially revealed tentative, lightly drawn, small images, sometimes including broken lines, dark colours, and off-centred images. Toward the latter sessions, noted were enhanced use of space on the page, larger images, stronger line quality, a greater variety of colour, and more centrally placed images.

Casework Profiles

This section includes art therapists' narratives with selected treatment casework imagery. These images provide a means of connecting to the subjective experience of persons with a TBI. Art therapists' commentary is provided to illustrate key developments and transformational experiences through the treatment process. Images are presented in pairings for comparative purposes. Pseudonyms are used for reasons of confidentiality.

The first two pairs of images are free drawings from the DDS application in Sessions 1 and 11. Peter's first image (see Figure 1) is a lightly drawn rendering of a church, very small to the relative size of the page. Peter described having no art experience and was hesitant regarding artmaking at the outset. Concerning the image, he described being on his way to church when his accident occurred, and his faith helped him get through this event. The faint lines might suggest his uncertainty, his sense of withdrawal, and possible depression, while the reenforced lines detectible in the church walls may be indicative of his feelings of insecurity and anxiety (Hammer, 1980, 2014).

Figures 1–2
Sessions 1 and 11 (Peter)



Of the second free drawing (see Figure 2) rendered in Session 11, Peter discussed it relating to the rodeo and chuckwagon races that were coming to town. Comparatively, in this later image, most of the space on the page is utilized. This change seemed to correspond with him becoming more at ease within the group over time, perhaps reflecting a stronger self-concept as well. There is more line pressure and fluidity in the stroke of the lines suggestive of increased decisiveness and assertiveness (Hammer, 1980, 2014). The chuckwagon reads "Big Al's Bar & Grill." This may reflect a positive transference response toward one of the art therapists as providing Peter and the group with "food and drink," symbolic of nurturing and support. Despite his initial inhibitions, Peter became highly invested in the group process. He experienced acceptance, becoming more openly expressive in interactions and in his display of emotions as the sessions progressed, noted in the observation data.

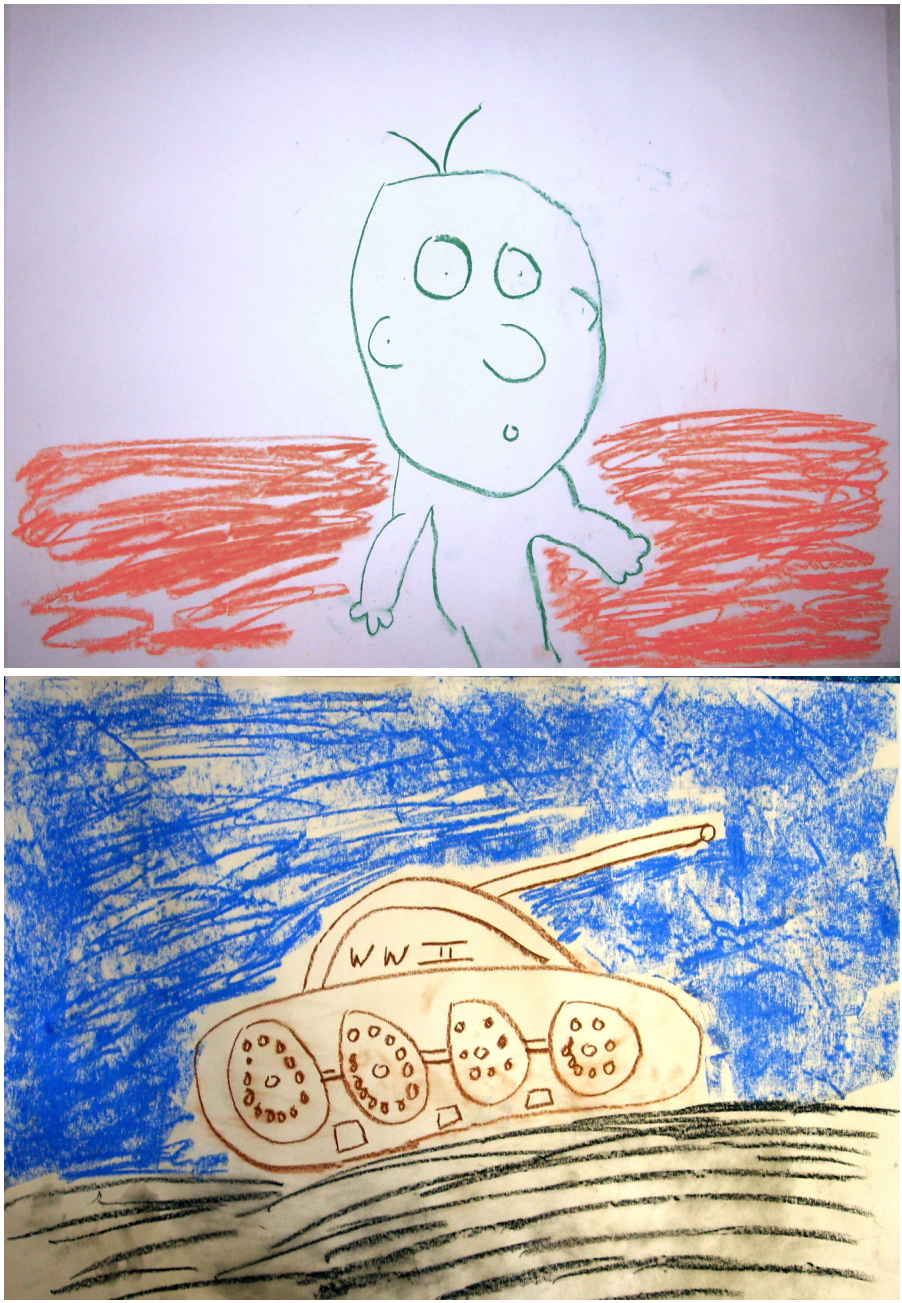
In Homer's Session 1 free drawing (see Figure 3), he represents a character with whom he was familiar from an animated television series, seeming surprised and possibly fearful. Homer identified with this personage saying he liked the way the animated character talked. His use of this particular character resembled Homer's own demeanour as he was initially shy, withdrawn, and uncertain as to what he should do during the sessions. He brought his geometry set to each session, which may have bolstered his sense of security and confidence.

Homer's later free drawing image (see Figure 4), created during Session 11, depicts an army tank. Structurally, as noted with the change in Peter's drawings, more of the space on the page is utilized. In fact, the space is utilized fully and more use of colour is present. What seems most compelling is that this image is affectively charged. The shaded and scribbly lines of the blue sky seem to accentuate inner tension and anxiety in the overall import of this image, in concert with its symbolic content, the scene of a battle-ready war tank. In his processing of the image, Homer recognized that the content represented on some level his anger toward those responsible for causing his injury and the resulting changes to his life. He experienced a breakthrough identifying and for the first time in the sessions articulating these feelings of anger he was experiencing.

The portrayal of a tank may imply the depth of rage he felt and the presence of retaliatory fantasies. He gave the impression that in reality, there was no place to target these feelings. However, his emotions were evidently being sublimated through his creative visual art. The idea of the tank being strongly fortified might reflect a compensatory need for inner protection. Certainly, this may relate to the trauma experienced with his head injury or perhaps to the need to feel protected when coming in touch with his deep feelings of anger.

The following sequential images are from Session 4, with a focus on body image. This segment was selected to exemplify the relationship between a TBI and self-concept as well as the therapeutic impact of the session for this man. The Traveller's drawing of a partner selected from the group was rendered without

Figures 3–4
Sessions 1 and 11 (Homer)



Figures 5
"A Ghost From Another Planet"

looking down at the page (see Figure 5). The wiry, rigid, slightly tilted figure is placed high on the page. His use of choppy, jagged, broken lines in creating the figure seemed indicative of anxiety. Some unusual features such as the manner of mark making, stick-figure approach, off-centre placement of the figure on the page could relate to his severe TBI. Participation in this blind contour drawing contributed to distortions, regardless of whether one has a TBI. When sharing his drawing with the group, The Traveller smiled, giggled, and said, "Mine does not look like a human being. It's a ghost from another planet." Through the symbolic imagery and his related discussion, he seemed to be projecting his experience of dissociation and his feelings of alienation safely.

Following this exercise, the participants were instructed to use a projector to trace an outline of their partner from the group onto the art paper. Next, each filled in their own features, thereby creating a form of self-portrait (see Figure 6). The Traveller was pleased with the outline tracing of his upper torso made by his partner. He appeared enthusiastic as he filled in part of the body with black pastel and added hair. Next, he took a flesh-coloured pastel and covered the head and the body with strokes resembling long hair. The completed visual effect of his image resembles a mummy, perhaps reminiscent of the bandaging of his head injury, a protective layer. Although the Traveller continued to speak of feelings of alienation, this exercise seemed to help him feel more at ease in the group milieu with increased interactive participation.

Figure 6
"Tracing of the Traveller"

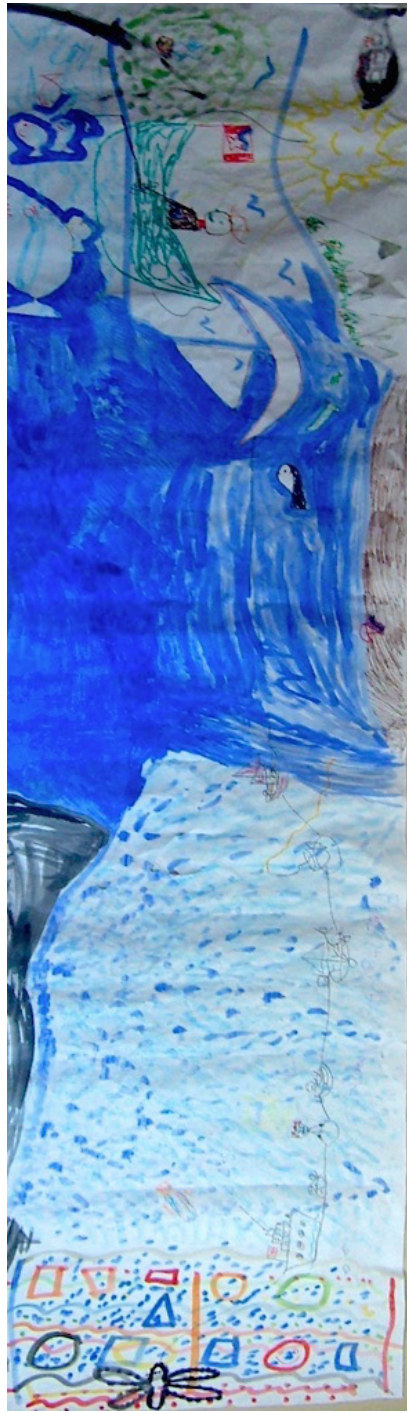


Figure 7
"Water" (First Mural of Group Two)

Figures 8–9
"All in the Same Boat"/"Homer's Space"

The remaining images included two group murals created by one of the therapy groups in Sessions 3 and 10. Each group selected a theme for the mural and used paint, markers, and magazine pictures to create it. The second mural repeated instructions from those of the first mural exercise. The rationale for including the second mural was to assess changes in roles, in confidence levels, and in themes that might be observed through the artwork and the group process (Wald, 1989). The group decided on the theme of water for their first mural (see Figure 7), which was made with the paper lying flat on the table. They created bodies of water, streams, and rivers connected along the length of the mural. One participant said there were dangers present. Another painted a picture with the group members in a boat and said, "We're all in the same boat," alluding to the fact they are all living with a TBI. One participant said, "You can bail out or carry on," referring to decisions made about their challenges (see Figure 8, a close-up of Figure 7).

Most of the group members moved about the mural, working in various areas, except for Homer, who remained in his seat. For his artwork, which represents an image of his space (see Figure 9, a close-up of Figure 7), Homer painted geometric shapes with a border around them and a black shape he described as "something dead in the water." This seemed to express how he felt on some level, post-injury. As a symbol and a metaphor, the content appears to resonate with an inner experience of a "loss of self" as previously referenced. Homer worked separate from the others until a group member connected his image by a line linking his black shape to the boat. He had presented as quiet and withdrawn up until this point, yet from here a brightening of mood was noted, and he began interacting more within the group.

For their second mural, also made with the paper lying flat on the table, in Session 10 (see Figure 10), the group decided on the title "Living the Long and Winding Road." For the group members, the title referred to the ups and downs in their lives. In the process of creation, a stop sign and traffic lights were added by one group member, who referred to the need for self-awareness, particularly knowing one's limitations and accepting them (see Figure 11). The road was considered inherently dangerous because many participants had sustained their injuries during motor vehicle accidents. One participant contributed a jail to the image, depicting a building and writing the word "jail" attached to it. Another commented on "times we felt in jail," which inferred feeling at times imprisoned by the effects of their brain injuries.

In Figures 10 and 11, one can observe that the road now runs along the length of the mural, connecting all members of the group. In this second mural, there is less defining of individual space and more integration of individual contributions into the overall image. These aspects reflected the group dynamics, which by this time were more cohesive. Homer, who had worked separately during the creation of the first group mural, was now contributing his imagery throughout the mural, joining the discussion as an integrated member of the group.

Figure 10
"Living the Long and Winding Road" (Second Mural of Group Two)

Figure 11
"Stop Sign and Traffic Lights"

In sum, this casework narrative has sought to illustrate by way of selected imagery changes in structural aspects of imagery, the sublimation of emotion in artwork, the development of insight with art, portrayals relating to identity and a TBI, transformational personal experience, and group processes over the course of treatment.

Quantitative Findings

Cognistat Data

The findings for the Cognistat, Self-Esteem, and Coping tools were all insignificant ($p < 0.05$), an outcome that was not surprising given the small sample and the short duration of the study. Visual inspection of the Cognistat data revealed that except for calculation ability, which showed a slight decrease in the average score across the participant group from pre-intervention to post-intervention, the remaining ability areas showed an increase in average scores from initial to follow-up testing. This finding, while statistically insignificant, is suggestive of a possible incremental benefit that may accrue as a function of this type of therapeutic intervention given more intensive intervention (e.g., of longer duration

and/or focused more explicitly on specific cognitive skill sets) or the utilization of more specialized and sensitive cognitive test measurement devices.

Coping Styles Data

Regarding the insignificant findings for coping styles, several points deserve mention. The greatest change that occurred was that of emotion-focused coping, where the mean pre-test score was 9.38 (SD = 2.89) and the mean post-test score was 10.46 (SD = 1.21). Problem-focused coping remained fairly stable, despite what was expected to occur, when the pre-test score (M = 10.50, SD = 2.26) was compared to the post-test score (M = 10.95, SD = 2.35). Disengagement decreased from the pre-test score (M = 9.45, SD = 1.48) to the post-test score (M = 8.70, SD = 1.89). Avoidance coping had a similar decrease from a mean pre-test score of 9.45 (SD = 1.83) to a mean post-test score of 8.75 (SD = 1.34). There was not a statistically significant pre-test coping style effect (F (3, 27) = .636, p > .05). However, there was a statistically significant post-test coping style effect found (F (3, 27) = 4.365, p < .02). Individual t-tests were conducted to investigate this difference further. A Bonferroni correction was made to accommodate the six multiple comparisons, resulting in none of the comparisons being significant.

Without the correction, there were significant differences found, indicating there was at least a single difference between the individual factors. Problem-focused coping style (M = 10.95, SD = 2.35) was found to be used more frequently than disengagement coping style (M = 8.75, SD = 1.34), (t = -2.38, p < .05). However, emotion-focused coping (M = 10.46, SD = 1.21) was used more frequently than both disengagement coping style (t = -2.86, p < .05) and avoidance coping style (M = 8.70, SD = 1.89) (t = 2.46, p < .05).

Affect and Self-Esteem Data

As with the Affect Rating Scale results (see Table 2), there was no statistically significant phase effect on the six types of affect except for Anxiety (p = .036). For some pairwise non-parametric comparisons, Wilcoxon signed-rank tests were performed on Anxiety. These tests revealed that there was no statistically significant difference between Phase 1 and Phase 2 (p = .672); there is a statistical difference between Phase 1 and Phase 3 (p = .039) and between Phase 2 and Phase 3 (p = .033); based on the mean rankings of each phase, there is a statistically significant decrease from Phase 1 to Phase 3. Due to the coding of the original scores, the smaller the mean rankings, the shorter the duration. In other words, the duration of anxiety decreased gradually from Phase 1 to Phase 3.

Despite the lack of statistical significance in the quantitative self-esteem data results, there was a strong trend indicating that self-esteem was affected by the 12-week intervention. Both self-esteem measures were consistent in their results, revealing that self-esteem increased when the pre-test scores were compared to the post-test scores. The SEI post-test score (M = 62.91, SD = 20.48) was greater than the pre-test score (M = 53.45, SD = 25.06). The SES also found that the

Table 2
Affect Rating Scale (ARS) Findings

Type of affect* for the 13 participants during the course of the 12-week study	Phase 1 (Weeks 1–4) Mean Rank	Phase 2 (Weeks 5–8) Mean Rank	Phase 3 (Weeks 9–12) Mean Rank	p-value (exact)
Pleasure	1.85	2.12	2.04	.791
Anxiety	2.36	2.18	1.45	.036**
Anger	2.06	2.28	1.67	.111
Sadness/depression	1.55	2.45	2.00	.069
Interest	2.23	1.69	2.08	.308
Contentment	1.96	1.92	2.13	.892

* For a description of each of these six types of affect, see Lawton et al., 1996, p. 6. Positive states include pleasure, interest, and contentment, and the negative affects include sadness/depression, anxiety, and anger.
** Significant at .05 level.

post-test score (M = 19.00, SD = 6.21) was greater than the pre-test score (M = 16.82, SD = 6.90).

Discussion

As per the qualitative data, several factors could support a claim that productive change had occurred in respect to therapeutic objectives. This was evident to some extent in differences with structural aspects of the artwork ascertained in the DDS findings. Concerning art production, there was progressive movement toward enhanced personal expressiveness, increased verbalization, social inclusion, and self-discovery. Changes were noted in the cognitive and affective levels (e.g., increased attention to the task, less apprehensiveness, and shifts from a blunted affect to a wider affective range). Through the treatment process, communication expanded, and meaningful interpersonal interaction occurred. In a safe therapeutic environment, significant treatment issues (e.g., trauma, adjustment, loss, and identity) were addressed to some extent.

Regarding the quantitative findings, although no significant differences were found with changes in the participants' self-esteem, coping styles, and mental status, there were indicators of positive trends. In addition, the measure of anxiety on the Affect Rating Scale showed a significant decrease. There may be a good argument against referencing "trends" or borderline significance in a clinical research paper. While such a point is well taken, there may be a counter-argument that the positive trends in this study yielded meaningful data. Although factors such as longer treatment duration, more participants, and increased number of

groups may have led to different and perhaps increased statistically significant findings, this exploratory pilot study worked within certain parameters and within a certain range of resources.

While the quantitative results yielded positive trends and one area of significance, they all pointed in a favourable direction. Perhaps this slight yet forward movement has possible relevance, given the small numbers and the short-term duration of the treatment. The Satisfaction Survey Findings (see Appendix C) do in fact reflect high levels of satisfaction in response to Questions 1 to 4. The observation data over the treatment period would give credence to the therapists' impressions of overall productive therapeutic engagement occurring in both groups.

In the measurement of coping styles, an increase in emotion-focused coping was noted. This would suggest that an enhanced ability to regulate negative emotional reactions to forms of stress was detected in both pre-testing and post-testing (American Psychological Association, n.d.). From the standpoint of integrating qualitative and quantitative data, perhaps we could return to Homer's visual expression of a tank. In creating and processing the image, he was able to express, put form to, and develop insight into his inner rage about having a TBI and into his will to combat his experience of victimization. The ability to sublimate these intense emotions through art, as referenced earlier, might certainly correspond to progress noted in the area of coping and emotional regulation.

The reduction of anxiety through the course of treatment was deemed to be statistically significant. With this finding, we return to the Traveller's two drawings on body image. The formal characteristics of the imagery suggest the experience of internalized anxiety, and a repetition compulsion tendency is noted (i.e., in repeated mark making in Image 5 and with the rendering of bandaging in Image 6). Both features may arise in response to the experience of trauma (van der Kolk, 1989). The act of creating the imagery serves toward containing anxiety. Viewing the two images sequentially reveals contrasting themes: in the first, a man is depicted as vulnerable and exposed, and in the second, a man is depicted as bandaged and protected. Hence, containment with the example utilized seems particularly evident. Containment also extends to a supportive function of the group process. Communicating this participant's associated feelings and perceptions about these images within the safety of the acceptant group lends to self-affirmation, another factor that seemingly could contribute to relieving anxiety.

The strong trend in the domain of self-esteem was unexpected. Clinicians sometimes understand self-esteem as something that increases when everything else falls into place. In this manner, a combination of factors might contribute to this finding. In review of the satisfaction survey data (see Appendix D), two excerpts from participants' responses to the open questions are selected in providing clues to this finding. For instance, "Some great projects connected art with emotions" perhaps reflects an experience of productive therapeutic engagement

and gaining connection to emotions as factors. "I am using imaginary [imagination] more in my everyday life, but this takes a touch more time" suggests that therapy may have given rise to a new and useful discovery extending beyond the therapy itself. While it may be difficult to pinpoint a specific reason for the strong trend in self-esteem finding, the sum of parts may offer the most reasonable explanation.

Implications for Therapeutic Practice

This paper offers clinicians an opportunity for a direct visceral encounter with a sampling of TBI survivors' artwork from a group art therapy context. The qualitative material presented—including DDS analysis, therapists' case profile descriptions, and Satisfaction Survey data—may contribute to an understanding of the imagery concerning a therapeutic process.

The protocol was established to provide a replicable set of exercises that could be applied to future research or to TBI treatment applications. In practical application, there is of course flexible delivery so that it may be altered to suit the needs of therapy recipients best. With the adult TBI population, group sessions of 90 minutes seemed satisfactory in duration. With increased time of session there may be concern arising with fatigue and with the capacity to maintain optimal attention. Longer duration of treatment (e.g., 6 months or longer) may be indicated considering the variety and depth of issues presented by adults with a TBI. Extending the period of treatment could allow for a wider range of art experience (e.g., in terms of open-ended directive exercises, more spontaneous art, and expanding use and types of media) with increased opportunity for addressing TBI-related treatment issues.

The protocol could also be adapted to meet more specific treatment objectives by ensuring that the selection and the weighting of exercises correspond to each other. For instance, if the treatment objectives were more specific (e.g., issues of body image and identity), mask-making exercises might be considered as those cited by Jones et al. (2019). If improvement of cognitive function was more the aim, the use of a therapeutic art storyboard could be implemented. A version of this technique is noted in the procedures of Guay (2018). The treatment objectives cited in Appendix B or selected components of it could serve as a resource toward treatment planning for adults with a TBI. There may also be consideration of applicability with similar treatment populations such as adolescents or young adults with TBI, concussion, and persons with acquired brain injury.

Future Research

The present study was limited to a 12-session treatment period of approximately three months. Increasing the treatment period could conceivably result in a wider range of statistically significant outcomes. Increasing the number of participants could result in a broader representation of a general adult age range

with more balance of factors such as gender identity, cultural diversity, and levels of education before the head injury.

The use of a control group might also be considered. Further longitudinal research could explore the effects and sustainability of therapeutic outcomes beyond the treatment period. It is also noted that the treatment paradigm could be adjusted from generalized treatment objectives to a narrower treatment focus with corresponding changes in the protocol directed to more specificity (e.g., improved cognitive function, loss and identity, or coping and adaption).

The field of art therapy has been keeping pace with research developments in neuroscience: how brain activity can be measured, how artmaking activities can activate the brain, and how such advances may be applied to treatment (Kapitan, 2014; Kline, 2016). These studies include measuring brain activity when using different art materials (Belkofer et al., 2014; Kruk et al., 2014) and when creating art versus completing a rote motor task (King et al., 2017). Also related is a branch of studies that originated with Lusebrink's Expressive Therapies Continuum (Lusebrink, 2004, 2010) and that consider art therapy treatment interventions to be neurobiologically based trauma therapy (Chapman, 2014; Hass-Cohen et al., 2014). The treatment model and the replicable methodology of our current study might conceivably be utilized in similar future studies relating to art therapy and neuroscience.

Limitations

As a pilot study, there were limitations regarding the small sample size and the overall duration of the groups. As a representation of the TBI adult population, it was noted that the youngest participant was 31 and the oldest was 71. In addition, there was a gender imbalance with nine men and four women. This gender imbalance is reflected in the general population, given that men statistically are three times more likely to sustain a TBI, in part due to the fact that men experience more serious sports injuries (Canadian Institutes of Health Research, 2015). We recognize that if this study was to be repeated, there could be improvements in terms of the satisfaction survey. For instance, providing participants with the opportunity to elaborate on the responses to open questions and a documented follow-up interview may have enriched the qualitative data.

Conclusion

This study offers multiple-methods research findings of the creative expressions and effects of short-term (12 sessions) group art therapy treatment with adults affected by a TBI. Participation experienced positive outcomes, including anxiety reduction, social engagement, promotion of feelings of well-being, problem-solving, and an experience of community. Participants in both groups were observed to be motivated for therapy, revealing minimal treatment resistance. Participants were also observed to engage meaningfully and productively in the short-term

group art therapy processes. Qualitative data indicated increases in attention to artmaking activities, social interaction and self-esteem, and the development of supportive interpersonal relationships. Although quantitative findings indicated no significant differences in the participants' self-esteem, coping styles, and neurocognitive functioning, there were indicators of positive trends in these areas. The measure of anxiety on the Affect Rating Scale showed a significant decrease.

Implications for care professionals working with persons affected by a TBI include recognizing the range of ways in which these individuals might express their experiences. The existing protocol or portions of it may serve as a useful resource toward strategies of applied therapeutic intervention. Given that replicating our methodology is possible, further applications of this study with larger treatment groups and/or longer periods of treatment might yield a wider range of statistically significant results. A longitudinal study could also be considered to articulate factors such as the long-term sustainable impact of treatment and to determine whether, in the various ways indicated, gains experienced through the treatment process may transfer to the participants' external environment. With recent developments in measuring brain activity, studies such as this one may conceivably serve as a platform for research into areas such as neuroscience and the impact of art therapy on cognitive function.

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Appendix A: Treatment Protocol

The treatment protocol developed for this study consists of a sequential series of practice-based therapeutic art exercises selected for suitability and for meeting treatment objectives of adults who have experienced a TBI. In this study, the protocol has served both research and therapeutic treatment purposes. Various factors were considered in selecting the protocol exercises. Given TBI impairments, participants needed to be able to comprehend the suggested activity and to have the physical capacity to participate, with assistance or adaptive equipment if required. Exercises were selected with a treatment rationale in mind. There was a consideration of utilizing exercises and techniques that would be stimulating enough to offer an adequate challenge without contributing to emotional or cognitive overload. Sequencing of the selected exercises was thought out, factoring in therapeutic pacing and the development of the group process within the opening, middle, and closing phases of treatment. In striking a balance, the therapeutic use of spontaneous art (a hallmark of art therapy practice) was utilized, as were open-ended directive exercises. It is noted that a non-directive spontaneous art approach in and of itself might be a viable approach for the adult TBI population. However, the structure and the variation of the exercises utilized in this study may have increased the prospects of engagement and potency of treatment for the short-term (in this case, 12-session) treatment format. Choice of media was another area of consideration: for instance, pictorial collage material and clay were advantageous for two of the exercises, whereas soft chalk pastel and 18 by 24 in. drawing paper were used as indicated in the standardized Diagnostic Drawing Series (DDS), while a wide-ranging choice of basic art media fits well for some of the other suggested tasks. Certainly, a wide range of applicable therapeutic art exercises could be included in a treatment protocol such as this.

At the outset of each session before the main (protocol) exercise of the day, a warm-up exercise was offered in aiming to reduce tension and anxiety, to be attuned to emotions, and to promote group cohesion. These warm-ups might utilize movement, drama, music, or art and can be fun. Examples of such warm-ups include having participants move as far apart as possible, then come as close together as a group as they feel comfortable, then return to their own space; each

in turn "makes a face," has a partner imitate the expression, then continues; and make gestural imagery as a response to a few abbreviated selected musical selections. All warm-ups would end with sharing and discussion. The session structure included opportunities for individual reflection, journaling, and processing within small groups or the entire group.

Protocol Exercises

Two of the exercises, the DDS (Sessions 1 and 11) and the group mural (Sessions 3 and 10), were presented near the beginning of the study and again near the end, for therapeutic and comparative study purposes for the research component of this study.

Session 1

DDS drawings were done. These art activities included a free drawing (non-directive), a tree picture, and a feelings picture. Standardized art materials including chalk sets consisting of 12 colours of soft chalk pastel and 18 by 24 in. drawing paper were used.

Session 2

A pictorial collage activity was offered to provide participants with the opportunity to select images from an assortment of magazine pictures reflecting a wide variety of themes. McGraw (1989) recommended the use of collage for persons affected by a TBI. This exercise was utilized during the early stages of a group because it was an enjoyable, non-threatening means of self-expression. Creating the collage involved organizational and problem-solving activities. Themes were reflective of identity, expression of personal interests, and fantasies. Creating a pictorial collage can offer a sense of accomplishment, while content is often meaningful to its maker. It may contribute to self-esteem while at the same time serving to promote group introductions and interaction.

Sessions 3

A group mural utilizing a variety of art media. Wald (1989) suggested that this exercise might facilitate the expression of conflicts or problems common to group members and afford insights about their shared goals.

Session 4

Two drawing exercises from observation: 1) Draw a person sitting across from you; 2) Draw a person. The first was a blind contour drawing, and the second involved the use of a projector and required that participants trace the shadow outline of a body. According to Wald (1989), these exercises addressed the sensitive matter of injury and body image, offering participants a safe distance from

themselves. These exercises were introduced as a means of approaching issues of body image and the effects of brain injury.

Session 5

Modelling with clay consisted of two exercises: 1) the directive "to create a clay model of an animal you identify with"; 2) non-directive clay modelling. Clay is a flexible medium providing potential for affective release and creation of a three-dimensional construct. The first directive gave rise to metaphorical expressions reflecting feelings and instincts. The processing occurred in smaller groups of two or four. Following McNiff's (1992) commentary, the participants were introduced to a means of "dialoguing" with their imagery and encouraged to give voice to their creations voice and to enact scenarios with their creations and with those of other participants. This activity enhanced communication of concepts relating to identity and to the experience of head injury. The non-directive clay modelling offered an opportunity for free expression with or without clay tools as desired, resulting in the symbolic expression of content meaningful to each individual.

Session 6

The "feeling expressions" exercise involved an invitation to illustrate an emotion that had been written on an index card. The group tried to figure out the feeling depicted. Wald (1989) suggested that this indirect game-like approach to the expression of feelings serves to soften the tension of dealing with feelings directly or on one's own.

Session 7

The Guided Fantasy Exercise involved engaging in a guided imagery exercise. Participants were invited to imagine themselves in a multi-stage excursion, passing through different landscapes until they met with a person who had a special gift for them. The subsequent group processing of the participants' artwork facilitated a discussion about coping with head injury, loss, and personal needs, including identification of unique or similar issues among group members, aspirations, and goals of group members (Gonen and Soroker, 2000).

Session 8

Participants were encouraged to reflect on three questions. 1) What am I today? 2) How would I like to be? 3) What I can be? The aim of this exercise, as outlined by Gonen and Soroker (2000), was to offer participants a choice of subject matter and art materials. The emphasis was on personal identity and on how participants envisioned themselves in the future, including what and who may be involved.

Session 9

Four Box Cartoon Drawing involved asking the participants to identify a particular difficulty or conflict they were experiencing. It demonstrated the participants' ability to approach the matter logically and to think in steps to work out a solution, as depicted sequentially in their imagery, in four boxes. According to Wald (1989), this exercise may assist people in problem-solving and may serve subsequently to decrease frustration and to contribute to enhancing self-confidence and self-esteem.

Session 10

Participants repeated the Group Mural Exercise (see Session 3). The second mural illuminated changes in roles, levels of confidence, and group interaction.

Session 11

Participants repeated the DDS (see Session 1).

Session 12

Group Mandala was a group activity used to reflect the theme of the group coming to an end. Participants were invited to use art materials of their choice to create their design within a circular format with the other group members—in sum, creating a group mandala. Jung (1968, p. 357) associated Mandalas with what he termed the Self at the core of personality: as he stated, "Their basic motif is the premonition of a centre of personality, a kind of central point within the psyche, to which everything is related, by which everything is arranged, and which is itself a source of energy." In the context of closure, the Mandala offered a means to individual and group expression and provided an opportunity for participants to reflect upon the meanings of their designs within the context of the group mandala. In the final session, group members had the chance to review the imagery they created throughout the sessions. Emphasis was placed on the integration of the material, the opportunity to participate in creating and discussing the content of the group mandala, and their feelings about closure.

Appendix B: Treatment Objectives

The treatment objectives utilized were adapted and modified for this study from those put forward by Wald (1989). These include

1. Providing a supportive group art therapy environment in which participants have an opportunity to express themselves and their experiences of a TBI safely through symbolic visual expression, journaling, group interaction, and discussion.
2. Providing an opportunity to address and to process through the trauma of head injury, changes of body image, and psychosocial challenges through

the experience of sublimation, catharsis, and individual and group processing in leading to increased understanding/insight and resolution.

3. Expressing and addressing emotions and issues relating to the experience of traumatic brain injury as may pertain to
   a. Symbolic expression of a range of emotions, which could include intense feelings such as the release of anger relating to injury, fear, and guilt;
   b. Reduction of stress and anxiety;
   c. Mourning of loss as it may impact physical functions and abilities, psychosocial aspects, former roles, and employment;
   d. Coming to terms with new limitations and changes in body image;
   e. Acknowledging former and present strengths;
   f. Acquiring new modes of adaptation.
4. Maintaining and increasing self-acceptance and ability to adjust as it pertains to
   a. Restoring a sense of identity and integrating the experience of a TBI into a new sense of self;
   b. Increasing self-esteem;
   c. Maintaining or increasing motivation for interpersonal communication within group therapy, which may in turn transfer to the external environment.
5. Increasing the experience of success and enhanced capacity for problem-solving and decision-making, furthering ability and self-confidence to be productive.

Appendix C: Satisfaction Survey Findings

The satisfaction survey was completed by 11 of the 13 participants, due to the fact that two participants were absent. No statistically significant differences were found between members of the two groups in terms of the level of satisfaction. The statistical outcomes of closed questions in the survey using Likert scales for Questions 1 to 5 and structured questions for Questions 6 and 7 are as follows:

1. How helpful has art therapy been in enhancing your awareness of your emotions?

Both groups found this therapy helpful, although the response of the second group was slightly higher. The majority of the scores fell in the "very good" range. Only 9.1% (n = 1) of the participants in the two groups evaluated the helpfulness level as being below "good."

2. How valuable has artmaking been in communicating your thoughts and feelings?

All participants from both groups rated it between "good" and "excellent"; 45.5% (n = 5) rated it between 9 and 10 (excellent).

3. How encouraging has it been to hear from other participants about their feelings?

Except for one participant, the findings are all between "good" and "excellent." The majority (n = 7) rated this between 9 and 10 ("excellent").

4. How do you rate the staff's role in facilitating the group?

Seven participants rated this as "excellent," one participant rated it as 5, one participant rated it as 6, one participant rated it as 7, and one participant rated it as 8.

5. How do you feel about the size of the group?

Most participants rated being quite satisfied with the size of the group. One participant rated it as 3. The rest of the ratings were almost evenly distributed: 5 (n = 3), 8 (n = 3), 9 (n = 2), and 10 (n = 2).

6. What is the optimal length of the single session, in your opinion?

Duration of 1.5 to 2 hours (n = 6), 3 hours (n = 4), and longer than 3 hours (n = 1).

7. If you had a choice, how long (months) would you like to attend a program like this?

Duration of 3 months (n = 4), 6 months (n = 5), 9 months (n = 1), and longer than 9 months (n = 1).

Appendix D: Satisfaction Survey Open Questions and Responses

1. What have you accomplished through the process of your art therapy?

Group one participant responses:

- Learned to view art in a different perspective.
- Time out of the house. Meeting other brain-injured. Trying different types of art.
- Some great projects connected art with emotions.
- How to draw things, I never was an art type person.
- I am using imaginary [imagination] more in my everyday life, but this takes a touch more time.

Group two participant responses:

- I think it is fun, and you learn what others are creating.
- It was a total worry-free, problem-free, obstacle-free, 1½ hours!! Met some pretty cool people. Some of the art I did I am not sure where it came from. Looking at my artwork, some themes I discovered [were] that I like drawing and working with pastels.
- Learning that it is very difficult to express feelings through my words except my poetry. Less fearful of reaching out. Less fearful of not confronting … [being] so hard on myself. I don't know what I thought would happen if I concentrated less.
- [There was no response.]

- It exposed some of my worries, which were not in my consciousness but buried.
- Very good.

2. What would you like to see included in this group, which has not occurred?

Group one participant responses:

- More time allotted to artwork, less about group dynamics, and how we feel. Art should be what we are to focus on if that is the goal here.
- More time. There isn't enough time to think about what to do. Also, the games [warm-up exercises] have to go or else ones that don't make me feel like [I'm] in grade one.
- Sharing of deep emotions.
- [There was no response.]
- More group activities.

Group two participant responses:

- I kind of see it kind of boring.
- Longer. 2 good parts: creating the pictures and discussing them, but we usually had to cut our discussions short!! They were as interesting as the art.
- Opportunity for one to one [interactions].
- [There was no response.]
- Can't think of anything.
- All

3. What do you consider the greatest advantage of this program? Did you experience any difficulties?

Group one participant responses:

- People were very helpful and approachable. Giving an occasional impromptu project is OK, but not all the time. There should be given to each person the tasks for the next class so they can think about it and be creative. Brain injured people don't think as fast as most.
- Letting frustrated brain-injured express themselves. Because it isn't easy to just talk.
- Exposure to other disabled artist.
- Communication; no difficulties.
- Bring art into my way of life through the exercises involved. Other than the distance from my place and transit problems, there were not any real difficulties.

Group two participant responses:

- You see what others' thoughts are. No [difficulties].

- Turns a solid, dreary, sad way of thinking into creativity and tons of fun. Something to look forward to all week long, artsy-fartsy. I know I am changing—it is difficult to be in the midst of it.
- [There was no response.]
- Advantage: the freedom to express oneself. Difficult to deal with dredged up feeling—upset for the rest of the day. At times frustrated.
- No.

4. What is to you the most memorable experience?

Group one participant responses:

- Meeting other people that not only have the same disabilities and problems but people who have the same interests and passions.
- How much I hated this class when I first started and how much I am going to miss it. I never thought that would happen, and I made some self-realizations.
- Meeting my ex-coworker. [They had met in a previous context.]
- Clay.
- Helping [a peer] get his Dr. Pepper.

Group two participant responses:

- Meeting with others. Making friends.
- Everything, opening discussions—watching people, each week changed—[we] opened up. Watching Homer draw, talking to [a peer], listening to [a peer] describe her artwork. Good snacks. Good people.
- Absolutely knowing that a drawing expressed my feelings at that moment.
- [There was no response.]
- It would be experiencing Homer's humour and his opening up to the rest of the group.
- Share with others.

5. Would you like to provide additional observations or comments?

Group one participant responses:

- Topics for the next week should be provided. More than one session [using the same] medium—clay. Able to attend one of the alternative classes if one misses a session. Could go to the other group, which is held on a different day.
- The art therapists were good. The students were good ones. The artists rocked. It was, I enjoyed seeing other people's art.
- Each to his/her own ability to express themselves.
- [There was no response.]
- I just feel this should have been a bit longer in duration.

Group two participant responses:

- No.

- Classes with music background.
- It would be really interesting to know all the interpretations of the art.
- [A peer] has bad memory, but he could sit and draw difLippard [Def Leppard rock band] from memory. It is perfect! Thank-you!!!
- The works used at the beginning and during each project—especially when it was specific to feelings, were exquisite.
- Good.
- [There was no response.]
- [There was no response.]

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