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## Art as Therapy: Using Fictional Written Accounts in the Treatment of PTSD

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Art as Therapy: Using Fictional Written Accounts in the Treatment of PTSD

Senior Project Submitted to  
The Division of Science, Math, and Computing  
of Bard College

by  
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May 2021

Para mis abuelos. Gracias por todo el amor y apoyo, los amo.

Oh, and I guess my brothers too.

Thanks, Mom.

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### **Abstract**

Though art therapies and cognitive therapies are both well-established as treatments for PTSD, no studies thus far have tried to consolidate the pros of each into a single therapy. Through modifications to CPT procedures to include expressive fictional written accounts rather than the standard autobiographical account of traumatic events, I believe that the expressive writing paradigm can be utilised to create a new therapeutic procedure for PTSD. Due to lesser emotional intensity and the freedom allowed by creative endeavours, I believe that this procedure would not only yield positive outcomes comparable to CPT, but also have lower drop-out rates than CPT and exposure therapies. The present paper proposes an experimental procedure to test the effectiveness of the modified CPT procedures and compare them to the current standard CPT. Drop-out rates of groups will also be closely monitored and compared between each other.

The creative and performing arts are not foreign to clinical work, but in my research, I have found an apparent dearth in the use of fiction in the clinical setting. Writing's primary usage as a tool for treatment appears to be in relation to trauma and relies on autobiographical accounts of said traumatic event. Knowing that creative endeavours help to alleviate stress, depression, and other comorbid symptoms of trauma (Collie, Backos, Malchiodi, & Spiegel, 2006; Schouten, Niet, Knipscheer, Kleber, & Hutschemaekers, 2015), I wanted to use creative writing as a tool and try to determine if there was any credence to using creative, fictional writing as a means to treat PTSD and its comorbid symptoms.

Amongst adults in the US, PTSD has an 8.3% lifetime prevalence rate, with many individuals often having been exposed to multiple traumatic occurrences (Kilpatrick, et al., 2013). Anyone that experiences a salient enough traumatic event can develop it, but there are a number of factors that can increase one's risk of developing this disorder, many of which are incredibly common. Some of these include low socio-economic class, being in a minority or historically marginalised demographic, childhood temperamental issues, genetic factors, and exposure to previous trauma (American Psychiatric Association [APA], 2013). There exist a great number of psychotherapeutic treatments for PTSD, many of which rely on some cognitive component such as cognitive behaviour therapy (CBT) or cognitive processing therapy (CPT) (Resick, et al., 2008). These treatments have already been shown to have positive effects in reducing PTSD symptoms (Bradley, Greene, Russ, Dutra, & Westen, 2005), however, they are not perfect. Because these methods rely on special training for the practitioner, accessibility may be an issue. Also, CPT and exposure therapies have high drop-out rates (Kline, Cooper, Rytwinski, & Feeny, 2017), suggesting that the emotional intensity of undergoing the procedure may be too difficult for many patients to handle. This is concerning as it indicates that there may

be need for effective treatments for trauma that can be more readily accessed by greater amounts of people. Therefore, I wish to propose a potential treatment for trauma that can utilise many of the strengths of CPT, while also mitigating its down-sides. The proposed treatment is a cognitive therapy that incorporates the writing of fictional trauma stories from multiple perspectives. I believe that through fiction, patients can find an avenue to explore their trauma in a safer environment, while still participating in the healing process, and thus, will result in positive outcomes and increased rates of patient retention. It is my belief that a modified version of CPT that incorporates fictional written accounts rather than autobiographical ones would have lower patient drop-out rates than standard CPT, whilst being similarly effective at reducing PTSD symptoms.

### **Cognitive Processing Therapy**

CPT is a form of cognitive therapy that was developed by Resick and Schnicke in 1992, and was inspired largely by the information processing theory of PTSD from Foa, Steketee, and Olatov-Rothbaum (1989) which proposed that fear networks are composed of stimuli, responses, and their meanings, and that information then creates avoidance behaviours. The treatment uses written autobiographical accounts of the survivor's trauma as a means of assisting in the healing process. This is done through the usage of Socratic questioning techniques that allow the therapist to challenge any erroneous beliefs that the patient has about the event and assist in correcting them. The focus of CPT is to identify and correct specific conflicts between the patient's previously held beliefs and their experience of trauma, known as 'stuck points' (Resick & Schnicke, 1992). CPT also utilises the autobiographical accounts as a form of exposure, and as a way of discouraging a numbed affectation because of the emotional intensity associated with writing them.

This is both a triumph and a shortcoming of the treatment, as the inclusion of the exposure component both increases the efficacy of CPT in relation to simply cognitive therapy (Resick, et al., 2008), but it also leads to high dropout rates, with one meta-analysis estimating an average dropout rate of 28.73% compared to cognitive therapy's 4.53% and prolonged exposure's 24.08% (Kline, et al., 2017). Attempts to find pre-existing factors that predict a patient's likelihood of dropping out of treatment have not gone well. Curiously, a study done by Alpert, Hayes, Barnes, and Sloan (2020) found that past and present negative emotions being expressed during the early stages of CPT predicted lower dropout rates, and only negative present physiological experiences and overgeneralised processing predicted higher dropout rates.

CPT is often considered one of the standards for effective PTSD treatments alongside CBT, prolonged exposure, and eye movement desensitization and reprocessing therapy (EMDR) (Alpert, et al., 2020), but regardless many people do not complete their treatment, which indicates a need for improvement.

### **Expressive Writing Paradigm**

As previously stated, writing is no stranger to clinical investigation. In 1986, Pennebaker and Beall discovered that participants who wrote about previously unaired trauma in a factual and emotionally stimulating manner had fewer visits to the on-campus medical center and fewer complaints of physical ailments than a control condition. In the following two decades or so, many researchers continued to look into what is now called the expressive writing paradigm (also sometimes referred to as the written disclosure paradigm). The underlying mechanisms are still under debate however (Pennebaker, 2004; Sloan & Marx, 2004), as there is a myriad of potential variables that are probably influencing these positive outcomes. There are several theories that have come up surrounding what the mechanism behind this paradigm may be,



which have, in turn, influenced later research. Sloan and Marx highlight three: emotional inhibition, cognitive adaptation, and exposure/emotional processing.

The theory of emotional inhibition dictates that prolonged and frequent inhibition of strong emotions will lead to negative outcomes or dysfunctions in both physical and mental health (Sloan & Marx, 2004). With this idea comes the natural conclusion that releasing these previously inhibited emotions will yield positive outcomes or reduce the physical and mental dysfunctions being caused by this emotional distress.

Emotional inhibition is the least relevant theory to this paper, but I want to at least acknowledge it for two primary reasons. The first is that this theory is the one that Pennebaker and Beall attributed with the success of their 1986 study. This is important as it serves to highlight the foundations of the research I am attempting to utilise. The second reason is that I believe that there is merit to this theory, and that it could provide a useful stepping stone to continue the research I am proposing. In order to do this, I would like for participants to complete a simple self-reporting measure of whether or not the traumatic experience that is being used for this study is one that the patient had discussed with anyone outside of a clinical setting (see Appendix A for full survey). This information would not be useful for this study, but could provide insight for future directions for this research to go.

The second theory that Sloan and Marx discuss is a broad version of cognitive adaptation, more pointing out the conceptual themes of the multiple versions that exist. Broadly speaking, the theory of cognitive adaptation is one that asserts that individuals suffering from trauma struggle to assimilate their trauma with their inner schemas of how the world works and their place within it. Therefore, the writing of trauma experiences provides a framework for the individual to begin putting the pieces together and changing how they understand their trauma.

Cognitive adaptation is important to note because it appears to be a large component of multiple effective trauma treatments, including both CPT (Resick, et al., 2008) and art therapy (Ali, Wolfert, Fahmy, Nayyar, & Chaudhry, 2019). In CPT, this can be seen in the form of the process of Socratic questioning that the therapist performs in order to challenge the patient's erroneous beliefs about the event and themselves. This forces a sort of reappraisal about the event in question, changing the narrative to one that is better to live with. Ali, et al. (2019) have designed a treatment program for veterans using the works of Shakespeare and personal monologues as a way of confronting and consoling their emotions and thoughts about their trauma. They also assert that the usage of the imagination and production of this monologue allows the veterans to – quite literally – write a new story for themselves in which the trauma is not forgotten or ignored, but allows them to move past it. In these ways, patients are redefining their conceptualisations of their trauma, and creating new schemas that they can continue to use in the future.

This theory is also key to the methods that I am proposing. Not only do I wish to harness the power of the imagination, but I would like for cognitive therapy to exist within its framework, adopting the Socratic techniques utilised in CPT. I hope that this merger will provide patients with a greater ability to reframe their trauma than either alone.

The final theory that Sloan and Marx posit is the theory of exposure/emotional processing. Exposure therapy is a common practice for the treatment of many common ailments including anxiety disorders like phobias. The simple explanation of this is that trauma creates an aversive stimulus that creates arousal, fear, or anxious responses that then generalise to other associated stimuli. These responses can be unconditioned by repeated controlled exposure to the aversive stimuli when they are accompanied by information that conflicts with the negative

beliefs (Foa & Kozak, 1986), thus weakening the association. Given enough information, the aversive stimuli can be corrected and no longer activate the aversive responses.

Exposure is common amongst treatments for PTSD, and a primary reason for the inclusion of written accounts in CPT procedures. According to Resick, et al. (2008), the writing of the written accounts provides an opportunity for patients to reprocess their trauma, and the daily reading of the written accounts provides the exposure necessary. Interestingly, based on this study's findings, when on their own with no cognitive therapy component, the written accounts were found to be the least effective component of CPT at treating PTSD and its comorbid symptoms when compared to just cognitive therapy and CPT as a whole. This may suggest that modifying this component will have the least effect on the overall efficacy of the treatment regimen. This bodes well, as a concern that I have is that by asking the patients to write about their trauma from a non-autobiographical point of view, the reduced personal stakes will cause the treatment to lose effectiveness.

Of the three theories, I believe that the theory of cognitive adaptation will be the most relevant to this proposal. It seems to me the most likely to have the greatest carryover effects when being applied to fiction rather than autobiographical written accounts. If there are indeed positive outcomes that are found through the proposed methods, this seems most likely to be the mechanism behind it, but the strongest support for this would have to come in future research. This assumption is being drawn from intuitions based on the findings of Resick, et al. (2008). As previously mentioned, the study found that the written accounts on their own were less effective than cognitive therapy on its own, indicating that the cognitive therapy aspect of CPT is more important. As I plan on employing cognitive therapy in my own procedures, the same theory of cognitive adaptation should still apply even when the written accounts are changed.

## **Art as Therapy**

Art therapy can come in many forms, and is defined by the kind of art that patients partake in. From the visual arts like painting and sculpture, to the performance arts like theatre and dance, and even poetry; they all have some use in clinical settings, for trauma and other-wise (Schouten, et al., 2015). Art therapy has the unique benefit that it does not require the patient to put their thoughts and feelings into words, a process which many find difficult, and instead they can express them through the subjective lens of artistic license. This can be quite empowering, as the liberation from rigid language rules allows for a freedom of expression that can be quite cathartic and revealing. This is similar to the cognitive adaptation theory for expressive writing too, as it is yet another way of reframing trauma. Studies have even shown that art therapy, in conjunction with psychotherapy, can reduce symptoms of PTSD like emotional numbing and avoidance (Collie, et al., 2006).

Through my research, I have yet to find any studies discussing fiction writing beyond authors discussing their personal journeys dealing with their trauma, or how they've inserted their trauma into their stories. While anecdotes are interesting to read, they lack the more precise language of research, which makes them sometimes unclear as to what mechanisms are at play. They are further complicated by the lack of controlled variables, making it even more difficult to hone in on what their experience actually is. Without any studies specifically looking at fiction at my disposal, I am forced to do with the next best: theatre.

I have elected to use theatre as my comparison rather than poetry, for example, because I feel that the similarities between theatre and fiction are more plentiful. Theatre is still concerned with telling a story through long-form language structures like fiction, and the level of dramatisation required to write for theatre I feel emulates the same sort of personal disconnect

one may feel writing fiction. Poetry tends to play with language in ways that are uncharacteristic of fiction writing through the use of lines, stanzas, and overall form; and while fiction often makes use of figurative language like poetry, the usage is less liberal and inconsistent.

Ali, et al. (2019) have designed a group therapy program for veterans suffering from PTSD where they study and perform the works of Shakespeare in conjunction with writing monologues about their personal traumas. This program, called DE-CRUIT, lasts seven weeks, and during that time, veterans collaborate and empathise with each other to create, workshop, and eventually perform a monologue about their trauma experiences. This paper is note-worthy primarily for what it highlights as one of the DE-CRUIT program's three core features, the liberatory function of the imagination. This feature is best summarised like so, "Many veterans...have identified the benefits of writing and performing their firsthand experiences of trauma through a simulative experience that mimics their suffering while providing the safety of aesthetic distance. This distancing instills a feeling that reinforces the notion that the narration of trauma does not itself constitute a threat in a way that the actual trauma stimulus would." What this entails in context is that after a veteran has finished their first draft of their monologue, they trade with another who then performs it for the first time. This detachment, what they call "aesthetic distance", allows for the veteran to reprocess and experience their trauma in a safe manner.

It is my hope that through the writing of fictional trauma accounts, patients will be able to harness this liberatory function of the imagination in much the same way. Although they will be in sessions alone with the therapist, it is my hope that the fictional aspect of the written account will simulate this aesthetic distance that is so important to this early stage of the DECRUIT program.

## Methods

### Participants

Participants would probably be recruited through broad advertising in a major metropolitan area by means of newspaper advertisements, flyers (see Appendices A and B), referrals from local therapists, and word of mouth. Participants would come from a population of individuals diagnosed with PTSD. There is no requirement of specific trauma types (i.e., domestic abuse, combat induced trauma) or preference of gender. Individuals would be excluded from participating in the study if they have a dependency on drugs or alcohol, have symptoms of psychosis, are currently experiencing abuse or are in hiding from an abuser, did not receive a high school diploma or equivalent, or if the trauma event occurred within the last three months.

These criteria may seem quite restrictive, as drug and alcohol abuse, psychosis, and multiple experiences of trauma are all potential comorbidities or symptoms of PTSD, and individuals with PTSD are exceedingly likely to also meet criteria for one or more other disorders (Bradley, et al., 2005). These restrictions are in place in order to try and keep the data simple for the first testing of the proposed procedures. In future research or iterations of this treatment method, these restrictions could and should be eased and lifted for the sake of testing the procedure with more and more complex forms of PTSD in order to get a greater look at the possible limitations and shortcomings of the proposed treatment.

### Measures

Participants will each have pre- and post-test measures taken on the Posttraumatic Diagnostic Scale (PDS) (Foa, McLean, Zang, Zhong, Powers, Kauffman, Rauch, Porter, & Knowles, 2016), as well as measures of comorbid symptoms and associated affectations such as

the Beck Depression Inventory-II (BDI-II, or simply BDI) (Beck, A. T., Steer, R. A., & Brown, G., 1996), the State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983), and measures of anger and guilt. Written accounts will all be analysed for theme, language, and overall content, and afterwards, participants will be asked to fill out a brief survey with questions about their satisfaction with their treatment and the aforementioned question about emotional inhibition (see Appendix A for full survey). Drop-out rates of every group will be carefully noted. Follow-up measures of PDS, BDI, and STAI will be taken 6 months after the completion of treatment.

The PDS is a diagnostic tool for PTSD. It is 24-item self-report measure designed to diagnose and test severity of a patient's PTSD. Questions are divided by symptom cluster vis a vis the DSM-V: intrusion, avoidance, changes in mood and cognition, and arousal and hyper-reactivity. Items are rated on a scale of frequency and severity. The lowest end is 0 ("not at all") and highest end is 4 ("6 or more times a week/severe"). A score of 28 or greater indicates a diagnosis of PTSD (Foa, et al., 2016).

The BDI is a widely-used self-report measure of depression symptoms that consists of 21 questions. Each question asks for the patient to rate certain criteria on a scale of 0-3, 0 being the least severe and 3 being the most severe. Ratings are then summed at the end for a final score out of 63, with several brackets of severity. A persistent score of 17 or greater is considered enough to be cause for concern, and any score over 30 is considered severe or extreme (Beck, et al., 1996).

Anxiety will be measured through the STAI which is a standard tool for measuring anxiety from two levels; how anxious the patient feels feel at time of administration, and how prone to anxiety they are generally. The full scale is a 40 question self-report measure comprised

of two subscales; the State-Trait Anxiety Inventory – State Subscale (STAI-S) and the State-Trait Anxiety Inventory – Trait Subscale (STAI-T), each being 20 questions. Questions are rated on a scale of 1 (“not at all”) to 4 (“very much so”) (Spielberger, et al., 1983).

Anger will be measured through the State-Trait Anger Expression Inventory-II (STAXI-2; Spielberger, 2010), a 57-item self-report measure. Like the STAI, the STAXI-2 measures anger at the time of report and in general.

Guilt will be measured via the Trauma-Related Guilt Inventory (TRGI; Kubany, Edward, Haynes, Stephen, Abueg, Francis, Manke, Frederic, Brennan, Jerry, Stahura, & Catherine, 1996). The TRGI is a 32-item questionnaire that assesses trauma-related guilt. Items are rated from 1 (“never/not at all true”) to 5 (always/extremely true”).

A participant will be considered to have dropped out if they have either revoked their consent to participate in the experiment, expressed that they no longer wish to receive their assigned treatment, or failed to complete all 12 sessions of their assigned treatment within the given time frame of 12 weeks and after they have completed 1 session of their assigned treatment.

All written accounts will be analysed with the software, MAXQDA 2020 (VERBI Software, 2019), a Computer Assisted Qualitative Data Analysis (CAQDAS) software designed to assist in the coding, organising, and analysing of qualitative data sets and comes with robust tools for creating annotations and finding patterns within data. The program supports line-by-line systematic analysis to allow for discovery of categories of data (Kuş Saillard, 2011). This analysis will not be reflected in the Results; however, the implications of this analysis will be expanded upon in the Discussion.



## **Procedures**

All procedures will be approved by the Bard College IRB prior to beginning the recruitment process.

Upon finishing recruitment, all recruited individuals will be assessed for eligibility and screened by mental health professionals, excluding all individuals that do not meet the previously detailed criteria. All individuals that meet these criteria will then have their pre-test measures taken, then will be randomly divided into one of three groups determining which treatment they will receive, with intent to treat. One group will receive standard CPT, another will receive the experimental modified CPT procedures incorporating fictional written accounts (FWA), and a control group will receive no treatment whatsoever. The CPT and FWA groups will undergo treatment for 12 sessions over the course of six weeks, with each session being approximately 1 hour long, meaning a total of 12 hours of in-therapy time. Sessions would occur twice a week, in-office. Each participant will have 12 weeks to complete their treatment to accommodate scheduling conflicts. If they still fail to complete the entire treatment during this time, they will still be assessed at the end of the treatment period and again six months later.

### **CPT**

The procedures that will be used for the standard CPT group will follow the same procedures detailed in Resick, et al. (2008), with the notable difference being the usage of the 2017 version of the CPT manual (Resick, Monson, & Chard) rather than the 2001 version used in their experiment. This is only because it is the most up-to-date version available, and therefore most reflective of current CPT practices.

Session 1 is mostly educational and provides the patient with a baseline understanding of PTSD and the treatment. The session begins treatment with the patient writing an impact statement about the meaning of the worst trauma event to them. This impact statement provides an initial look at the patient's trauma, and their thoughts and feelings about it, which then helps guide the rest of the treatment. Session 2 begins with the patient and the therapist reading the impact statement together and discussing the meaning of the event. They then begin the process of identifying the relationship between the event and the patient's thoughts and emotions. This process continues into Session 3, which ends with the assigning of a written autobiographical account of the most traumatic event of the patient's life. This account is then read during Session 4, with the remainder of the time performing cognitive therapy through Socratic questioning. This session ends with the patient being assigned to rewrite the account once more to allow the patient to restructure the trauma event and reprocess it through a new view. The new account is read in Session 5, and again the patient and therapist use cognitive therapy to challenge their beliefs about the event. This process continues for the next several sessions, with each session being focused on a different theme that arose from the written accounts or Socratic questioning. At the end of Session 11, patients are told to rewrite their impact statements which are then used in Session 12 to qualitatively evaluate the patient's improvements and areas that need continued work through comparisons with the original impact statement. Through the impact statement, practitioners can identify how well the cognitive restructuring process worked.

### **FWA**

The FWA condition is a modified form of CPT, and therefore will adhere to the structure of those procedures. However, there are key differences.

Sessions 1-3 will be the same as described in the CPT condition, however rather than asking the patient to write an impact statement, the patient and therapist will simply talk about the event and its meaning without a formally written account. This is so that the therapist can obtain knowledge about the patient’s

trauma without asking them to write about it, which would run counter to the intent of the study. This also allows time for the therapist to build rapport with the patient.

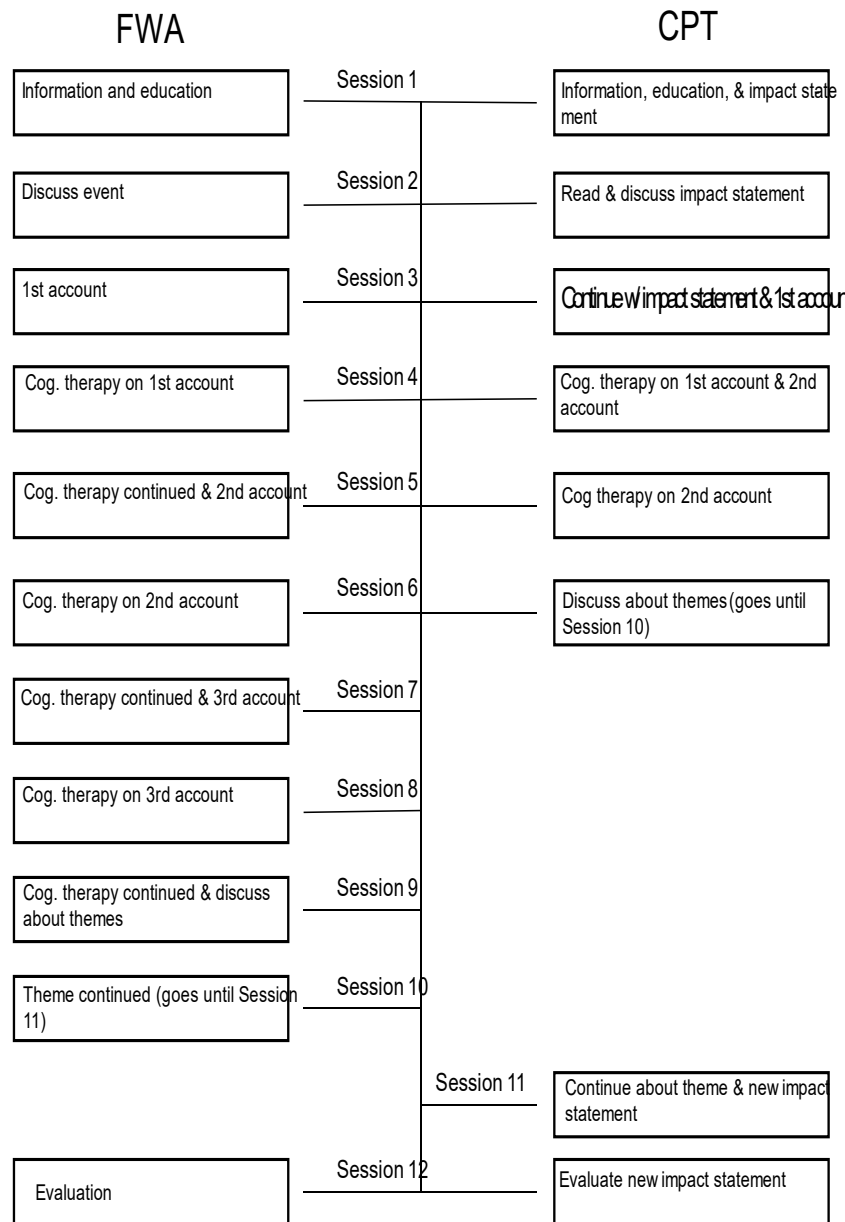
At the end of Session 3, the first fictional written account will be assigned (see Appendix D for prompts). Sessions 4 and 5

will be about using Socratic questions based on the written account, relating themes, content, affectations, etc.

expressed within the account back to the patient’s trauma experience. At the end of

Session 5, the second prompt will be assigned. Sessions 6 and 7 will focus on the second written account, with the third prompt being assigned at the end of

Session 7. Sessions 8 and 9 will focus on the third prompt. Sessions 10 and 11 will focus on overall themes and work on any



*Figure 1: Timeline showing how patients progress through the CPT and FWA conditions. Sessions last an hour and occur up to twice per week over the span of 6-12 weeks.*

hanging issues from previous prompts. Session 12 will primarily be wrapping-up, evaluating progress and identifying areas that still require work.

### **Post-test**

Post-test measures of PDS, BDI, STAI, STAXI-2, and TRGI will be taken at the conclusion of their final session or at the end of the 12-week period, whichever occurs first. Six-month follow-up measures of PDS, BDI, and STAI will be performed via mail.

### **Results**

As previously mentioned, there are four primary variables of interest; the pre- and post-test scores of PDS, BDI, and STAI, and the drop-out rates for the CPT and FWA groups. While other variables are being measured, they are mostly for illustrative purposes, as well as useful tools for gauging how well treatment affects other parts of PTSD that are not well represented through the PDS, BDI, and STAI. A successful treatment would be considered one that significantly lowers scores of PDS, BDI, and STAI at post-test and keeps them lower than pre-test at follow-up. However, if a treatment fails to successfully diminish feelings of anger and guilt, then it may indicate a weakness in the treatment, measurement tools, methodology, or some combination thereof. Ideally, reductions in feelings of guilt and anger would also occur as a part of PTSD treatment, but because there may be factors beyond the patient's PTSD that are contributing to these affectations, therefore they are not of primary concern.

All pre- and post-test measures of PDS, BDI, and STAI will be analysed in repeated measures 3 (Time) x 3 (Treatment) analysis of variances (ANOVAs) and appropriate post-hoc analyses, with  $p < .05$ . Figure 2 shows the predicted results of each treatment on PDS, BDI, and STAI scores. As per my hypothesis, the CPT and FWA groups should perform comparably to

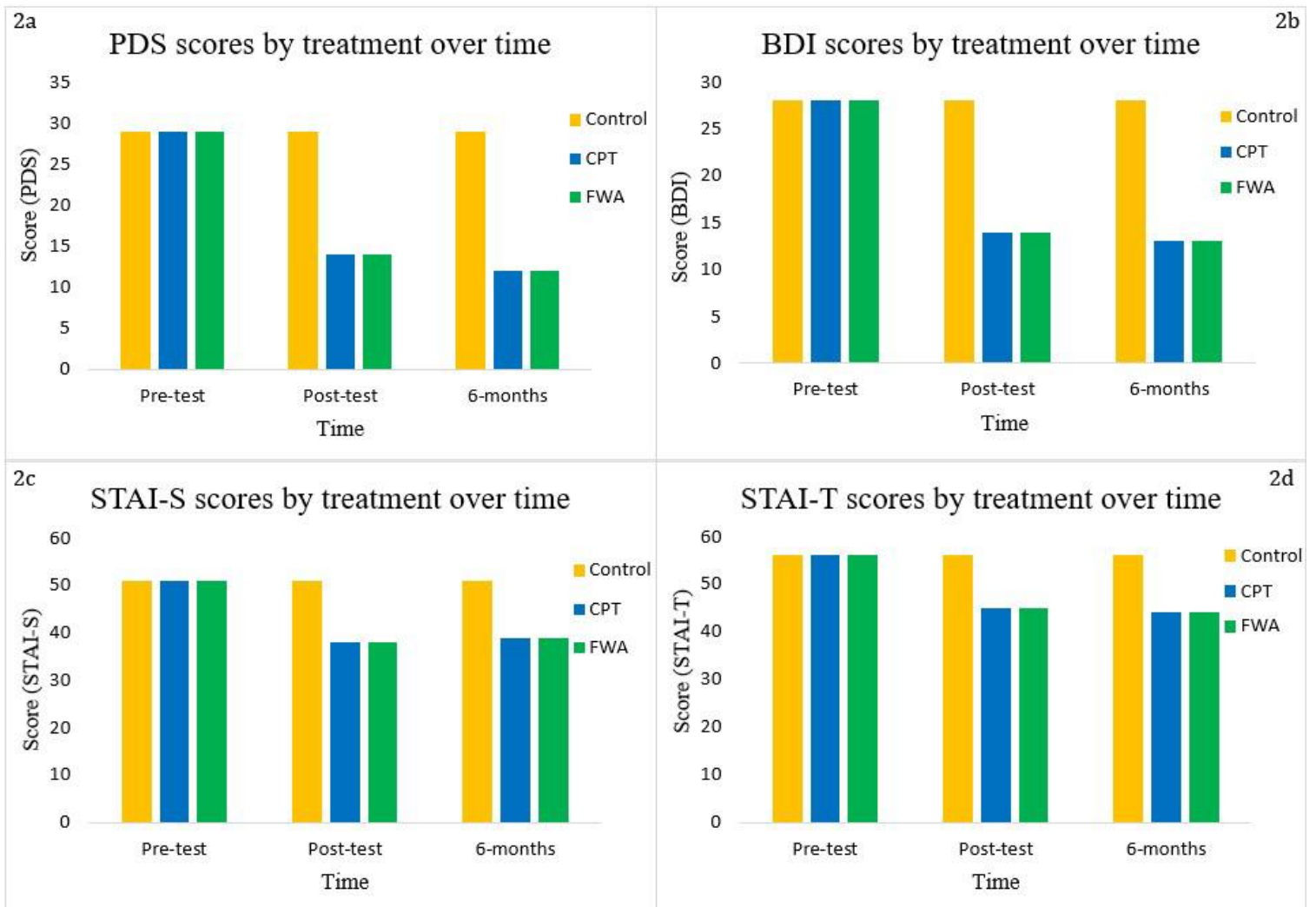
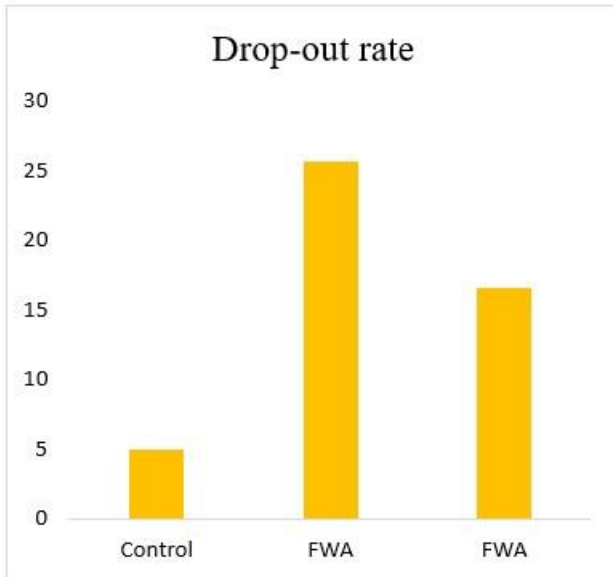


Figure 2: All three groups should start with the same average score, and lower scores on PDS (2a), BDI (2b), and both STAI subscales (2c and 2d) would be seen post-treatment. All measurements are based off of the findings of Resick, et al. (2008), specifically the CPT condition therein. The numbers in 2a are not fully representative of what the real data would show, and is merely illustrative of the predicted trend as the PDS has been updated since the publication of the cited study. The most notable change between versions is fewer questions in the current version. Based upon my hypothesis, the data for the FWA condition should closely resemble those found in the CPT condition. All decreases from pre-test to post-test in the CPT and FWA conditions are significant. Non-significant differences between CPT and FWA may also be encouraging.

each other in reducing PDS, BDI, and both STAI subscales at both post-test and follow-up. At worst, the FWA may perform nominally worse in these measures. Figure 3 shows the dropout rates between the CPT and FWA groups. Based on my hypothesis, the FWA group should have lower drop-out rates than the CPT group due to the lowered emotional intensity of the treatment, as well as the aesthetic distance provided by the creative writing prompts.



*Figure 3: Comparing the drop-out rates between CPT and FWA. The estimate for CPT (28.73%) comes from Kline, et al. (2017). The estimate for FWA was calculated via averaging the drop-out rates of CPT and standard cognitive therapy (4.53%).*

Secondary measures (STAXI-2 and TRGI) will be analysed with repeated measures 2 (Time) x 3 (Treatment) ANOVAs and appropriate post-hoc analyses. Ideally, a similar trend would emerge in these measures as was described for the PDS, BDI, and STAI above. Predicted outcomes show that the CPT and FWA groups would be comparably effective at lowering scores on the STAXI-2 and TRGI.

The FWA should also be rated more favourably than CPT in the post-treatment satisfaction survey. The results of the survey will only be used to evaluate the proposed treatment qualitatively, and only after all other analyses have been completed.

## Discussion

As previously mentioned, the purpose of this research is to design a new and effective treatment for PTSD that uses the positives of its predecessors, namely CPT, while also mitigating the downside of having a high drop-out rate. This high drop-out rate indicates that there are many people that do not complete their treatment because of the emotional intensity of the treatment, which indicates that there may be a need for something that is more accessible and patient-friendly. The proposed experimental treatment borrows from literature about art therapy and the expressive writing paradigm and utilises fictional written accounts, rather than the standard autobiographical written accounts, to create a safer environment for the patient to undergo their healing process.

The FWA condition is a first pass at creating this treatment, and may need revisions after real data is collected on its effectiveness at achieving the above goals. It may be that while successful at having lower comparative drop-out rates, the effectiveness of treatment is also reduced, which would require a dramatic re-working of the experimental treatment. One direction this re-work could go is to lean more heavily on the art therapy side of things and incorporate more creative techniques as the medium for their expression. This would make the procedure more distinct from CPT, but otherwise, the effects of such changes are yet unknown. Even still, within the proposed methodology, there are a few implements in place to aid in the revisionary process.

At the end of treatment, all participants will receive a treatment satisfaction survey in which they will have the opportunity to express their anonymous thoughts about their treatment process. Because the FWA condition was designed to be a safer experience for the patients, their feedback will be valuable not only to determine whether or not this was the case, but also as a tool for revising the treatment. Patient feedback should be weighed heavily when considering revisions to the procedures. For example, if patients in the FWA condition express that they were confused by the prompts, or that they were otherwise unclear, this would show that the language of the prompts needs to be revised to more accurately convey the what is being asked of the patient. This could be true even if the data found supports my hypothesis. However, even though patient retention is important, it is more important that the treatment remains data-driven. This means that dramatic changes to procedures need to be weighed against how they might impact the effectiveness of the methods as a whole.

The proposed study is limited in that there is not much research done on the use of creative fiction as a means of treatment for PTSD, which necessitates using research from other

domains to formulate the backbone of this study, and the effects may not carry over. Because of this, it was also difficult to find an accurate estimate of certain figures, like the predicted drop-out rate for the FWA condition. Therefore, I resorted to simple computations using figures that I could find, which has obvious bias. The actual results should show the same trend as depicted in Figure 3, but will probably look nominally different. There is also the problem in using another study as a model for my results; whatever flaws in methodology or data collection that may have occurred in the Resick, et al. (2008) study, become inherited and reflected by the current proposal. This is not too great an issue though, as the data is being used mainly for illustrative purposes, and not for meaningful analyses.

Another limiting factor is the rather restrictive criteria that are being used to determine participant eligibility. As stated earlier, this is to try and test the experimental procedure under more ideal circumstances with as few potentially complicating factors as possible. Obviously, real-world circumstances will be more complicated, but this study is merely a proof-of-concept that, if successful, could lead to requiring the experimental procedure to be tested under more and more strenuous conditions.

Finally, if this methodology were to be adapted, the issue of accessibility still arises. While CPT is a standard treatment for PTSD, not every practitioner knows how to actually perform the procedures. This means that it may be difficult, or even impossible, for someone who needs help to get it. The issue is not helped by the proposed methods. Even if the FWA condition were to successfully develop into an improved version of CPT, the period of adoption would still leave it out of reach for the people that need it. Even after, the methods are still specialized, and does not improve upon the logistics of training practitioners, or running CPT.



The obvious implications for a positive result found would be the discovery of a potentially powerful new treatment method for PTSD. However, even if this is true, I would caution against rushing to train practitioners in this new methodology. The proposed study is a first outing of this new treatment, and only the first iteration. There are many lessons yet to be learned from how the treatment actually works in practice. Additional testing would also still be required for replication and expansion purposes. If the experimental procedure were to only work under the conditions described in this study, then the treatment simply isn't useful for any real-world applications, as the niche it would serve to fill could also be filled by other effective treatments. At that point, the potential benefit of a lower drop-out rate would not outweigh its costs of implementation, furthered by the fact that a low drop-out rate is not as big of a benefit if the effective population for the treatment is so restricted.

Besides the obvious implications a positive result could lead to in terms of treatment for PTSD, the current study could also lead to furthering the current research on the expressive writing paradigm and its underlying mechanisms. Because the study specifically utilises two of the three theories posed by Sloan and Marx (2004), it could provide evidence towards or against cognitive adaptation or exposure/emotional processing being the dominant mechanisms behind the expressive writing paradigm. However, this would need to be supplemented by further research, possibly utilising the current proposed treatment, or the data collected vis a vis the final question of the patient satisfaction survey (Appendix A) which asks about emotional inhibition. However, the aforementioned survey question is not a particularly robust measurement, and should be used mostly as a vehicle to transition the FWA condition into perhaps a different domain of research.

Another application this research may have could come in the form of the MAXQDA analyses of the written accounts. These analyses could have numerous implications depending on their findings. Relevant to this study, a comparison of the language used in the fictional accounts from the FWA condition and the language used in the autobiographical written accounts from the CPT condition could prove to be quite revealing about the ways patients process trauma when the trauma is firsthand versus being fabricated by the individual. How they choose to frame the account or tell the story could shed insight on these processes. It also may be that the amount of detail used in the accounts differs by condition. For example, if the FWA condition produced much more detailed accounts than the CPT condition, it may suggest that the aesthetic distance of the fictional account made the patient feel more comfortable going into greater detail with their story. Or if the inverse is true, and the CPT condition produced much more detailed accounts than the FWA condition, it may suggest that the salience of the actual event allowed for much more vivid accounts. For this, Ali, et al. (2019), who performed a similar analysis of the monologues written by the veterans in the DE-CRUIT program, may actually provide a good predictor for this. Their analysis was conducted using their own three-step coding methods that grouped the monologues into ones that dealt with the military or not, and then two more layers of increased detail based upon the previous layer's code. One of the themes they note is the use of sensory imagery and how sensory memories from childhood are echoed at later points in life, especially in military experiences. The DE-CRUIT program is interesting as the monologues are autobiographical, but are written in a way that is laden with figurative language and artistry. This does lead me to reason that the autobiographical accounts would be similarly rich with detail. How this compares to fictional accounts, is still unknown. Despite this there are still many other

possible comparisons and conclusions that could be made depending on what the real data shows.

## **Conclusions**

The present proposal is designed as a means of discovering a new treatment for PTSD. The purpose of this study is not to imply that the current tools for treating PTSD are wrong, or should not be used. CPT is already a well-established and well-researched treatment (Bradley, et al., 2005; Kline, et al., 2017), and to imply otherwise would be foolish and a disservice to all of the people it has helped. Merely, this study is to point out a weakness in one of the current standards and to try and improve the already strong foundation. The present proposal lays out a potential route at rectifying one of CPT's glaring issues: of the major treatments for PTSD, CPT has the highest average drop-out rate (28.73%; Kline, et al., 2017). Even though there are other options available in terms of treatments for PTSD that are both effective and have lower drop-out rates, like CBT (22.42%) and EMDR (19.08%), the fact remains that improving one treatment still benefits the entire field. And if the present experimental methods were to instead develop into its own separate treatment, then that too is a benefit, as it adds another way for people to receive help.

It is my hope that regardless of the outcomes, some good can come out of the proposed methods, even if it is only to raise greater awareness of the shortcomings of one of the current standards for treatment. I hope that everybody can get access to the treatments they need, regardless of if that treatment is CPT, a version of the FWA condition, or some other treatment.

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## Appendix A: Patient satisfaction survey

**The following is an anonymous patient satisfaction survey. Please answer all questions to the degree with which you agree with the given sentiment, and answer the questions as truthfully as possible. All responses are anonymous, and will not reflect on you or your results in anyway. This survey is merely for gauging participant satisfaction with their treatment, and may be used to guide future research/iterations of this methodology. Thank you.**

**Rating scale:**

**0 (Not at all) 1 (A little bit) 2 (Somewhat) 3 (A great amount) 4 (Absolutely)**

I enjoyed going through my treatment regimen.

0 1 2 3 4

I feel better after having completed my treatment regimen.

0 1 2 3 4

My life has noticeably improved since beginning my treatment.

0 1 2 3 4

My practitioner was always prepared, and had a good grasp on the ins and outs of the treatment.

0 1 2 3 4

My practitioner helped me feel safe and welcome during sessions.

0 1 2 3 4

I did not enjoy going through my treatment regimen.

0 1 2 3 4

I regret receiving treatment for my PTSD.

0 1 2 3 4

I often felt numb or apathetic while receiving treatment.

0      1      2      3      4

The writing prompts were unclear, and I was unsure of how to respond to them.

0      1      2      3      4

I would recommend this treatment to a loved one if they were suffering from PTSD too.

0      1      2      3      4

Going through my treatment felt dehumanizing, shameful, or otherwise demeaning.

0      1      2      3      4

Participating in this study has helped me learn more about trauma on a general level.

0      1      2      3      4

Participating in this study has helped me learn more about my own trauma.

0      1      2      3      4

Writing the trauma accounts was scary and/or anxiety inducing.

0      1      2      3      4

Writing the trauma accounts was fun and/or relaxing.

0      1      2      3      4

Writing the trauma accounts was a valuable experience, and was helpful for my healing process.

0      1      2      3      4

Writing the trauma accounts elicited a strong emotional reaction from me.

0      1      2      3      4



**Please answer the following yes or no question. If you select yes, please select all that apply.**

I have never told anyone else about my primary experience of trauma before participating in this study.

YES                      NO

If yes, then who? If an individual person would qualify as multiple of these selections (i.e., "FRIEND" and "ROOMMATE"), please only select the one that is most accurate.

PARENT/GUARDIAN                      SIBLING                      GRANDPARENT

FRIEND                      ROOMMATE                      COWORKER

OTHER: \_\_\_\_\_

## Appendix B: Newspaper advertisement

**GOT TRAUMA ?  
WE WANNA HELP**

**Help a researcher at Bard College learn how to better treat PTSD through a new, experimental procedure designed to stimulate your imagination and your emotions.**

**All participants must complete a thorough screening procedure before being accepted. Exclusion criteria include, but are not limited to: dependence on drugs or alcohol, psychosis, or did not receive a high school diploma or equivalent.**

**IF INTERESTED,  
CALL:  
(845) 555 - 7873**

**WARNING: Some procedures being tested are experimental, and their effectiveness at treating PTSD or its symptoms is not guaranteed.**

*Note:* Advertisement for present study to be used for recruitment. Contact information is a placeholder.

Appendix C: Recruitment flyer

# **GOT TRAUMA? WE WANNA HELP**

**A researcher at Bard College is  
designing a new experimental  
treatment method for PTSD, and  
needs participants.**

**All participants must complete a thorough screening process  
before being accepted. Exclusion criteria include, but are not  
limited to: dependence on drugs or alcohol, psychosis, or  
did not receive a high school diploma or equivalent.**

**WARNING: Some procedures being tested are experimental,  
and their effectiveness at treating PTSD or its symptoms is  
not guaranteed.**

## **CONTACT IF INTERESTED**

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↓

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↓

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CALL : (845) 555 - 7873 EMAIL: email@bard.edu	CALL : (845) 555 - 7873 EMAIL: email@bard.edu	CALL : (845) 555 - 7873 EMAIL: email@bard.edu	CALL : (845) 555 - 7873 EMAIL: email@bard.edu	CALL : (845) 555 - 7873 EMAIL: email@bard.edu	CALL : (845) 555 - 7873 EMAIL: email@bard.edu	CALL : (845) 555 - 7873 EMAIL: email@bard.edu
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*Note:* Flyer to be used for recruiting participants for the present study. Contact information are placeholders.

## Appendix D: Prompts for FWA condition

Write a story in which a point-of-view character goes through a traumatic event. The character should not go through the same type of event as you, however the story should be informed by your experience(s) with trauma.

Rewrite your first story from the point-of-view of someone on the other side of the traumatic event. This could be a perpetrator, or simply someone whose momentary negligence caused an accident — whatever feels right for your story. Be sure to be mindful of what has been discussed in your sessions.

Rewrite your second story from the point-of-view of an outside observer. This could be someone who witnessed the event, or a first responder, or whoever best fits in your story. Be sure to be mindful of what has been discussed in your sessions.

*Note:* Prompt 1 is assigned at the end of Session 3. Prompt 2 is assigned at the end of Session 5.

Prompt 3 is assigned at the end of Session 7.