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“Trying to Sing through the Tears.” Choral Music and Childhood Trauma: Results of a Pilot Study

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Abstract

Recent advances in trauma treatment research suggest that a paradigm shift is underway towards engaging trauma survivors in interventions that include the body, creativity, and activities that allow for social synchronization with others. This new wave of trauma treatments represents a shift away from a primary focus on talk-based interventions arguing that body-based, creative, and socially targeted interventions will have increased and more integrative benefits for those healing from trauma (van der Kolk, 2015). It was our goal to provide a choral music experience to better understand the potential impacts of choral singing for adult survivors of childhood trauma. We recruited 18 adult survivors of childhood trauma and ran weekly rehearsals over the course of a winter term. We measured the emotional experience of singing on the Singer's Emotional Experience Scale (Beck, et al., 2000) and found significant improvement in overall mean responses over the course of the rehearsals. Seven primary themes were identified through the thematic analysis. These included: feelings about “structure”, feelings about repertoire, dealing with triggers, choir as a safe and healing space, getting connected to music (again), getting connected to others, and therapy without therapy. Implications for those working with trauma survivors and choral directors are offered.

Key Words:

childhood trauma, choral music, singing

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There's a special kind of magic when you're singing with a group of people and you're all trying and it's like, it's really beautiful. I just kind of wanted to sing and be part of a choir, and I know that I have trauma in my childhood experiences so it just kind of fit kinda well for me, as an opportunity, as part of a choir.

Over the past 30 years there has been an explosion of clinical and experimental research focused on understanding best practices in the treatment of childhood trauma (van der Kolk, 2015). As this evolution began, clinicians approached their work with phase-based, talk-centred psychotherapy approaches, which have evolved over time, as we have learned more about the pervasive impacts of trauma and how to address them, into approaches that integrate all aspects of the survivor's self. These include new paradigms for the creative arts and body-based treatments such as trauma informed yoga, theatre, singing, and dance (van der Kolk, 2015). It is thought that engaging the body, creativity, and working in groups for healing, promotes healing through, in part, engaging in synchronized movements with others to provide the opportunity to repair systems of regulation; internal physiological systems, and external social/interpersonal systems. A new body of research is emerging to begin to assess the veracity of these claims (e.g. Jindani, et al., 2015; Bensimon, et al., 2008). It is our goal to contribute to this growing literature through the exploration of choral singing with childhood trauma survivors.

The experience of singing with other human beings, the bond of raising voices together in song, in synchrony and solidarity with others, is a deeply pleasurable experience that requires no special equipment, few financial resources, and no special training. The experience of singing in a choir has been demonstrated to have positive impacts on our physical, emotional, social, and cognitive wellbeing (Clift & Hancox, 2010; Clift, et al., 2010). In Canada, 3.5 million people sing in a choir, that is one tenth of the population, or one in six people in the country (Association of Canadian Choral Communities, 2017). In fact, more people in Canada sing in choirs than play hockey. And yet, various groups may be excluded from the experience of singing with others for reasons of social isolation, poverty, and psychological barriers. Over many years of working in our communities as choral directors and mental health care providers, we have noted that trauma survivors often voice the beliefs that special training is required to be in a choir, that only people with shiny clean mental health are allowed to participate in choirs, and the fear that music, maybe triggering. They seem to fear that the emotionally engaging experience of singing, and singing with others, may become overwhelming to them and that it could be embarrassing or shameful to experience strong emotions in a group of people who may not understand their experiences. It was the purpose of this pilot study to examine the experience of childhood trauma survivors in a choral music environment and to explore how childhood trauma survivors might experience singing in a choir through qualitative interviews and quantitative measurement of their emotional experience.

Over the past thirty years, the deleterious impact of childhood trauma (e.g., child sexual

abuse, child psychological or physical neglect, parental violence, witnessing intimate partner violence, and other types of child maltreatment) has been well established in the literature (Dye, 2018). Childhood trauma has been associated with a wide range of pervasive difficulties in all areas of adult functioning including psychological (e.g., depression, posttraumatic stress, somatization, cognitive distortions) (Briere, et al., 2010), social (e.g., challenges in developing and maintaining satisfying interpersonal and conjugal relationships) (Godbout, et al., 2013; Watson & Halford, 2010), and physiological (e.g., abnormalities in biological regulatory systems leading to long term negative health outcomes (Chanda & Levitin, 2013; Lanius, et al., 2010).

Posttraumatic stress disorder (PTSD) is prevalent in childhood trauma survivors and results in challenges with emotion regulation, management of intrusive memories and nightmares, avoidance, and difficulties with engaging with the world as a result of being turned inward to manage their turmoil and the hypervigilance related to constantly reliving dangers that have already occurred (Briere, et al., 2010; van Dijke, 2008; Whiffen & Oliver, 2004). However, PTSD is not the only psychological sequelae of childhood trauma. Many survivors experience prolonged and intractable periods of depression and suicidality, chronic anxiety, eating disorders, self-injury, obsessions and compulsions and a host of other forms of psychological distress (Briere & Scott, 2014; Godbout & Briere, 2012).

The capacity to develop and maintain strong social bonds has been associated with health and wellbeing throughout the lifespan (Holt-Lunstad, et al., 2010) while loneliness and social isolation have been associated as risk factors for heightened mortality (Holt-Lunstad, et al., 2015). Ironically, while positive interpersonal and social relationships serve as a buffer against the negative impacts of childhood trauma, survivors often evidence severe difficulties in their social functioning. One of the major impacts of a history of trauma is pervasive and debilitating feelings of loneliness and social isolation (Cloitre, et al., 2005; Freedman, et al., 2015; Herman, 1992; Solomon, et al., 1990). Trauma separates the survivor from society, leaving them feeling different, separate and disconnected. This may be part of the reason why many survivors have told us, in the context of our clinical and musical work, that they feel they cannot engage in social activities such as singing in a choir. In studies, survivors were found to report high levels of social dysfunction, feelings of loneliness, mistrust and anger towards others, and lower levels of perceived social support (Abdulrehman & De Luca, 2001; Callahan & Hilsenroth, 2005; Dimitrova, et al., 2010; Evans, et al., 2013; Gorcey, et al., 1986). While trauma focused psychological treatments have been designed to directly address the impacts of trauma, the majority focus on the individual within the context of psychotherapy and very few interventions directly address the social and relational impacts of childhood trauma within their relationships and communities (MacIntosh, 2019). Group therapy has been suggested as one possible modality for addressing social isolation and interpersonal dysfunction, with the goal that the group will provide a forum for the survivor to develop interpersonal skills, build relationships with other members and strengthen feelings of belonging (Cloitre, et al., 2002; Herman, 1992;

Scurfield, et al., 1990; van der Kolk, et al., 1996).

A number of researchers have explored the psychological impacts of listening to music and identified that listening to music improves reported mood, decreases symptoms of depression and anxiety, increases concentration and reduces stress (Castillo-Pérez, et al., 2010; Hsu & Lai, 2004). These findings have been replicated in a number of populations including psychiatric inpatients, and patients awaiting or recovering from medical procedures in both medical and non-medical settings (Bailey & Davidson, 2002; Khalfa, et al., 2003; Miluk-Kolasa, et al., 1994; Sloboda, et al., 2001; Ventura, et al., 2012). A number of hypotheses for these improvements have been extended, including that listening to music acts as a distraction or mask for difficult thoughts or feelings, that music listening evokes and regulates strong emotional states producing intense feelings of pleasure and positive emotions, and that listening to music leads to physiological changes that result in improved mood, wellbeing and decreased stress, especially when that music is personally meaningful and selected (Chanda & Levitin, 2013; Preti & Welch, 2011). However, the most frequently cited argument for the positive impact of listening to music on wellbeing is its activation of areas of the brain associated with pleasure and reward as well as areas of the brain associated with modulating emotion and arousal (Chanda & Levitin, 2013; Levitin, 2012; Morgan, et al., 2010).

Music therapy includes activities such as drumming, playing instruments, improvisation, song-writing, music “games” and guided imagery music processes (CAMT, 2016). Findings of music therapy interventions are highly similar to those of studies evaluating the effects of listening to music. Positive benefits of music therapy interventions have included improved mood, reduced depression and anxiety, stress reduction and relaxation, decreased positive and negative symptoms of psychosis, decreased symptoms of multiple psychological disorders, and improved self-confidence and social skills. These findings have been summarized in a number of meta-analyses and reviews (Castillo-Pérez, et al., 2010; Gold, et al., 2009; Guétin, et al., 2009; Krout, 2007; Lagacé, et al., 2015; Loomba, et al., 2012; McDonald, et al., 2015; Silverman & Rosenow, 2013). These strong findings are consistent and there are no known reported deleterious side effects of music interventions (Ulrich, et al., 2007). One meta-analysis identified that the results of music therapy interventions are dose-dependent with higher doses resulting in strong effects, in fact, it has been reported that more than 70% of the variance of outcomes was explained by dosage (Gold, et al., 2009).

In addition to the findings that suggest music therapy may exert positive effects on multiple domains of individual functioning, the music therapy literature also describes positive impacts on social functioning. It is argued that the synchronized activities involved in many music therapy interventions may foster feelings of social connection including interpersonal trust and bonding (Chanda & Levitin, 2013), pro-social behaviours and feelings of affiliation (Liebowitz, et al., 2015; Pearce, et al., 2015). Storr (1992) argued that music has the capacity to bring people together, creating a shared bond because it invokes similar physical responses among different individuals engaged in shared music making.

A number of music therapy interventions have been explored for the treatment of trauma. It is argued that music is a natural vehicle for working through trauma as music interventions may allow for tolerable access to traumatic memories as well as mediating limbic structures that are often hyperaroused and dysregulated in response to reminders of traumatic stimuli, leading to an inability to process traumatic material (Wigram, et al., 2002). Trauma survivors often have difficulty translating their emotions and memories into words and music seems to bypass the mechanisms that interfere with regulation and trauma processing (van der Kolk & Fisler, 1994; Wigram, et al., 2002; Zlotnick, et al., 2008). For instance, Bensimon and colleagues (2008) explored the use of drumming with combat veterans diagnosed with PTSD. These traumatized veterans reported feelings of increased wellbeing such as openness, relaxation, decreased trauma symptoms; and increased feelings of belonging and competence in interpersonal communication. Orth (2005) also used drumming and music to help traumatized refugees to engage in a community building activity despite their diverse languages and backgrounds.

Extending the review of music as an intervention, a specific literature has emerged that describes the positive impacts of singing on wellbeing. From a psychological perspective, singing has been associated with positive emotions, improved mood, increased self-assertion and emotional expression (Bailey & Davidson, 2002; Kreutz, 2014; Lagacé, et al., 2015). In meta-analyses, singing has also been associated with positive social impacts including increased social connections, cohesion, a sense of unity and purpose, increased feelings of closeness, and faster bonding than in controls engaged in other group activities (Clift & Hancox, 2010; Clift, et al, 2010; Kreutz, 2014; Pearce, et al., 2015; Vaudreuil, et al., 2019). From a physiological perspective, singing has been demonstrated to lead to reductions in cortisol levels and enhanced immune functioning, increased body awareness and lowered blood pressure (Beck, et al., 2000; Chanda & Levitin, 2013; Clift & Hancox, 2010; Clift, et al., 2010; Tavormina, et al., 2014).

A number of research studies have explored the impact of engaging in choral singing on psychological wellbeing. These studies have investigated the impacts of choral singing in community choirs, university music student chorales, as well as in choirs developed for therapeutic reasons. Research into the experience of individuals in community choirs suggests that participants experience enjoyment and satisfaction, heightened mood and increases in overall psychological wellbeing (Bonde, 2014; Bygren, et al., 1996; Sanal & Gorsev, 2014). Clinically, a number of researchers have explored the psychological impacts of choral singing on diverse clinical groups such as homeless men, psychiatric patients including those dealing with mood disorders and psychosis, veterans and prison inmates. These studies have found that regardless of diagnosis, choral singing resulted in short and long term improvements in mood, decreases in anxiety and depression, reductions in perceived stress, improved cognition, identity, self-confidence and self-esteem, and positive experiences of self-expression (Bailey & Davidson, 2002; Cohen, 2009; Harvey, et al., 2007; Lagacé, et al., 2015; Liebowitz, et al., 2015; Tavormina, et al., 2014). Identifying 35 studies published

from the 1960's to 2008, Clift and colleagues (2008, cited in Clift et al., 2010) performed a systematic review of the impacts of singing on reports of wellbeing and health in multiple non-clinical populations and contexts. The majority of respondents across these diverse studies reported positive impacts in relation to their emotional, social, spiritual and physical health. A number of these studies included those who engaged in group singing in choral contexts.

In a recent study, Pearce et al. (2015) explored the social impacts of group singing on a group of 84 adults. These authors' findings suggest that group singing acts as an "ice-breaker effect" in that singing in a group leads to increased feelings of closeness and bonding with their fellow singers more quickly than in other group interventions. A number of other studies have found similar effects. These include in both community and clinical choirs. In community choirs, singers have reported feelings of social belonging, commitment to the choir, and the community built through the choir (Bonde, 2014; Bygren, et al., 1996). Clinically, choirs have been found to decrease social isolation and impairment in some of the most vulnerable. Bailey and Davidson (2002) brought together a group of 20 men, alienated from society, for a choral singing project. The men reportedly experienced a newfound sense of community and social inclusion, improved social skills, and the development of new social networks. At the time of writing, all of the participants had achieved stable housing and many had found employment. Working with a similarly socially disenfranchised group, Cohen (2009) reviewed the literature on choirs with prison inmates and studied two choral singing interventions for incarcerated men. Findings indicated that participating in the choirs assisted the men in feeling closer to one another, more sociable, more trusting, and experiencing higher levels of social interaction. Studies of choral singing with individuals living with chronic and acute mental health difficulties have identified significant social impacts. These social impacts include strengthened feelings of interpersonal trust and positivity towards others, feelings of closeness and community, the development of new relationships and prosocial behaviours, feelings of belonging and decreased feelings of loneliness (Lagacé, et al., 2015; Liebowitz, et al., 2015; Tavormina, et al., 2014). In their large scale studies across the United Kingdom, Australia and Germany, Clift and colleagues (Clift & Hancox, 2010; Clift, et al., 2010) with over 1700 participants from university to community choirs, identified, consistently, that singers reported benefits to their health, social and emotional wellbeing including improved mood, calm and relaxation, and positive impacts on a diversity of mental health concerns.

Given the positive impacts reported in response to choral singing experiences on the health of participants in community, clinical populations, and diverse groups including homeless and incarcerated men, it seems to be a natural next step to extend choral music interventions to traumatized populations. Limited research has been conducted to explore the use of choral music with trauma survivors. Bailey and Davidson's (2002) study examining the use of choral music with homeless men articulated that many of the participants

had experienced traumas in their lives although these were not explicitly considered. Harvey and colleague's (2007) exploration of choral singing with hurricane survivors following hurricane Katrina indicates that the choir was an important lifeline to traumatized participants, especially given the high levels of traumatic stress and the low levels of resources available to respond to the needs of the survivors. Participants reported that the choir assisted them in a non-stigmatizing way to deal with their challenges in family functioning, loss of optimism and mental health problems.

Limitations of Current Research and Rationale for Current Study

Thirty years of research on the impacts of childhood trauma have consistently identified pervasive psychological, social and physiological deficits (MacIntosh & Menard, in press). Interventions designed to assist survivors have demonstrated efficacy in managing individual psychological distress but have focused on the individual outside of their social and relational networks (MacIntosh, 2019). Additionally, recent advances in trauma treatment research suggest that a paradigm shift towards interventions that engage the survivor at the level of the body and include creativity and activities that allow for social synchronization will have added benefits to those healing from trauma (Coleman & MacIntosh, 2015; van der Kolk, 2015). Based on these trends and realities in the trauma field, our research team hypothesized that choral music may be an ideal avenue for this form of healing from trauma. To date, the majority of studies examining the impacts of choral singing on different aspects of wellbeing have been small, exploratory, rarely utilizing standardized measures, and lack a theoretical framework to understand the mechanisms through which choral singing influences wellbeing (Clift, et al., 2010). Additionally, we were not able to identify any studies that have specifically studied the use of choral music with an explicitly identified group of trauma survivors. It was our objective to expand this literature through the exploration of a pilot choral music project with childhood trauma survivors using both qualitative methods to examine themes that may shed light on the mechanisms of action as well as tracking responses on a quantitative measure that has been used in other studies to allow for comparison.

Method

As this was the first study to explore the use of a choral intervention with childhood trauma survivors we used a qualitative thematic analysis methodology with one quantitative measure assessing the experience of singing. Thematic analyses were conducted on the transcribed pre and post choir interviews with survivor participants. A thematic analysis is a method used to identify, analyze and track patterns (themes) within a dataset (Braun & Clarke, 2006). Thematic analysis has proven appropriate for research topics where no

established theories exist, or the theories are not specific enough or relevant to the area one is investigating (e.g., Fereday & Muir-Cochrane, 2006). This approach to qualitative analysis of data follows a step-by-step method of documentation of data, textual analysis by multiple raters, and clear methods for resolving discrepancies and conflicts between raters allowing for a transparent process that reduces the influence of bias and increases rigour (Mackieson, et al., 2019; Roberts, et al., 2019). We utilized this methodology to bring coherence to a large volume of interview data regarding a topic upon which little prior qualitative research had been conducted. This approach is a well-validated strategy for organizing data to increase coherence and reduce potential for bias to interfere with analysis. Themes emerge through multiple comparisons rather than from pre-formulated hypotheses. In the case of this analysis, our objective was to identify specific themes related to the impact of singing in a choir for survivors of childhood trauma. For our analysis, the second author and research assistant transcribed all sessions and transcript segments were isolated and a preliminary thematic sorting of the material was conducted. The first author and principal investigator then reviewed each transcript segment in its entirety to familiarize themselves with all of the interviews and their content. Following this, initial themes were identified based on general patterns in the data, for instance, transcripts segments related to rehearsals, repertoire or other general areas of discourse. These initial themes were then sorted and specified into thematic categories by each independent rater until they were clear and distinct. These resulting themes were reviewed by both raters for agreement. It was determined, a priori, that in the case of disagreement the raters would work together to identify a theme upon which they could have consensus for the data in question. In our case, there was no disagreement in themes, except in the naming of one, which was changed to reflect the clearest identifier. These themes were then reviewed by a research assistant not involved in the research programme for the purpose of validation. This study received approval from the Research Ethics Board of McGill University.

Recruitment

Adult survivors of childhood trauma were recruited from the community through community mental health settings, private practitioners who work with trauma survivors, and through community choirs who circulated recruitment materials to their networks and audiences. Participants were pre-screened on the telephone for presence of exclusion criteria, which included current suicidality, substance abuse that was not in remission and active psychosis. Interested callers were informed that participating in the project would involve attending weekly choir rehearsals on Tuesday evenings from the beginning of January to the beginning of May and that no prior musical or choral singing experience was required. They were informed that an interview would be carried out before and after the rehearsal period and that they could withdraw from the project at any time.

Measures

All participants were provided with an information sheet that outlined the major procedures of the study. This included information about how to contact the research ethics board of McGill University. They were advised that all identifying information would be kept confidential by the three researchers and informed of the limits of confidentiality regarding. Additionally, they were informed that all interviews would be transcribed and no identifying information would be left on these transcriptions. A demographic questionnaire was administered to all participants before starting in the choir that provided basic demographic characteristics of participants including age, education and income but which also asked questions such as, “Have you ever sung in a choir before?”, “Do you read music?”, “What kind of music do you most enjoy listening to?”. The Childhood Trauma Questionnaire (Bernstein, et al., 1994) was used as a screening measure to assess the presence and nature of childhood traumatic experiences. The CTQ is a retrospective self-report measure of childhood traumatic experiences that has received wide psychometric validation and that identified the forms, severity and duration of trauma experienced by our survivors (Scher, et al. 2001). Before the onset of rehearsals and following the termination of the project participants were asked to complete the Singer’s Emotional Experience Scale revised (Beck, et al., 2000) is a measurement of their current emotional state in relation to the singing experience. Questions on this measure include, among others, Singing is very important to me, Singing has made me a happier person, Singing has contributed to my personal well-being, Singing gives me identity as an artist, Singing generally lowers my mood, I feel detached when I’m singing, I don’t usually feel strong emotion when singing. Responses fall on a Likert-type scale from *strongly disagree* to *strongly agree* corresponding with a score of one to five. Scoring was reversed for negatively valenced items and a total score increased as enjoyment and emotional amelioration in response to singing increased.

A final group discussion was held on the last night of rehearsals where participants had an opportunity to share their thoughts, feelings and reflections about the project within the group. Following this final rehearsal, participants were invited to a private office at McGill University to participate in an open-ended interview to discuss their experiences in the choir. These were unstructured interviews to allow participants to freely express their experiences in the choir. No analyses were performed on any of the pre-treatment measures prior to commencing the choir rehearsals to ensure that the researchers were not entering the rehearsal period with specific impressions of the singers and their attitudes and feelings towards singing in a choir.

The Choir

The research team was comprised of all three authors. The principal investigator is a clinical psychologist and Associate Professor at McGill University whose research focuses on the interpersonal impacts of childhood trauma and who is also a choral singer and choir director. The second author, the research assistant on the study, was present at all rehears-

als and conducted the majority of the intake and exit interviews, and is also a professional photographer who uses photography as a medium for social change and personal growth. Her professional training is in the area of social work and she has worked extensively with individuals dealing with significant distress including in-patient psychiatric patients and trauma survivors. The third author is the Director of Choral Activities at McGill University in Canada who is interested in the psychological aspects of participation in choirs and in the experience of choral directors working with individuals in their choirs who may have mental health challenges.

Rehearsals took place in the evening during the winter term in a standard rehearsal hall in the music building. In a meta-analysis (Gold et al., 2009) the “dose” of music interventions regarded as necessary to identify a strong effect suggested that 73-78% of the variance in effects was explained by the number of sessions. Additionally, they further articulated that small effects are seen after 3 to 10 sessions; medium effects after 10 to 24 sessions and large effects after 16 to 51 sessions. Given these findings and the sessional nature of the university system, it was our decision to offer twelve rehearsals, thus fitting in to the semester timeline and falling within the moderate effect range of session numbers.

Rehearsals followed a standard format of gathering, vocal warm up, and a run through of each repertoire piece with a focus on the development and improvement of the singing of the piece. In early rehearsals this included note and rhythm learning and, for many participants, an introduction to singing in parts. As the rehearsals continued, the focus shifted to musicality and expression as notes and rhythms were solidified. Rehearsals were not structured in any way to be group therapy sessions or to be slanted towards a therapeutic setting; they were structured in the way that choral rehearsals are structured in the community to ensure that we were measuring the experience of being in a choir and not attempting to replicate a music therapy intervention. The only accommodation that was provided in relation to the potential for emotional distress to be experienced by participants, was to provide a break out room for participants to step away from any rehearsal with or without the accompaniment of the research assistant should they feel the need to have a time out of the rehearsal. Given that this was a pilot study we felt it important to provide some psychosocial support to participants should they require it during rehearsals.

Participants

In total, 18 childhood trauma survivors from the community were interviewed and 16 attended the first rehearsal. The two that did not both had conflicts in their school schedules with the rehearsal schedule. The average age of participants was 38 (Range 21-60). The majority of participants' incomes were under \$25,000 per year (84%) with only three participants having incomes over \$50,000 (16%). While incomes were quite low, this was a well-educated group of participants with 95% having completed college or university. The majority of participants had sung in a choir as a child (80%) but all had left singing behind during or after childhood. Of the 18 interviews completed, only one participant could

identify their vocal range. Two of the 18 participants had learned how to read music during childhood music lessons but both indicated that they were not sure if they still had this ability. Participants identified musical preferences as predominantly pop/rock, blues/jazz. All but one participant had previously attended individual psychotherapy. On the CTQ, the primary index trauma for 82 percent of the sample was sexual abuse with three participants identifying physical abuse, emotional neglect and abuse as index traumas. However, all of the participants noted more than one form of maltreatment in their respective childhoods.

Of the 16 participants who attended the first session, four did not return to the second session, eight participated in all or most rehearsals, and four attended between two and four rehearsals. Reasons provided for withdrawal included changes to work/school schedules, work related travel and difficulties with childcare and transportation. One session was dropped due to a severe winter storm, equalling eleven full rehearsals and one pre and post interview for each participant as well as a final group discussion, which was also transcribed and included in the thematic analysis. There appeared to be no differences between the participants who continued in the study and those who dropped out after the first rehearsal, in terms of demographics and trauma history.

Repertoire

Repertoire was chosen to fit a beginning level choir and to be neutral in message and tone with no clear valence to the positive or negative. The majority were written or arranged by Canadian composers. Lyrics related to religion, family relationships and other potentially triggering topics were avoided. All of the pieces were arranged in two vocal parts and participants were placed into a soprano/tenor or alto/baritone groupings based on vocal exercises conducted in the first rehearsal. Some of the pieces that were chosen to bring to the first rehearsal included *Bring Me Little Water, Sylvie* arranged by Moira Smiley, a call and response piece that can be learned by rote and which has a body percussion part, two pieces from Nancy Telfer's Reflections of Canada Collection, *She's Like the Swallow* and *Un Canadien Erant* being among others in this vein. After the first rehearsal participants indicated that they would prefer songs that were more familiar to them and that were more contemporary in terms of a "pop" style. Of the pieces purchased for the first rehearsal, only *Bring Me Little Water, Sylvie* and *Wood River* by Connie Kaldor, arranged by Willie Zwodesky, were retained by the group.

For the second week, an assortment of pieces was purchased from an online music retailer and five others were added to the repertoire that were mainstays throughout the rehearsal period, *Blackbird* and *Penny Lane* by the Beatles arranged for two-part treble choir by Audrey Snyder, *Put a Little Love in Your Heart* by De Shannon arranged by Jeff Funk, *You've Got a Friend*, by Carole King arranged by Mac Huff and *Somewhere Over the Rainbow* by Howard Arlen arranged by Andy Beck. Participants indicated that they appreciated the message, the upbeat tempi and that these pieces were familiar to them.

Results

Statistically significant differences were identified regarding the enjoyment and satisfaction derived from singing as measured on the Singer's Emotional Experience Scale comparing ratings from before the introduction of choral rehearsals ($M = 50$, $SD = 9$), and following the termination of choral rehearsals ($M = 54$, $SD = 8$), ($t_{(df=10)} = -1.706$, $p < .05$) with average scores moving in the direction of greater positive emotional experiencing over the course of the rehearsal period.

Thematic Analysis

Seven primary themes were identified through the thematic analysis. These included: feelings about "structure", feelings about repertoire, dealing with triggers, choir as a safe and healing space, getting connected to music (again), getting connected to others, and therapy without therapy. To protect the confidentiality of participants, given that the Anglophone community of Montreal, Quebec, Canada, is very small, we have avoided the use of any identifiers. Additionally, the interviews from the final rehearsals were in group format and so it would be impossible to identify the speaker in that format. The quotes selected below are those that most clearly and accurately represent the themes being reviewed.

Feelings about Structure

Participants described feelings about the structure of the choir. For some, they would have preferred more structure, more teaching about reading music, how to sing in two or more parts, and more psychoeducation about how trauma impacts the singer and the voice. These participants reported feeling as though this would have enhanced their experience in the choir. For instance, one participant described her feeling that more structure helped her participate, initially, as she felt she knew what was expected of her. She indicated:

Participant: In the first few times we each had certain roles to play, and there was more structure and that kind of helped me out . . . And then when it went all over the place, I mean all over the place meaning we were just singing along. Some of it took away, because I was learning right . . . This is my very first choir. So the structure helped me, and I mean I'm still kind of, I still get lost in the following.

Researcher: Can I just ask, when you say structure, do you mean specifically to the music, or to the group?

Participant: Well split into groups, soprano, alto, and each had a certain line to read, and then we would switch if we wanted to, like I could do alto. It was kind of an education for me at the same time. And it provided me with a structure that was reassuring.

Another participant described an interest in having more opportunities for psychoeducation about trauma, trauma and singing, and that this would help her feel more grounded in the choir as a trauma survivor. Her feeling was that these psychoeducational segments might make her feel more like the choir was reflective of her experience as a survivor. She indicated:

I would have liked more, like we discussed that last night, for grounding of how the singing was going to connect to let's say trauma symptoms. If I could put it this way, like a little bit more of a lecture segment, or a therapy segment, a psychoeducational segment. Even if it was totally small. Something that would just differentiate it from the feeling I had of it being a choir, no different from any other choir.

Other participants described a preference for less structure, a singalong style environment where they felt more like they could be accepted in the group regardless of their level of skill or training and with greater freedom to just sing freely. One participant noted:

I just like singing whatever my voice wants to do...as opposed to it being structured... I was hoping that it was more like, okay, we're singing a song and we don't have to worry about whose part is high or low and whether I was doing it "properly", you know?

Another participant indicated:

There's a lot of gatekeeping in music ... You need to have all this training; you need to have coaches behind you to prove that you can carry a basic tune ... If you don't have umpteen years of semi-professional training and background you can't say you have a minimum level. That kept me out of music for a long time so I didn't want that in this group.

These beliefs about singing in an organized group were common in our group of participants, that you must have prior training, high levels of skill, and abundant talent to sing in a "real" choir.

Repertoire

All of the participants discussed the repertoire as an important aspect of their experience of the choir. For many, singing songs that felt uplifting and mood enhancing, was a positive experience.

Honestly, I found that what worked really well was, the song choices were just

very focused on calm uplifting melodies. I found the music that really worked the best in the context were things like, some of the fan favorites Blackbird, You've Got a Friend... Then there were a couple of the fun songs, Penny Lane, Put a Little Love in Your Heart. Most of the music was towards uplifting and reassuring melodies, and I found that using songs that were based around reassurance with really a good way to cement the feeling of safety, allow people to feel more in the moment, because the song is safe. So it allows them to feel safe as well. What I found seemed to work best were the ones that were about uplifting and reassurance and since that seemed to be the main focus then you know, go with it.

One participant, who attended fewer than four sessions, indicated that her experience was the opposite of this. She indicated that she did not feel that the repertoire was uplifting and that this had a negative impact on her desire to continue to participate in the choir.

And I do remember saying, maybe the first and second sessions like, 'can we find some happy tunes?' (laughter) That's maybe something like, the fact that we're there and we're victims of trauma (laughter), maybe it's important to find things that are actually uplifting. And I don't mean pop songs but I think there has to be mindfulness about what this does to people, so, yes it's good to have triggers to say 'you need help right now' but also you know what? Maybe we do need to learn a song that makes us feel good.

For many participants, having had the opportunity to participate in the selection of pieces was very important to them. They described feeling respected and valued and as though this helped them feel more comfortable in the choir.

I definitely like that (director) was willing to listen to what songs we wanted to sing—that she was open to suggestions.

Dealing with Triggers

All of the participants shared their thoughts and feelings about how singing in a choir had triggered, or not triggered, strong emotions, often connected to their traumatic experiences. Some participants expressed surprise that they were not triggered while others discussed the experience of having been triggered into traumatic emotional states and how they coped with these. Examples of things said by participants who weren't triggered include:

But this particular thing, it didn't, the fact that we weren't sitting here and each time going over each individual story, it was just all about music, so I don't, like

it was something to awaken something that I had kept dormant for so long and it's, it's had a more positive effect than a negative effect. It's not triggering for me, I mean it could be, but it's not, because, you know, we're not coming here every week and you know, it changes the mood for me, you know, I look forward to it.

No, no, no, no. I mean the first meeting, yes, I wasn't triggered but there was a sense of, being uncomfortable, kind of knowing that we're all in the room together for the same reason um, (pause), ya', but actually triggered, no, thankfully no.

Examples of how participants who were triggered in rehearsals talked about this experience include:

It certainly does. I'll say in a weird way being in choir re-triggered me a little, because sometimes music has a really ... lyrics will have a really profound effect on me and I'll just start crying at a certain song ... but I also hadn't realized ... I knew that when I stopped singing for awhile it was due to trauma and basically my mental health had crashed so much that I just couldn't sing or couldn't feel comfortable with it, but I also hadn't realized how much my voice had changed since I'd stopped singing. I mean, the past year I've been like, everything has been triggering. I think I like numbed everything for a long long time. I taught myself to not feel in front of people. Can't cry in front of anyone, I just have my poker face on, and I'm fine. And so I'm used to that. I would never, even if something triggered me I wouldn't react. I know I wouldn't. It doesn't work in front of people. So not specifically it could be that sometimes like after I left, I would cry in the car. A lot of times, I'm listening to music and I cry it reminds me of stuff. It brings stuff up for sure.

I felt awkward about trying to sing through the tears and I often pushed myself to just keep going rather than start crying. But at that point I could always feel my eyes welling up, and trying to keep my voice from cracking.

A participant who did not stay in the choir after the first two rehearsals discussed how being triggered opened things up for her that then sent her back to therapy to continue her work on her trauma. While this participant did not tolerate being triggered by singing in the choir and did feel the need to leave the group, she did not, necessarily, view this as having been a negative experience.

For the time I was there it was very intense and it actually sent me into therapy (laughs). I realized while I was there I got totally emotional about trying to sing and it just made me feel really, it triggered, it triggered such strong emotions, and

so, I, realized, you know it was actually stopping me from doing it. One particular session was the one where we were standing around the piano choosing the songs and we were starting to sing “If you need a friend”...And I just lost it. I had to leave the room. And it made me realize that I probably wasn’t ready to do this sort of thing ‘cause I was just in such a difficult and vulnerable place. It was actually a catalyst, so it was, in that sense it was really good. I’m doing some therapy for trauma. It just made me realize “ok this is, this is right there underneath the surface”. I remember just the way I felt, and it just made me realize ‘I need help’. I really didn’t expect that at all. It’s like that opened up a Pandora’s box. So it’s not a positive or a negative, it just is. It was, I don’t want to say I didn’t have a good experience, but I didn’t have a good experience. I would like to do this again because I see the power of that experience where once you get over your shyness about ‘oh’, you know ‘I’m in a group, I can’t sing, I can’t do this, I don’t understand’, then something happens.

Choir as a Safe Space

Those participants that stayed in the choir throughout the rehearsal period described feelings of safety and trust in the choir environment. They described feeling that this safety allowed them to try new things, to create new positive associations to old triggers, and to be vulnerable emotionally as they sang together in this new way.

Just to be able ... many times we associate songs with experiences, and so certain songs can have certain memories, can trigger certain memories, and learning new songs in a very safe environment could maybe trigger things ... but they were all in this safe environment, which meant that I was able to approach these songs from a very different perspective and create new memories, create new experiences.

I kinda’ felt like I was in a safe place so that was nice. I knew what the structure, and the frame was ... the frame of this project, was not therapeutic, even though it has a therapeutic element to it, it's not to go there. So that also gave me the privacy. It allowed for me to maintain my privacy, if anybody saw my red eyes or being emotional I was okay with it because I knew I was with other people here who had trauma, but it also gave me the privilege to keep to myself what's going on. I would say that there was ... I had the space, I had the safe space.

Getting Connected to Music (Again)

All of the participants revealed through their discussions and interviews the various ways in which the choir experience had facilitated their reconnection with their voice, singing and music. These participants reported feeling excited, nervous and grateful for this new

experience. Some participants started music lessons, others joined a choir, and a couple simply started listening actively to music and attending free concerts in the city. Finances were an issue for this group of predominantly lower income participants so all had been resourceful in finding low or no cost means of reconnecting with music.

I just wanted to say, um, I think this finally did me in and I went for my first music lesson... I've wanted to take music lessons for years, and never have...I'm starting off with just like, learning, my own voice and music and stuff like that, where I'm good with instruments.

Other Participant: Gotta sing buddy!

Other Participant: Let it out!

Researcher: Well that's great, that's wonderful.

Participant: Yeah, so for me, mind you, it's like coming here I did not want to go into talking about my history, so the thought of actually just getting connected with my voice, which I've wanted to for a long, long time, that was the purpose. And a couple of weeks ago, I checked to see what other choir is around and I went to the Lakeshore one, which is near my house where they're practicing. So I've gone there about two, three times.

Researcher: That's fabulous.

Getting Connected to Others (Again)

Our participants reported low levels of social engagement, close interpersonal relationships and comfort in social groups, in the context of their intake interview and assessment. Most indicated that part of the allure of the choir was the opportunity to connect with others who were similarly experiencing the impacts of trauma and who were interested in music.

I think there's something really special about singing in harmony, and like about a group of people that are working together with a common goal, producing something beautiful, musically. So that's always kind of cool. And it also sort of triggers a memory of what it felt like to sing the song, or what it felt like to be in the group again for the first time. So, that was always really important I think.

I liked the sense of togetherness, of helping each other. You know, everything I've done otherwise (in therapy) is one on one, pretty much.

I really like harmonies, and I like making harmonies, but most of all I love hearing harmonies, and being a part of it, being a part of like, feeling like you're inside a harmony is so special and kind of spiritual for me, it feels really nice, so yeah, so yeah just, just, being a part of um, a musical collective.

For some, the experience of reconnecting with others was impacted negatively by the level of attrition in the group. These participants reported feeling sad and, in some cases, frustrated, by people not attending regularly or dropping out of the choir.

I found it sad somewhat, because after a certain point when you see people and when you start getting to know them in the group setting and what not and then they don't show up anymore. It's saddening. (long sigh). Frustrating because you're a group and then suddenly the group is shrinking. At least this time it wasn't in a competitive sense. But it was still sad because even if it's not for you, I wish you the best so, sad to see you go.

As the weeks progressed it kind of saddens me that people were dropping out. Because they really never gave it a chance, they based it off of the first meeting, and then they based it off of the second one, we were still trying to find our way. I think that certain participants did not give it a chance, and used certain excuses to not continue to participate which I think that was very sad. Because now that you are at the end, you sort of have made friendships. You know it's like the choir friends, right. And for me it was a really good experience because others went on to do other things in singing, as a result of sticking it out. As a result of being around and you know even though I wasn't there for a few sessions, what I got out of it was very positive.

Therapy Without Therapy

All of the participants described feeling as though the choir, explicitly structured as a choir and not as therapy, had been therapeutic for them. These participants acknowledged that the goal was to sing in a choir but, that in this frame, the experience was therapeutic even though it wasn't therapy. They discussed the experience of physicality, creativity and connection with others who were also interested in healing their musical selves, and how this contributed to their overall sense of healing from trauma.

Because this was more physically active, more creative, and playful... The creative and playful is a bit of what I'm seeing, working with, versus any kind of therapy that is not ... therapy. Therapy is not usually creative and it's not always playful, unless you're doing drama therapy or something like that. And the physical thing, I say there is obviously healing that happens through the body, just

the way trauma often happens on the body, there is healing the body does itself. Singing builds that I'm sure I can feel it.

This wasn't an outright trauma-focused group. I found that helpful in a lot of ways. It was assumed -okay you are all here because of this, but we're not going to make that the focal point. Instead we're going to just focus on something else. It felt like when you're really stressed and instead of just talking about the stress, you just distract from it to calm down to a place where you're more comfortable handling it. So I suppose that's like taking a side street, instead of the main road. But it's still all going towards the same place.

Part of my reason for coming to the group was to have the opportunity to sing. The other part was oh, a potential healing for trauma, or a potential method of you know treating trauma. So even if that was not foregrounded, how it was going to be connected to the trauma or how it was going to work, I was happy to be in an environment where there was going to be staying and I was going to be singing. And I was going to learn something about singing better.

Discussion

Over a winter term, huddled in an impersonal rehearsal hall, a small team of researchers and a group of childhood trauma survivors gathered to create a choir. This choir was a choir, not therapy, not music therapy but, a choir. It was a fierce winter, but participants braved a number of very nasty storms and those who came regularly made their way to our rehearsal hall every week regardless of the bitter cold. At the end of the rehearsal period, relationships had developed and our participants reported that they had found their way back to singing and music. Subsequently, the group now gathers for semi-regular karaoke nights around town to continue sharing time together and singing.

The literature on the impacts of choral singing on social, emotional and physical health of participants suggests that the benefits are consistently reported and wide reaching. Consistent with this, the responses of our participants in exit interviews suggest that primarily, social and emotional benefits were experienced by most participants. However, for our group, the impact on musical wellbeing was also highlighted, which is not a theme that arose in our reading of the literature. It is possible that our open ended questions allowed for this theme to emerge where, in other research contexts greater structure to interview formats focused the attention of the researcher and participant in the band of social, emotional and physical benefits. It is also possible that the emphasis of our participants on reconnecting with their own musical self and music in community reflects the exclusion to which we referred in the introduction. While oppressed and marginalized groups such as

homeless men and prison inmates have been researched in relation to choral singing, it is possible that there is something unique about the exclusion from music and musical community for childhood trauma survivors, possibly even something that mirrors and reflects aspects of their trauma histories. This is certainly an element to explore in future studies.

The experience of singing, itself, was reported to be significantly more pleasurable, rewarding, confidence building, and uplifting over the course of the choir experience. Our thematic analysis suggested that it was challenging to find a structure that worked for all participants and that, similarly, finding a repertoire with which all participants would be comfortable was challenging. Many participants did report feeling triggered by overwhelming emotions, many related to traumatic experiences, over the course of the rehearsal period. However, in the context of the rehearsals themselves, this did not ever take over the foreground. While we did have a break-out room for participants to go to with the research assistant during rehearsals, should they feel triggered and need help with emotion regulation through containment and grounding work, not one participant ever used this. Instead, participants described a kind of toughing it out, feeling that the space of the rehearsals and the relationships within the choir had created a safe healing space. They described feeling safe enough within the group to stay in the room, in spite of feeling overwhelmed and; they didn't want to miss the singing. This experience contributed, in part, to participants describing feeling as though they were connecting with others in new and positive ways. They further described the experience of feeling that while the choir was not therapy, per se, the experience had been therapeutic. One of our participants was called away to another city on the day of a rehearsal. Something quite tragic had happened in her family and she was suddenly thrust into a different city and a traumatic context. That evening, the choir met, called her on the phone and sang, *You've Got a Friend* to her. Everyone sang with all of their might and there were many tears shed in solidarity with this participant. This was an example of the kind of musical sharing and healing group that was created through the choir.

Perhaps the most meaningful outcome of this experience, for the researchers, was to see and hear about all of the ways in which our participants were "finding their voice"(s). To hear that this choir had been a catalyst for members to join other community choirs, to start taking singing lessons, to begin attending concerts and to generally open themselves up to music, again, was incredibly exciting for us, as researchers and musicians.

Next Steps

Results of this pilot study suggest that singing in a choir may have strong positive emotional, social and musical impacts on the lives of childhood trauma survivors. Significant increases in positive emotional responses were identified on the Singer's Emotional Experiencing Scale, a scale of the emotional experience of singing. Results of the thematic analysis suggest a number of positive impacts on the lives of survivors, especially that of reconnecting to music, regaining their voice and feeling as though the experience was

therapeutic. In future studies it will be important to obtain sufficient funding to allow for a complete research team and to clarify the structure and requirements for commitment with participants before the rehearsal period begins. While it is impossible to avoid winter storms, a longer rehearsal period that spans two semesters may allow for less of an impact of losing a rehearsal to weather or illness.

The apparent incongruence between some participants' desires for more structure versus those who would have liked less structure will be an important issue to attempt to resolve in future studies. It is possible that one aspect of this conflict may relate to levels of previous musical exposure, training and skill. Those participants who wanted more "structure" described having an interest in more training about music reading, vocal technique, the impact of trauma and how to sing in harmony. Those who wanted less "structure" wanted less of these things. If participants were at similar levels of preparedness for the choir, it is possible that the issue of "structure" might be less of a concern. One option might be that a preparatory class be offered prior to starting the choir. This preparatory class would be optional and would include lessons in basic music notation, sight reading, vocal technique and parts singing as well as psychoeducation about trauma and its impact on singing.

Our results echo those of many previous studies that have identified the positive impacts of choral singing. However, the question of the mechanisms of change was not adequately answered by our participants' responses as analyzed through the thematic analysis. It is still unclear what aspects of the choral singing experience were causal in their experience of positive change in their lives. In particular, given we are unclear about the mechanisms, the added complexity of the role of trauma on this relationship is one that warrants further investigation.

Limitations

There was a high level of attrition from the first intake interviews to the final rehearsal. Two participants dropped out before the rehearsals began, a further two dropped out after two rehearsals and a further four came only sporadically to between two and four rehearsals. While participants all had explicit reasons for why they were dropping out, which included schedule changes for their school and work, travel for work and commute time to the rehearsals, in post interviews, some participants did indicate certain concerns about the choir experience that impacted their feelings of safety and their desire to continue. These included concerns about feeling triggered in ways that may have felt unmanageable, feeling that there was not enough "structure" or opportunities for psychoeducation about trauma or music education. On examination, there did not appear to be any differences between those who dropped out and those who continued in relation to demographic or trauma related characteristics. However, given the small sample size, it was not possible to perform a statistical analysis to determine if there were differences that would not have been apparent on general examination. While this rate of attrition may appear to be high, it is in line with other studies that have explored the use of creative and physical modalities for healing

from trauma. For instance, in yoga studies with childhood trauma survivors, similar rates of attrition were identified (Price, et al, 2017). It has been suggested that these high levels of drop out relate to the potential for these kinds of activities to be highly triggering for survivors, at the same time as these types of body-centered, creative activities for survivors can be extremely powerful modalities for improving wellbeing (van der Kolk, 2009).

Another limitation included the multiple roles of the research team. The principal investigator played the role of researcher, choir director, and accompanist. The research assistant participated in all of the rehearsals as a support person who was available to participants should they require psychosocial support. Funding available to this team was not sufficient to provide a stipend for more than one research assistant or an accompanist. Attempts will be made, for any future research, to obtain sufficient funding to cover the costs of an accompanist, a rehearsal support person and a research assistant for interviewing and transcribing.

The potential for researcher and participant bias is also an important caveat in considering our findings. The research team was made up of a psychologist/choral director, a photographer/social worker and a professional choral director. In analyzing the thematic analytic results the old adage, *preaching to the choir*, might fit; this is not a group that was approaching the work of building a choir for trauma survivors with any personal doubts about the potential benefits of choral music and singing. However, we were approaching it with curiosity, as open-minded learners, hoping to understand more about how this thing called choir, singing together with others, might impact trauma survivors. We were deeply interested in understanding that experience for survivors. In thematic analyses, some concerning themes did emerge and these were given as much weight and credence as those that expounded upon the healing power of singing in a choir. However, any qualitative research that assesses a phenomenon to which the researchers are closely aligned is one where future researchers would well attempt to replicate for the sake of validity. Clift and Hancox (2010) also discuss the potential for participant bias in their large-scale survey of the benefits of singing in choirs. They indicate that while choral singing is a voluntary activity and that this may “reflect(s) a definite interest in music, it may be that a high personal value placed on music encouraged participants to agree indiscriminately with any positive sounding statement” (p. 255). They echo our assertion that while this may be the case, a wide range of possible responses, some on the negative side of the scale, were present in these findings.

Conclusions

Choral singing has been associated with many positive aspects of health and wellbeing including improved physical, emotional, social and psychological wellbeing. Childhood trauma survivors have reported to us that they consciously excluded themselves from choirs and choral settings due to feelings of being too different, too traumatized, too triggered, among others. This pilot study provided an explicit opportunity for childhood trauma survivors to participate in a choir, a choir where no requirements for previous training, skills

or talents would be required. The participants who attended this choir appeared to experience many positive benefits from the experience, most significantly, feeling safe, feeling that singing contributed to their healing from trauma and reconnecting with music and others in new ways. We'll end this discussion with the words of a participant describing the experience of finding her voice again:

I used to sing a lot, but once I got married I uh, I stopped singing, for 20 years . . . I just felt that, I wanted to sing again I felt like I needed to regain my voice. I know it's kind of metaphoric but I felt it's, it helped me to regain my voice. It got me to start going to music lessons. Did it change how I feel about music? It's a complicated question because on the one hand I have a love/hate relationship with music. And so it didn't change because I still have the love for the music, but the hate doesn't exist in it in this new genre.

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