Pilot Programme: Evaluating the effectiveness of Group Music Therapy for reducing PTSD symptoms in Front Line Emergency Workers

"Where words fail, music speaks"

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FORWARD

Front line emergency staff are exposed to high levels of trauma in their "normal" pattern of work and we are pleased to have been able to support this groundbreaking programme by the Blue Light Symphony Orchestra (BSLO) and Chroma. The improved levels of wellbeing among the participants' shows that group music therapy has a place in looking after emergency personnel. We want to thank Detective Sergeant Seb Valentine of the BLSO, and Daniel Thomas for initiating this collaboration and a special thank you to Amanda Thorpe for running such a successful programme.

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This report is a milestone not only for the Blue Light Symphony Orchestra, which I founded in 2016, but also for me personally. I am hugely grateful to Dan Gillard, Adrian Rutherford, Daniel Thomas, Joint managing director of Chroma and of course, Amanda, who has put so much more into this project than she needed to. I could not have wished for a better team.

This report is being written at a time when the Police Federation of England and Wales have just published a survey where 77% of Police Officers responding reported mental health difficulties in the past year. I hope we can build on this work with the aim of diversifying the options open to those in the emergency services struggling with mental health problems.

Detective Sergeant Seb Valentine, Surrey Police
Founder and Musical Director, Blue Light Symphony Orchestra

ABSTRACT

Overview: Professions associated with a higher risk for the development of Post Traumatic Stress Disorder (PTSD) include the military, fire fighters, first responder/ambulance personnel and law enforcement officers (Skogstad, 2013). In 2019, *Police Care UK* reported that 1 in 5 serving police officers were living with PTSD or anxiety disorders triggered by exposure to one or multiple traumatic events. Almost two-thirds of officers reported experience of fatigue, anxiety or sleep disturbances. However, they continued to go to work as per usual.

COVID-19 has placed front line workers under an additional layer of considerable psychological pressure. Not only is the police service responding to an increased level of incidents related to mental health, they are continually increasing their own exposure risk to the virus.

The main treatment options offered for PTSD in the UK are Cognitive Behavioral Therapy (CBT), Eye Movement Desensitisation Reprogramming (EMDR) and/or medication, with the goals of reducing symptoms, teaching strategies and skills to deal with symptoms, and restoring self-esteem. The use of music therapy for PTSD, anxiety and trauma-related stress within ex-military personnel in the US is well documented (Libby et al. 2014), yet despite an equally high incidence of PTSD symptoms reported in blue-light emergency service personnel, music therapy as a treatment modality within these services has not been explored.

Aims: To address this gap, a working collaboration between the Blue Light Symphony Orchestra (BLSO), Chroma, and five Blue Light organisations: Surrey Police, Sussex Police, Surrey Fire & Rescue Service and East Sussex Fire & Rescue Service and South East Ambulance Service, was established to design, implement, and evaluate music therapy as a treatment option for front line workers with symptoms of PTSD. The BLSO is a user led charity, which aims to improve the mental wellbeing of emergency workers through music. Chroma is the UK's leading provider of creative arts therapies services to partners across the health, education, social care and statutory sectors, through its team of over 90 HCPC registered creative arts therapists.

Results: Findings indicated a positive reduction in symptoms, increased sense of wellbeing, and a sense of leaving therapy with specific coping strategies. Participant feedback revealed the following themes: *surprise at the benefits experienced, going outside of a comfort zone, learning different coping strategies, reduced stress.* Many participants expressed a desire for the group to continue and requested they be contacted about additional programs for which they could sign up.

Implications: The pilot programme indicated a positive impact of group music therapy within the Blue Light services and highlighted key areas of consideration for additional research to validate the treatment model.

KEYWORDS:

First Responders, Blue Light Services, emergency services, police, ambulance, fire, Post Traumatic Stress Disorder, PTSD, anxiety, depression, mental health, sleep disturbances, well-being, mutual recovery, positive mental health, music therapy, group therapy, pilot programme evaluation, thematic analysis, mixed methods, case study, group drumming, music

DEFINITIONS & ABBREVIATIONS:

Attunement	How a therapist "tunes in" to clients needs, works to understand their thoughts, and responds to how they are feeling and behaving
Entrainment	The synchronization (e.g. foot tapping) of organisms to an external perceived rhythm such as music and dance.
Blue Light Services/ First Responders	A person with specialized training who is among the first to arrive and provide assistance at the scene of an emergency, such as an accident, natural disaster, or terrorism. First responders typically include law enforcement officers, paramedics, EMT's and fire fighters.
Cognitive Behaviour Therapy (CBT)	A talk therapy that focuses on challenging and changing cognitive distortions and behaviours, improving emotional regulation, and the development of personal coping strategies
Cognitive Processing Therapy (CPT)	A talk therapy that focuses on helping people "stuck" in their thoughts about a trauma, helping them address these errors or stuck points by gathering evidence for and against those thoughts.
Dialectic Behaviour Therapy (DBT)	A talk-therapy that focuses on self-acceptance, combining strategies like mindfulness, acceptance, and emotion regulation to challenge and change cognitive distortions and behaviours.
Eye Movement Desensitization and Reprocessing (EMDR)	A psychotherapy method proven to help people recover from trauma and other distressing life experiences, including PTSD, anxiety, depression, and panic disorders.
Music Therapy (MT)	A form of psychotherapy that uses music as its main mode of expression and communication to help improve social interaction, emotional regulation, physical and sensory integration.
Post Traumatic Stress Disorder (PTSD)	An anxiety disorder caused by very stressful, frightening or distressing events. There are a variety of symptoms including flashbacks, nightmares, intrusive thoughts, avoidance, anxiety, and changes in mood, thinking and social interactions.
Prolonged Exposure Therapy (PET)	Teaches individuals how to gain control by facing their negative feelings. It involves talking about their trauma with a provider and doing some of the things they have avoided since the trauma.

Table 1: *Definitions of terminology used in this paper*

INTRODUCTION

In 2019, *Police Care UK* reported that 1 in 5 serving police officers were living with Post Traumatic Stress Disorder (PTSD) or anxiety disorders triggered by traumatic events. Of those officers *without* PTSD, nearly a third still reported experiencing high levels of flashbacks, avoidance, and feeling an exaggerated threat response (symptoms of PTSD) suggesting the negative impact of the work is much more pervasive in everyday policing than originally thought. Almost two-thirds of officers reported experience of fatigue, anxiety or sleep disturbances—especially shift workers—however, they continued to go to work as per usual.

The mental health charity, *Mind*, found equally concerning feedback from their 2021 survey of 1,600 staff and volunteer emergency 'blue light' workers with 1 in 4 (27%) respondents saying they had thought about ending their life. Nearly two-thirds (63%) had considered leaving their position as a direct result of poor mental health or stress. Compared with the general population, these professions have increased risk of mental health and related stress (Skogstad, 2013), yet the stigma still associated with seeking support may deter a lot of people from getting the help they need.

The cost of managing sickness absence across these services is multifaceted. It impacts not only the health and well being of the individual and their family; it impacts police efficiency, morale, and number of 'feet on the beat'. Over 20 years ago, a 1998 Parliamentary Report, identified the financial cost for the Metropolitan Police Service alone as being over £120 million a year in treatment, lost earnings, and care and support; a figure most likely to have increased over the past 20 years. But with the increase of awareness around mental health, there has also been an increase in understanding not only of the causes, but how to effectively support and treat individuals.

POST-TRAUMATIC STRESS DISORDER (PTSD)

The American Psychiatric Association created the post-traumatic stress disorder (PTSD) diagnosis in 1980 sparking a proliferation of research. The strongest evidenced treatments include cognitive-behavioral therapies such as Prolonged Exposure Therapy (PET), Cognitive Processing Therapy (CPT), and Eye Movement Desensitization and Reprocessing (EMDR). A meta-data review found protocols were indistinguishable in terms of effectiveness in treating PTSD (Seidler, 2006). A 2019 Cochrane review suggested couples therapies might also be beneficial for reducing PTSD symptoms, and according to the US National Centre for PTSD, involving clients in the discussion and choice of

treatment option brings about the best results. Another factor repeatedly associated with successful treatment is the quality of the relationship between the therapist and the patient.

Music Therapy and PTSD

Music therapy has a long history as a treatment modality for PTSD, anxiety and trauma-related stress within the military dating back to work with soldiers returning from World War's I and II (AMTA, 2014; Taylor, 1981). In 2014, music therapy was provided as a treatment in 37% of all residential military rehabilitation units in the US (Libby et al. 2014), and studies from the UK (Carr et al, 2012) and Israel (Bensimon, 2008) corroborate that music therapy is an appropriate and effective intervention for this cohort.

Group music therapy is designed to hold and contain members within a supportive structure. By immediately engaging members in the shared physical act of playing, participation and intentional listening is accelerated, and relaxation is promoted through the physical release of tension. The non-verbal nature of music therapy can also help with psychological tasks of stimulating, exploring and expressing a wide range of emotions (Pavlicevic, 2000), providing a different way into self-reflection. Whilst engaging in music performance can evoke heightened emotions, traumatic associations elicited by music have been seen to reduce over the course of therapy (Bensimon et al., 2008). Non-melodic, rhythmic driven, improvisation does not require knowledge of musical notation, making it particularly accessible for a heterogeneous group with varying levels of prior musical experience. Yet despite the research supporting the positive impact of music therapy for individuals with PTSD, funding for these services is not readily accessible.

In order to evaluate the impact and the benefits of group music therapy for Blue Light emergency personnel, a pilot programme was developed to answer the following questions:

1. ***Does group music therapy reduce PTSD symptoms of attendees?***
2. ***Do group participants feel the programme makes a positive difference to their understanding, and management of themselves and their symptoms?***
3. ***Is there a shift in the participants' sense of wellbeing after exposure to the program?***
4. ***What are the main benefits identified by participants with this intervention?***

METHOD

Evaluation Design

A Mixed Methods Case Series (Creswell & Plano-Clark, 2018 p105) was used to examine the impact of the Music Therapy Group intervention. Both quantitative + qualitative data was collected over the course of two pilot programs of twelve sessions each. Data was systematically analyzed separately, and then merged for group review. Amanda Thorpe, Music Therapist at Chroma, and the Occupational Health & Wellbeing Service for the aforementioned police and fire and rescue services designed the evaluation model for this report.

Engaging consenting adults with self-diagnosed PTSD-like symptoms placed this study as 'low/medium risk'. In light of this, procedures were in place for safeguarding participants, participant confidentiality, escalation and onward referrals. Occupational Health screened all participants for immediate /heightened risk and intervention needs before enrolling them in the programme, the therapist received regular supervision, and contact with Occupational Health was maintained throughout the programme.

Participants

Once approval of the *Pilot Programme Proposal* (Appendix 1) was granted by the Forces Joint Wellbeing Board and the Assistant Chief Fire Officers of Surrey and East Sussex, the programme was promoted to all employees, regardless of role, at the five Blue Light organizations.

The *Pilot Programme Information Sheet* (Appendix 2) outlining the nature of the programme, voluntary participation, participant requirements and criteria, confidentiality, risks, benefits, and means of obtaining further information about the study, was distributed to all employees who expressed an interest. Participants were offered a place if they meet the following criteria:

1. *You are generally coping but struggling with some/all of the following symptoms: stress or anxiety; poor quality sleep; nightmares; reoccurring thoughts; flashbacks; anger; difficulty concentrating; negative thoughts.*
2. *You are affected by your symptoms, they are causing you at least some concern, and you want to reduce these.*
3. *You are not currently receiving any of the following treatments: CBT, EMDR, or similar talking therapy or expecting to start any of these during the programme (April–June 2021).*

Informed Consent

Each participant signed an *Informed Consent* form (Appendix 2) agreeing to the pilot programme requirements and processes.

Lottery funding was secured from the Coronavirus Community Support Fund, which is distributed by The National Lottery Community Fund. As such, this pilot scheme was provided at no cost to any of the five Blue Light Services or the participants.

Procedure

The *Blues & Tunes* pilot Programme included participation in twelve 1-hour group music therapy sessions that ran over twelve consecutive weeks between April 10th 2021 and June 30th 2021.

Participants were required to complete a *Clinical Outcomes in Routine Evaluation–Outcome Measure* (CORE-OM) questionnaire in the first and last sessions, an *Outcome Rating Scale* (ORS) at the beginning of each session, and a *Group Session Rating Scale* (GSRS) at the end of each session. In addition to the in-session data collection, participants were invited to fill out the *Patient Health Questionnaire* (*PHQ-9)* and the *Generalised Anxiety Disorder* Assessment (GAD-7) online.

After the fifth session, participants were invited to a 30-minute 1:1 session with the therapist to discuss the therapy and to recalibrate personal goals for the remainder of the program. A final 30-minute 1:1 session was offered to participants after the therapy ended to review their progress and discuss any ongoing recommendations.

Group Outline

Psychodynamic music therapy, Neurologic Music Therapy (NMT) and Dialectical Behaviour Therapy (DBT) techniques informed the group. Each session followed a similar structure and was designed to allow participants to experience, reflect, learn, and transfer strategies into every day life. Timings were flexible and open to variation in response to the needs of the group:

0:00-1:30	ORS *(Evaluation Tool)*
0:02-0:20	Improvisation, drumming drills
0:20-0:30	Verbal reflection
0:30-0:48	Psychoeducation (reactions to stress and trauma)
	Strategies/ techniques (eg: to support distress tolerance, emotional regulation)
0:48-0:58	Mindfulness/Body mapping; Final reflections
0:58-1:00	GSRS *(Evaluation Tool)*

Data Collection & Analysis

Participants were reminded of the data collection protocol and their right to withdraw at any stage of the program. To comply with the Data Protection Act, all collected data was anonymized, aggregated in a Microsoft Excel sheet for analysis, and stored on a password-protected computer.

The CORE-OM (Appendix 3) is a standardized assessment tool that covers domains of *Well-being, Problems, Functioning,* and *Risk*. Responses indicate a level of psychological global distress that is rated from *Healthy* to *Severe*. Pre- and post- intervention scores were used to assess effectiveness of the intervention. The CORE-OM was issued to participants at the beginning of sessions 1 and 12. The CORE-OM was also issued to all participants who had initially signed up but had withdrawn from the programme at the same time via email. Participants who dropped out after starting the programme were also asked to provide feedback (Appendix 7) at the time of withdrawal.

Within sessions, participants completed the Duncan & Millar *Outcome Rating Scale* (ORS) and *Group Session Rating Scale* (GSRS) (Appendix 4). This standardized tool tracks both the clients' progress (overall sense of well-being) from the ORS ratings and the quality of the therapeutic alliance from GSRS ratings. Scores are expected to increase in response to services offered. Out side of sessions, participants were invited to complete the *Patient Health Questionnaire* (PHQ-9), a validated nine-item tool used to monitor the severity of depression and response to treatment, and the *Generalised Anxiety Disorder* (GAD-7) assessment, a validated seven-item instrument that is used to measure or assess the severity of generalised anxiety disorder.

At the end of the group, participants were asked to fill out a custom *End of Programme Survey* (Appendix 5) regarding their experience of the group. This captured both qualitative and quantitative information that was reviewed for common themes.

Limitations

This evaluation is vulnerable to selection bias and does not represent the wider population. All participants had self-selected by agreeing to participate; behaviour and comments may be wholly or partly due to Rosenthal effect (high expectations leading to an increase in performance), and the Hawthorne effect (being observed). It is worth noting that the Hawthorne effect original studies were poor and are open to many interpretations (Izawa, 2011). Whilst not examining gender differences, participants were primarily female.

RESULTS

DEMOGRAPHICS

A total of 14 individuals (9 female, 5 male), aged between 30 and 60 years originally signed up for the Programme in November of 2020 (Figure 1). The majority of participants were from the police force with only one participant from the fire service and one participant from the ambulance service. Diagnoses were unavailable for participants but initial CORE-OM ratings collected from 11 of 14 indicated elevated levels of distress in all participants, with three participants scoring 'Severe' levels of distress (Figure 3).

Between this time and the Programme starting (April 2021), four individuals withdrew. Only one person indicated that this was because they felt 'in a better place'.

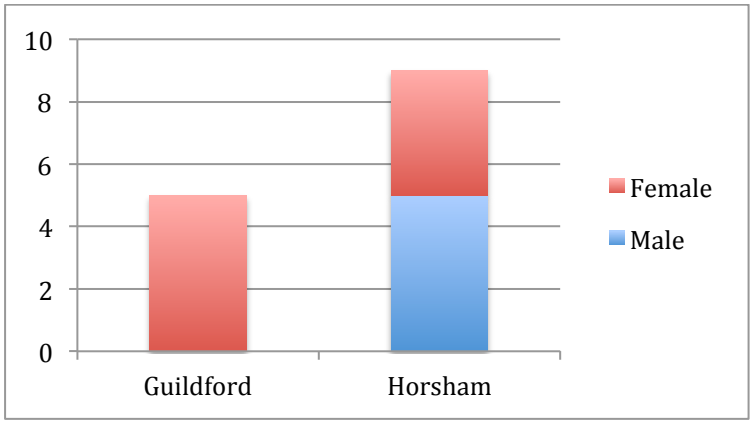

Figure 1: Attendees

DROP OUT

Of the ten participants that started the program, three dropped out within the first three sessions. Reasons for dropping out (Appendix 7) included:

- Group size being so small (exposing); group with co-workers (felt uncomfortable).
- A sense of chaos in the music (overwhelming)
- Not understanding how it would translate to help in every day circumstances.
- Cost/investment: not being able to claim travel/ book hours when attending sessions.
- Location/time/schedule: too busy, too far away, sessions being on a bank holiday.
- Already accessing other therapy. (This was not initially identified due to the Programme originally being scheduled to start in January, then moved out due to covid restrictions)

ATTENDANCE

Seven participants participated throughout the pilot. However, full attendance only occurred on one occasion, in Session 11. Reasons for non-attendance were primarily attributed to two clients who were engaged in shift work. Other issues included work commitments, childcare and a bank holiday.

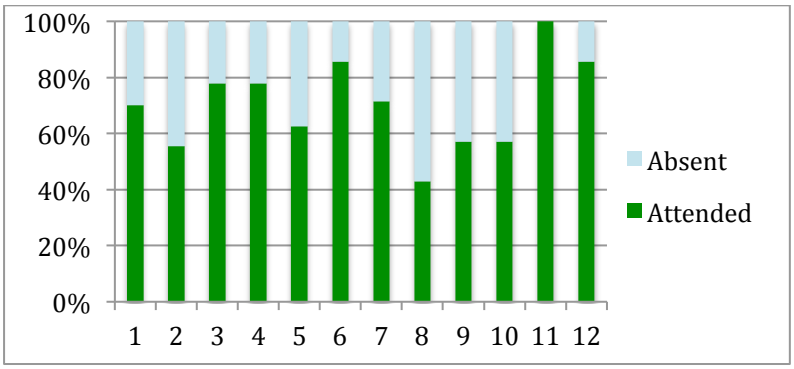

Figure 2: Attendance

CORE-OM PRE/POST SCORES

Of the seven participants that engaged in the program, CORE-OM results were captured from five participants *prior* to starting the program, seven participants in Session 1, and six participants in Session 12 (Figure 3). Scores indicate a decrease in *Levels of Distress* in five participants. One participant identified increased Levels of Distress, and one participant was not at the last session to complete the questionnaire. The slight reductions observed in *pre Programme* and *Session 1* scores could represent a sense of being held through the assignment to therapy and therapy starting.

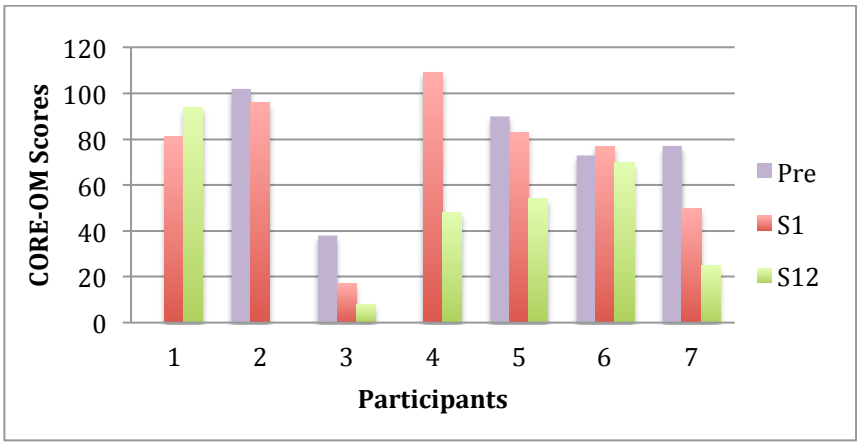

Figure 3: CORE-OM Ratings Pre and Post Therapy

Outcome Rating Scale/Group Session Rating Scale (ORS/GSRS)

Individual ORS/GSRS scores were reviewed collectively for the group. In session 1, both ORS and GRS scores were below the cut off scores (25 and 35 respectively) and above cut off scores in session 12. The dip in the GSRS score in session 4 may be explained by the 'storming' phase of group formation in which members typically push against the group boundaries after the initial group formation and conflict and tension can arise (Tuckerman, 1965). Session 4 was also a particularly difficult session for two participants. After session 5, GRS scores increased indicating a positive therapeutic alliance. The final dip in the ORS score was attributed to increased anxiety around the group ending, and specifically the anniversary of two participants fathers having passed and the Fathers day holiday.

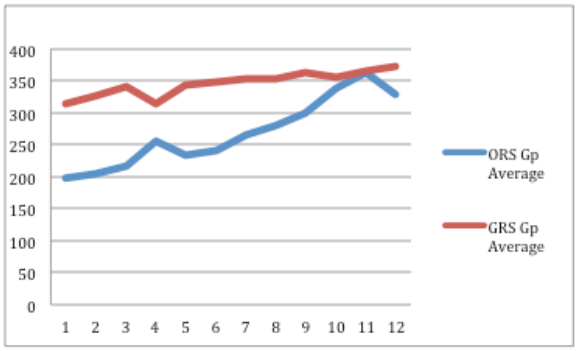

Figure 4: ORS GSRS Group Average

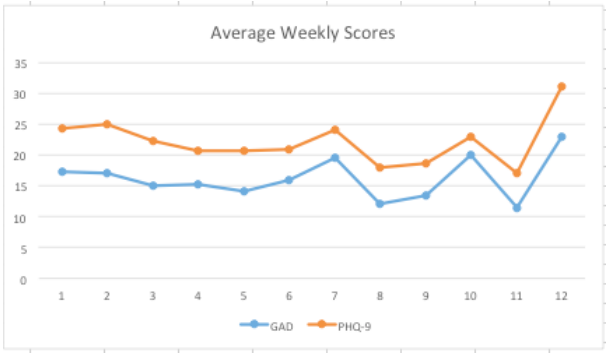

Figure 5: PHQ-9 GAD Group Average

PHQ-9/GAD-7

Participants were asked to complete the PHQ-9 and the GAD-7 weekly so that any in-person bias of surveys collected by the therapist could be balanced (Figure 5). Of the possible 72 PHQ/GAD surveys, only 35 surveys were completed. Response rate to questionnaires from emergency service personnel is notoriously low, so 48% compliance was considered positive.

In alignment with the CORE-OM and ORS/GSRS, at the beginning of the program the PHQ-9 group average score indicated 'Severe Depression' (24) and the GAD score indicated 'Moderately Severe' anxiety (17). At the end of the 12-week program, the PHQ-9 group average had reduced by seven points to 'moderately severe' (17), and the GAD had reduced by six points to moderate (11).

Only one participant filled out the PHQ-9 and GAD survey after the programme had finished. Scores indicated elevated (severe) level of anxiety and depression however, they were still lower than initial

scores. Ratings given in the middle of the programme were even lower, where there may have been a sense of being held and contained by the programme before increased anxiety around the ending.

End of Programme Survey

From the end of Programme survey (Appendix 5), key themes emerged (Appendix 6), around

1) Music: Different pleasure in, and ways of listening to and engaging in music
2) Creativity: Exploration of instruments; Finding their voice
3) Group: Shared experience, different ways of listening and responding to others.
4) Sense of Self: Improved sense of wellbeing, motivation, energy, resilience, self-care, more comfortable in groups
5) Mood: Feeling more positive, happier, engaged, and having fun
6) Reduced anxiety and stress; Learnt strategies and techniques to manage day to day
7) Novelty: Doing something new, outside of comfort zone, concentration and coordination

Results Summary

On concluding the program, 71% of the participants' recorded reduced 'levels of distress' compared to their CORE-OM scores when they signed up for the program.

All participants reported appreciation of the therapy and a change in their stress and coping mechanisms since engaging in the therapy, indicating that they had accessed their desired support and strategies. This was supported in reduced CORE-OM scores in five of seven participants (one score not provided, one score increase) and an increase in both *Outcome Rating Scale* (ORS) and *Group Session Rating Scale* (GSRS) that started 'below cut off' rates at the beginning of therapy, and ended 'above cut off 'at the end of therapy.

Several participants had initially expressed apprehension around music being a core component of therapy. This was based on concerns around their own lack of musicality, and a 'kumbaya' perception of sitting around playing songs, with partners and/or friends making fun of their attendance. There were normal rate of attrition (~30%) before the group started (Long, 2016), and anticipated group attrition within the first four sessions. But over the course of the programme, participants became increasingly confident and comfortable with the use of music, as would be expected, and their perceptions around the therapy and their own experiences changed as a result.

DISCUSSION

Blue Light /emergency service personnel are trained to be hyper vigilant, to look for, and to run into danger, not away from it. This requires the body to be in a heighted state of arousal, with adrenaline and cortisol being released into the body, primed and ready for action. Whilst beneficial for dealing with life-threatening situations, it is imperative that the body also engages in states of rest that are necessary for restorative healthy functioning.

Engagement with group drumming has been shown to provide psychological benefits and to affect underlying biology with noticeable shifts away from a pro-inflammatory towards an anti-inflammatory immune profile (Fancourt et al, 2016). By containing group drumming within a music therapy program, participants are immediately engaged in the benefits of group drumming, but they are also supported through reflection and the sharing of specific strategies and techniques that they can use independently outside of the group.

Avoidant behaviour is a common symptom of PTSD. Musical improvisation demands an active response, not just within the music, but also to the music and utterances made by others (Orth, 2005; Orth & Verburgt, 1998; Volkman, 1993). Despite feeling uncomfortable, resistant, and skeptical at the beginning of the program, each participant demonstrated a significant level of awareness, adaptability and resilience just by showing up. They were all willing to go outside of their comfort zone and to try something unknown. Just the process of doing this is of benefit and should not be overlooked.

Results from the two groups that ran supported the hypothesis that group music therapy can lead to multidimensional enhancement in well-being among police force and emergency services personnel. Self-reported changes from the sessions included increased engagement, concentration, agency, and confidence, which remain key goals in the context of therapy across varied mental health conditions (Adam & Sutker, 2001). Participants' reports on generalization of change in their response to situations outside the programme reinforce this potential suggesting this short programme was enough for a perceived improvement in symptoms. Sustainability of this effect was not part of the study.

As suggested by Pines (2009), "*Group composition is the therapist's first and most enduring contribution to the group, for its membership will determine the outcome of therapy."* When forming this group, participation was based on shared symptoms, therapeutic aims, and timing leaving no member in an isolated position. By incorporating an initial assessment meeting, potential participants

could determine if the approach is something they are comfortable with, and the therapist can also determine if there is anyone who might not be suitable for the group.

Through the twelve weeks, all participants have shared an array of emotions (sadness, anxiety, vulnerability, joy, happiness). Participant comments within sessions suggested improved emotional states including elevated feelings of joy and happiness in the moment; an increased sense of self agency, control, initiation, and choice; a sense of accomplishment and gratification; and increased self awareness. There was an increased sense of meaningful connectedness in group 2 which had more consistent full attendance.

Several participants commented that the session length (1-hour) was too short as they had only just started to relax and get engaged in the process of reflective sharing and the learning of specific skills and strategies when the group was coming to a close. This was also felt by the therapist who allowed a couple of sessions to run over in order to accommodate all participants sharing. Whilst NICE Guidelines support CBT dosage of 8 to 12 sessions, several clients also voiced frustration that the sessions were drawing to a close just as they felt they were starting to benefit from the group. Few studies have been published on the dose-response relationship, and routine settings range between 4 and 26 sessions (4–6 for low intensity guided self-help) (Robinson et al, 2020). There is general consensus that between 13 and 18 sessions of therapy are required for 50% of patients to improve (Hanson 2006). Optimal doses vary according to setting, clinical population and outcome measures, but taking this into consideration, the group intervention may benefit from being longer in both session duration (1.5 hours) and number of sessions (possibly 18). Dosage and longevity of effect could be explored in further programs.

In light of *Police Care UK* research indicating shift work as a contributing factor to heightened anxiety and sleep disturbance, the shift patterns that affected group 1 should be considered. Sessions could be offered at different times to support shift working patterns, however, this would only accommodate employees on the same shift. Alternatively, employees who are approved to attend these types of programs could be temporarily moved off shift work for the duration of therapy.

The group incorporated free improvisation, the learning of some simple drumming techniques, blended with health and wellness education and interactive improvised music making. Over the course of the Programme there was an increased sense of camaraderie, enjoyment, and playfulness that developed.

The sessions in and of themselves provided a small reprieve from the daily experiences of stress, pain, guilt, and trauma, and the meditations provided a feeling of peace, even if only for a little while.

Whilst the Programme can be considered beneficial overall, and the therapy process may uncover significant issues that have formerly been supressed or managed in different ways. Consideration must be given to providing appropriate referral pathways or extended support to clients with on-going needs. According to NICE guidelines, "*during transitions between services for people with PTSD who need ongoing care, the referring team should not discharge the person before another team has accepted the referral*" (2018). As this was a pilot Programme and participants did not have formal diagnosis of PTSD, this intervention ended as per the Programme outline. However, each participant received the option for an individual therapy session and an end of therapy report with forward recommendations that was shared with the participant and their GP (where necessary).

The *Police Care UK* and *Mind* reports as referenced in the Introduction, have identified significant PTSD symptoms and other significant stressors at 20+% of serving police officers. This programme was offered to more than 10,000 Blue Light Service employees and the uptake was less than 0.05%. Reasons for nominal uptake may be attributed to several different factors, for example: national/regional variances, pre-existing Occupational Health involvement and support with the staff, a group/public forum, and/or preconceptions around the use of music (eg: can't play an instrument, not musical, kumbaya). All expressed some surprise in their experience of the group, especially those who were particularly skeptical about the approach at the beginning. This could be explored further in order to find alternative ways of promoting and offering the group to staff.

CONCLUSION

This report evaluates the effectiveness of two *Blues & Tunes* pilot programmes run in 2021 for first responders who self identified as having PTSD type symptoms and were willing to participate in the pilot program.

Directional results indicated that the *Blues & Tunes* music therapy pilot programme provided an effective therapy intervention that reduced PTSD related symptoms of attendees. Group participants felt that the programme made a positive difference to their understanding and management of themselves and their symptoms. All participants commented on a shift in their sense of well being after exposure to the programme and on having gained tools that they could take forward. This was supported by the data. The main benefits identified by participants were the use of drumming and guided meditation. There was a significant level of surprise amongst participants regarding the difference in their pre-conceived ideas of what music therapy would be, and what they actually experienced, suggesting a lack of awareness and understanding of the intervention modality.

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Amanda Thorpe, Chroma

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https://theconversation.com/paramedics-need-more-support-to-deal-with-daily-trauma-97315

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Policing: The Job & The life Survey 2018' (*University of Cambridge*) <https://www.cam.ac.uk/policeptsd> https://www.policingtrauma.sociology.cam.ac.uk/survey accessed 8 July 2021.

APPENDICES

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Pilot Program
Evaluating the effectiveness of Group Music Therapy for reducing PTSD-like symptoms in Front Line Workers

14th October 2020

Overview

Project duration:	6 months (26 weeks)
Locations:	Lewis and Guildford
Number of Groups:	4 (2 in each location)
Group Format:	Closed
Participants:	6 per group (minimum participants 3) + the music therapist
Frequency:	Weekly
Clinical duration:	1hour x12 sessions
Set-up/break down:	30mins
Clinical notes:	30mins

0:00-1:30	Survey – ORS *(see Evaluation Tools below)*
0:02-0:20	Drumming - Shared improvisation, drills, exercises
0:20-0:30	Verbal reflection
0:30-0:45	Associative Mood & Memory Training (AMMT)* exercises
0:45-0:55	Mindfulness/Body mapping; Final reflections
0:55-1:00	Survey - SRS *(see Evaluation Tools below)*

* **Associative Mood & Memory Training (AMMT)**
AMMT is one of the Neurologic Music Therapy certified interventions linked to cognitive affects. Musical mood induction techniques are used a) to produce mood-congruent mood states to facilitate memory recall, b) to access associative mood and memory neural networks to direct specific memory access, and c) to enhance learning and memory function through inducing positive emotional states in the learning and recall process, via a music framework which facilitates and links the mood, memory and emotional networks.

Evaluation Tools
The purpose of the following tools will be explained to the clients and their active consent and participation will be solicited prior to the formal initiation of the intervention.

Clinical Outcomes & Routine Evaluation (CORE)
Participants will be asked to complete the CORE-34 seven days prior to their first session. The CORE 34 is used to capture a range of 'core' concerns that present in therapy settings, including;

- Subjective wellbeing (4 items)
- Problems & Symptoms (12 items)
- Functioning (12 items)
- Risk of harm to self or other (6 items)

This tool will be issued one week prior to intervention commencing and once again, one week after treatment has completed. Statements include positively/negatively framed items, and high/low-intensity items that the client is asked to consider, then rate how often they have felt like this over the past week.

Outcome Rating Scale/ Session Rating Scale (ORS/SRS)
The validated ORS/SRS tool (Duncan & Miller, 2000) is a brief self-report instrument that takes less that a minute to complete at the beginning and the end of each session.

The ORS is designed to assess changes in client functioning widely considered valid indicators of progress in treatment: Individual functioning, interpersonal relationships and social role performance (work adjustment/quality of life). The SRS is also a brief four item, self-report instrument that takes less that a minute to complete. Items on the scale assess the quality of the relational bond as well as the degree of agreement between the client and therapist on the goals, methods and overall approach of therapy.

https://www.scottdmiller.com/wp-content/uploads/documents/SessionRatingScale-JBTv3n1.pdf

Schedule:
Due to the requirement to complete the project within six months, all four groups will run simultaneously from w/c 11th January 2021. Mondays and Saturdays have been suggested as possible sessional days. The project aims to follow this schedule;

	January			February				March					April				May
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	11.01.21	18.01.21	25.01.21	01.02.21	08.02.21	15.02.21	22.02.21	01.03.21	08.03.21	15.03.21	22.02.21	29.03.21	05.04.21	12.04.21	19.04.21	26.04.21	03.05.21
Group 1	Set up	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	Project evaluation and write up			
Group 2	Set up	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12				
Group 3	Set up	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12				
Group 4	Set up	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12				

Referrals
There will be a single point of referral, via email which Dan Gillard will set up and operate. He will also be responsible for the initial filtering of referrals to ensure that only those referrals suitable for the group program are selected, and that all unselected referrals will get signposted to other appropriate services. The GAD7 and the PHQ9 assessments will be used at point of referral to enable initial filtering.

Once referrals have been selected for entry into the program, c. 1st December 2020, each participant will be asked to complete the GAD and the PHQ9 on a weekly basis until the two weeks after the end of the program, completing their final assessments w/c 19.04.21.

Primary program outcomes:
Our treatment model and the associated music therapy research that underpins it, highlights a number of outcomes which may be of relevance and benefit to participants. These include;

- **Sleep**: improving quality and restorative function of sleep (Lowry 2020)
- **Self-regulation**: Improving self-regulation of difficult emotional states (Lightstone et al 2015)
- **Symptoms**: Achieving a non-intimidating access to traumatic memories, facilitating an outlet for rage and regaining a sense of self-control, thereby reducing the impact of PTSD (Bensimon 2008).
- **Social relationships**: Restoring feelings of belonging through group drumming (Bensimon 2008)

Research into music therapy (Carr et al., 2012), also found greater reductions in PTSD-like symptoms compared to cognitive behavioural therapy. We are interested in whether this pilot program will also show similar reductions.

Research background:
The use of music as a treatment modality for PTSD-like symptoms, anxiety and trauma-related stress is well understood and evidenced in research and publications within the ex-military personnel cohort. Studies from the UK (Carr et al, 2012) and Israel (Bensimon, 2008) among others suggest that music therapy is an appropriate and effective intervention for this cohort. Music therapy is provided as a treatment in 37% of all residential military rehabilitation units in the US (Libby et al. 2014). In the UK, the use of music therapy as a treatment modality is not common within blue-light emergency service personal despite the high incidence of PTSD-like symptoms reported.

Studies that highlight the issues of PTSD and related symptoms in emergency workers include;

National Police Wellbeing national survey, January 2020

- 45% of Police Officers frequently report having less than 6 hours of sleep
- Shift workers are more likely to experience poor sleep quality, lower levels of emotional energy and job satisfaction
- 67% of officers and 50% of staff report feeling symptoms of PTSD

Police Care UK 'The job and the life' survey 2018 – published October 2020

- 1 in 5 frontline Police Officers suffer from PTSD

GMB survey of Ambulance staff in 2018

- 39% had experienced PTSD during their service

Mind Blue Light survey 2019

- 60% of Fire services staff and volunteers had experienced mental health problems.
- The most commonly reported mental health problems experienced by fire service personnel were depression (39.3%), anxiety (39.1%) and PTSD (18.1%).
- The percentage of fire service staff reporting experience of PTSD was the second highest across all of the emergency services.

Informing our treatment model:
Music can engage people in a safe and motivating way and is universal to all cultures (Blacking, 1973; Pavlicevic, 1997) and lifelong. Music can also be highly evocative, stimulating strong emotional and psychological reactions, e.g., catharsis

The non-verbal nature of music therapy can help with psychological tasks such as exploring and expressing a wide range of emotions; this is partly due to the emotional triggering that can occur in response to music (Pavlicevic, 2000). Music therapy offers a means for traumatized people to relate to their healthy identity (Orth, 2005; Pavlicevic, 2002). Above all, it may encourage traumatized people to engage in treatment more than with current NICE-recommended treatments (Gold, Solli, Kruger, & Lie, 2009). A UK study showed that participants in a music therapy intervention had greater reduction in their PTSD symptoms than those receiving CBT (Carr et al, 2012).

Group music therapy is a social process that addresses the avoidant behaviour of PTSD sufferers. Musical improvisation demands an active response, not just within the music, but to the music and utterances made by others (Orth, 2005; Orth & Verburgt, 1998; Volkman, 1993). When dealing with intrusive and arousal symptoms, music therapists mainly focus on reducing the emotional stress and anxiety level, channeling or redirecting emotions via healthy outlets, and developing relaxation or diversion. (Orth 2004)

Music therapists have observed the potential for music to evoke traumatic memories providing access for discussion and processing of the past (Bensimon et al., 2008; Orth, 2001). Bensimon et al. (2008) found traumatic associations elicited by music reduced over the course of therapy. The specific use of drumming enhances group participation, reinforces intentional listening and promotes relaxation through physical release of tension. To initiate selective, divided, and alternating attention, studies show a Neurologic Music Therapy technique called Music Attention Control Training (MACT) can be used effectively (Vaudreuil et al, 2020), along with Musical Mnemonics Training (MMT) which uses verbal phrases to reinforce rhythms participants play on the drums.

Privacy and confidentiality
This pilot program will be delivered with client privacy and confidentiality at its core. Music therapists work under the auspices of the Health and Care Professions Council, and follow their Standards of Proficiency at all times, which includes protecting client privacy and confidentiality. These standards include;

- being aware that the concepts of confidentiality and informed consent extend to illustrative records such as video and audio recordings, paintings, digital images and other art work

- being aware of the limits of the concept of confidentiality

- being able to recognise and respond appropriately to situations where it is necessary to share information to safeguard service users or the wider public

- understanding the principles of information governance and be aware of the safe and effective use of health and social care information

To read the full Standards of Proficiency please click here:
https://www.hcpc-uk.org/standards/standards-of-proficiency/arts-therapists/

GDPR
Chroma adheres to all GDPR legislation and is registered with the Information Commissioner's Office (Registration number: ZA232443).

Our case notes and other information relating to the people we work with in therapy are stored via the Iinsight Case Management system (www.iinsight.biz), which is fully compliant with GDPR regulations.

Our safeguarding system is MyConcern (www.myconcern.co.uk) which is also fully compliant with GDPR regulations.

Our therapists are all registered with the Information Commissioner's Office, are regulated by the Health and Care Professions Council and all members of the British Association for Music Therapy and follow their code of ethics.

Background checks
Every member of staff, associate and administrator within Chroma has an online enhanced DBS certificate which is appropriate and enables them to carry out their work. Chroma has the full range of public liability, malpractice insurance and employees insurance fully complying with all aspects of health, safety and well-being at work legislation.

In addition, all therapists have public liability and malpractice insurance, safeguarding training for children and adults (level three) and data protection training. Ongoing training records and compliance with mandatory training such as safeguarding are kept within each therapist's own HR file. Copies of the music therapist's Quality Assurance (QA) document will be shared with Dan Gillard from Occupational Health.

The music therapist
Amanda Thorpe has a degree in Psychology from UCL, trained as a Music Therapist at the Guildhall School of Music & Drama, and is a fellow of the Neurologic Music Therapy Institute. Alongside a professional career in advertising, she has used performance and songwriting to facilitate wellbeing and cognitive functioning for over 20 years as a community musician and special needs tutor in New York City.

Today, Amanda works with Chroma providing client-centered music therapy heavily informed by psychodynamic and neurologic practice modalities to address both functional and emotional challenges and to improve her clients' overall sense of wellbeing. She is a strong advocate of evidence-based practice and has led the development of outcomes-based practice for several of her clients. She has worked in a range of settings including the Bronx Psychiatric Hospital, South West London & St Georges Hospital, Royal Hospital Chelsea, Home of the Chelsea Pensioners, and the Royal Hospital for Neuro-Disability leading groups and individual sessions to support a range of issues including mental health and brain injury. She has worked with Chroma since 2017.

Clinical supervision
Clinical supervision is a mandatory requirement for all music therapy services and therapists. For this project clinical supervision will be carried out by Chroma's Head of Referrals Kate Cropper. Supervision is a confidential series of conversations between the music therapist and the supervisor about their work to ensure best practice and the best outcomes possible for the participants.

Instruments
Each group will have access to a range of musical instruments specifically chosen to facilitate the program. These have also been chosen with COVID19 in mind, and adhere to infection control assessments. The instruments provided by Chroma to each group include;

- 7 Djembe drums (one per participant)
- 7 sets of hand-held percussion & drum sticks and beaters (one set per participant)
- A range of tuned percussion, such as xylophones

To compile with infection control, all instruments will be cleaned and made safe for use after each session.

COVID19

To ensure this program compiles with relevant COVID19 guidelines and restrictions, the following measures will be put in place;

- Sessions will take place in a large room where social distancing is possible
- Chairs will be placed compliant to social distancing rules
- PPE (face masks, gloves) will be on hand for all participants and music therapist should they require it
- Shared instruments (tuned percussion) will only be moved by the music therapist. Participants will play these instruments using their own beaters or drum sticks
- All instruments will be cleaned and made safe for use after each session
- The instrumental use of the human voice will be allowed, but only within a socially distant context

****14th Oct 2020**

In recent days the Government has implemented the 3 tier system for Covid19 transmission reduction. The project team believe that unless Surrey and/or Sussex enter the "Very High" tier of measures, this project should continue as it is a healthcare intervention, based on an occupational health assessment, delivered by an Allied Health Professional.

•●•

Blues and Tunes

OCCUPATIONAL HEALTH & WELLBEING SERVICE
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BLUES & TUNES

Pilot Program: Evaluating the effectiveness of Group Music Therapy for reducing PTSD-like symptoms in Front Line Workers

Music Therapy is an Allied Healthcare Professions (AHPs) recognized by the Health Care Professions Council (HCPC) in law https://www.england.nhs.uk/ahp/role/. Music therapy is used in the treatment of PTSD and there is significant research regarding its effectiveness an intervention for PTSD in the military. This pilot program has been developed to assess the value of music therapy as a treatment for Front Line workers with symptoms of PTSD. We will run four music therapy groups of 4 to 6 people, two in Surrey and two in Sussex.

Criteria for Participants

1. You are generally coping but struggling with some/all of the following symptoms: stress or anxiety; poor quality sleep; nightmares; reoccurring thoughts; flashbacks; anger; difficulty concentrating; negative thoughts.
2. You are affected by your symptoms, they have to be causing you at least some concern and you want to reduce these.
3. You are not currently receiving any of the following treatments; CBT, EMDR, or similar, talking therapy or expecting to start any of these during the programme: April – June.
4. As this is a research programme we hope you will commit to the full 12 sessions.

Please let us know if you have received any therapies within the last 6 months, or if you are taking medication for symptoms. NB: This does not exclude you from taking part but is helpful for us to know.

Programme Outline

Participants will receive twelve one-hour sessions of group music therapy, delivered by an experienced qualified Music Therapist. Please choose your preferred location by placing an X in the box below:

Location	Start Date	Time	Room	Group Preference
Horsham Police Station Sussex, RH12 2DJ	Group 1 **Monday's** commencing 12th April for 12 weeks	**11:00–12:00**	Large Conference Room	**Full**
Horsham Police Station Sussex, RH12 2DJ	Group 2 **Monday's** commencing 12th April for 12 weeks	**12:30–13:30**	Large Conference Room	

Surrey Police HQ Guildford Mount Browne Guildford, GU1 9PE	Group 3 **Saturday's** commencing 10th April for 12 weeks	**11:00–12:00**	Class Room 6 Building B	
Surrey Police HQ Guildford Mount Browne Guildford, GU1 9PE	Group 4 **Saturday's** commencing 10th April for 12 weeks	**12:30–13:30**	Class Room 6 Building B	

A working collaboration with Chroma, the UK's largest provider of Music, Art and Drama Therapy services, the Blue Light Symphony Orchestra, Surrey Police, Sussex Police, Surrey Fire & Rescue Service and East Sussex Fire & Rescue Service is now established. The four parties are happy to be part of Music Therapy for treatment for PTSD; Blues and Tunes. This is a pilot scheme and at no cost to any of the four Blue Light Services at this stage. Lottery funding has been secured from the Coronavirus Community Support Fund, which is distributed by The National Lottery Community Fund.

BLUE LIGHT SYMPHONY ORCHESTRA

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Blues and Tunes

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Application Form

Privacy statement: Your application and associated documents such as questionnaires will be held by the Occupational Health Department. When the programme is completed these documents will be destroyed. The therapist running the sessions will also ask you to complete questionnaires throughout the programme. Please see the Information Sheet regarding the storage of data

First name	Last name	mobile	email address where you can receive confidential questionnaires	Location that you will be able to attend, or either

In completing this application, you consent to your application being assessed by occupational health and questionnaires being assessed by the therapist, and statistical information being used as part of analysis of the programme. You confirm that you fit the criteria above and will inform the therapist if this changes.	Yes	No

If the programme is oversubscribed would you like to be placed on a waiting list?	Yes	No

If the programme is oversubscribed would you be willing to be part of the control group? (The control group is important to enable another level of evaluation for the programme.) Individuals in the control group will be asked to complete questionnaires in parallel with the programme. If you are in the control group you can still remain on the waiting list and be able to join if a space becomes available within the first three weeks.	Yes	No

First name:	Last name:
Signature:	Date:

Please password protect this document with your initials in capitals and a 3 digit number and text the password to M: 07977 425529 and return this completed CORE-OM (below) questionnaire to:

!Musictherapyconfidental (Surrey) Musictherapyconfidental@surrey.pnn.police.uk

Musictherapyconfidential@surrey.pnn.police.uk Musictherapyconfidential@shdc.police.uk

As we transition to Windows 10 our email addresses are also transitioning.

•••

For analysis please complete:

Gender	Male	Female	Self-description	Prefer not to say

Age	16 – 24	25 - 34	35 – 44	45 – 54	Over 55	Prefer not to say

Blues and Tunes

OCCUPATIONAL HEALTH & WELLBEING SERVICE
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CORE OM. IMPORTANT – PLEASE READ THIS FIRST

Please read each statement and think how often you have felt this way over the last week. Tick the box closest to this.

	Over the last week…	Not at all	Only occasionally	Some-times	Often	Most or all the time
1	I have felt terribly alone and isolated					
2	I have felt tense, anxious or nervous					
3	I have felt I have someone to turn to for support when needed					
4	I have felt okay about myself					
5	I have felt totally lacking in energy and enthusiasm					
6	I have been physically violent to others					
7	I have felt able to cope when things go wrong					
8	I have been troubled by aches, pains or other physical problems					
9	I have thought of hurting myself					
10	Talking to people has felt too much for me					
11	Tension and anxiety have prevented me doing important things					
12	I have been happy with the things I have done					
13	I have been disturbed by unwanted thoughts and feelings					
14	I have felt like crying					
15	I have felt panic or terror					
16	I made plans to end my life					
17	I have felt overwhelmed by my problems					
18	I have had difficulty getting to sleep or staying asleep					
19	I have felt warmth or affection for someone					
20	My problems have been impossible to put to one side					
21	I have been able to do most things I needed to					
22	I have threatened or intimidated another person					
23	I have felt despairing of hapless					
24	I thought it would be better if I were dead					
25	I have felt criticised by other people					
26	I have thought I have no friends					
27	I have felt unhappy					
28	Unwanted images or memories have been distressing me					
29	I have been irritable when with other people					
30	I have thought I am to blame for my problems and difficulties					
31	I have felt optimistic about the future					
32	I have achieved the things I wanted to					
33	I have felt humiliated or shamed by other people					
34	I have hurt myself or taken dangerous risks with my health					

BLUE LIGHT SYMPHONY ORCHESTRA

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Participant Informed Consent

Pilot Program: Evaluating the effectiveness of Group Music Therapy for reducing PTSD-like symptoms in Front Line Workers

Thank you for agreeing to take part in our pilot program. In order to evaluate the effectiveness of the program, we will be conducting some research. This involves the collection of data in the form of questionnaires, before and after the program. We will also be gathering additional on-going information from participants throughout the program. The person organising the research must explain the project to you and you should have read any accompanying information sheet before you complete this form.

If you have any questions arising from the *Information Sheet* or the explanation given to you, please ask the researcher for more information before you decide whether to participate. You will be given a copy of this Consent Form to keep and refer to at any time.

- I understand that if I decide at any time during the research that I no longer wish to participate in this project, I can notify the researchers involved and withdraw from it immediately without giving any reason. Furthermore, I understand that if I so choose, I will be able to withdraw my data prior to July 14th 2021, as stated on Information Sheet.
- I consent to the processing of my personal information for the purposes explained to me. I understand that such information will be treated in accordance with the terms of the Data Protection Act 1998.
- I understand that information submitted will be published within a report and I can request a copy.
- I understand that confidentiality and anonymity will be maintained and it will not be possible to identify me from reading the publication.

Participant's Statement:

I _____ *(full name, please print*) agree that the research project named above has been explained to me to my satisfaction and I agree to take part in the project. I have read the agreements outlined above and the Information Sheet about the project, and understand what the research involves.

Participant signature: _____

Date: _____

Researcher signature: _____

Date: _____

Blues and Tunes

OCCUPATIONAL HEALTH & WELLBEING SERVICE
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Participant Information Sheet

Pilot Program: Evaluating the effectiveness of Group Music Therapy for reducing PTSD-like symptoms in Front Line Workers

Thank you for participating in our *Blues & Tunes* program. Please read the following information carefully and if you have any questions, please speak to the Project Lead. At a preparatory meeting, we will introduce you to the *Blues & Tunes* Group Music Therapy model that you will be exposed to during this program. We can discuss anything that is not clear and address any questions you may have. You should only participate if you want to; choosing not to take part will not disadvantage you in any way.

Aims of the program

- To evaluate music therapy group work as a viable intervention to offer front line workers.
- To evaluate the effectiveness of music therapy in reducing PTSD like symptoms in front line workers.
- To evaluate the self-reported emotional well-being and resilience of front line workers during the program.

How will the program be carried out?

You will be invited to attend 12 x 1-hour sessions over the course of 12 weeks (sessions will be held on 12 continuous weeks including Bank Holiday weekends). Sessions will follow a similar, but variable format consist of a range of activities including collecting drumming, musical improvisation, reflection, and mindfulness.

- *Indication of Interest/Initial Assessment:* You will be asked to complete and submit and application form
- *Data Capture:* You will be asked to complete and submit:
    - CORE-OM questionnaire one week before the group starts and one week after the group ends
    - GAD & PHQ9 forms weekly
    - ORS/SRS questionnaire within each session.
- *B&T Program:* 1 hour closed group
    - A 'closed group' is a group that runs for a set period of time with the same members. Once the group starts, no new members will join the group.
- *Locations:*
    - Horsham Police Station Sussex, RH12 2DJ
    - Surrey Police HQ Guildford, GU1 9PE
- *Pre/Post Survey:* You will be asked to complete a CORE 34 to evaluate your current symptoms. You will also be asked to complete the Duncan Miller GRS at the start and end of each session

Who else is being recruited?

- There will be a maximum number of 24 participants exposed to the B&T program
- There will be a maximum number of 24 participants used as a control group.

Board Approval

- The pilot program proposal has be reviewed and approved by the *Forces Joint Wellbeing Board* and the Assistant Chief Fire Officers at Surrey and East Sussex.

Are there any risks?

- A fully qualified and experienced Music Therapist will lead the Music Therapy groups. A Music Therapist is trained to determine appropriate interventions and techniques to support resilience and recover.
- Due to the nature of this work, you may feel tired after the session. This is normal. Journaling has been shown to be an effective way of processing your experience and you may find this beneficial.
- Should you have any concerns after any of the sessions, the Music Therapist is available for you to speak with.
- The Occupational Health team will remain available to you if you have any concerns.

BLUE LIGHT SYMPHONY ORCHESTRA

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Possible benefits

- There is no monetary compensation for participating in this program/research.

Arrangements for ensuring anonymity and confidentiality

Attendance

- Group participants agree to respect the confidentiality others and of the information shared within the group. *What is shared in the group stays in the group*.
- You will be called by your first name only in the group.
- You may bring a change of clothing for the group so that you are not in uniform. Please allow time to change that is outside of actual group time.

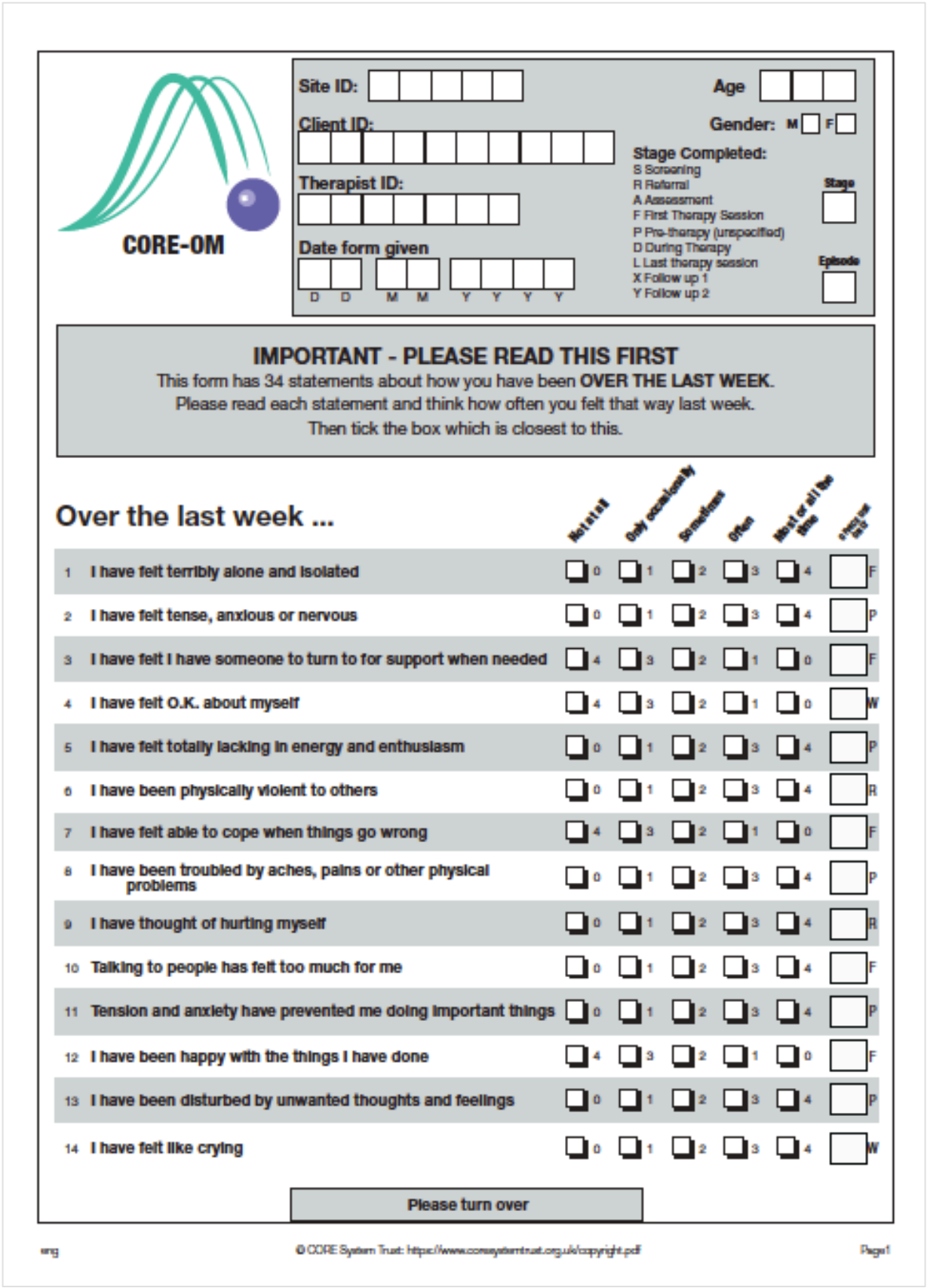
Data

- To ensure compliance with the Data Protection Act, all data will be treated confidentially.
- Data source materials will be stored securely at Surrey Police Headquarters in a secure file that is only accessible by the Head of OHWS
- Data source materials will also be stored in a secure file held by Chroma for audit requirements and to complete the analysis of the programme.
- All data will be destroyed 12 months after the programme is completed.
- Participants will be annoymized in Case studies and/or reports written up about the work
- You may withdraw your data from the project at any time up until July 14th, 2021.

How will the research outcomes be disseminated to participants?

- The results of the study will be written up in a project report and made available to all participants, on request.
- A copy of the *Blues & Tunes Pilot Program Report* will be held at Surrey Police Headquarters and Chroma.

APPENDIX 3: CORE-OM



CORE-OM

Site ID: Age

Client ID: Gender: M F

Therapist ID:

Date form given D D M M Y Y Y Y

Stage Completed:
S Screening
R Referral
A Assessment
F First Therapy Session
P Pre-therapy (unspecified)
D During Therapy
L Last therapy session
X Follow up 1
Y Follow up 2

Stage

Episode

IMPORTANT - PLEASE READ THIS FIRST

This form has 34 statements about how you have been **OVER THE LAST WEEK.**
Please read each statement and think how often you felt that way last week.
Then tick the box which is closest to this.

Over the last week ...	Not at all	Only occasionally	Sometimes	Often	Most or all the time	
1 I have felt terribly alone and isolated	0	1	2	3	4	F
2 I have felt tense, anxious or nervous	0	1	2	3	4	P
3 I have felt I have someone to turn to for support when needed	4	3	2	1	0	F
4 I have felt O.K. about myself	4	3	2	1	0	W
5 I have felt totally lacking in energy and enthusiasm	0	1	2	3	4	P
6 I have been physically violent to others	0	1	2	3	4	R
7 I have felt able to cope when things go wrong	4	3	2	1	0	F
8 I have been troubled by aches, pains or other physical problems	0	1	2	3	4	P
9 I have thought of hurting myself	0	1	2	3	4	R
10 Talking to people has felt too much for me	0	1	2	3	4	F
11 Tension and anxiety have prevented me doing important things	0	1	2	3	4	P
12 I have been happy with the things I have done	4	3	2	1	0	F
13 I have been disturbed by unwanted thoughts and feelings	0	1	2	3	4	P
14 I have felt like crying	0	1	2	3	4	W

Please turn over

eng

Over the last week ...

		Not at all	Only occasionally	Sometimes	Often	Most or all the time	enter score here	
15	I have felt panic or terror	0	1	2	3	4		P
16	I made plans to end my life	0	1	2	3	4		R
17	I have felt overwhelmed by my problems	0	1	2	3	4		W
18	I have had difficulty getting to sleep or staying asleep	0	1	2	3	4		P
19	I have felt warmth or affection for someone	4	3	2	1	0		F
20	My problems have been impossible to put to one side	0	1	2	3	4		P
21	I have been able to do most things I needed to	4	3	2	1	0		F
22	I have threatened or intimidated another person	0	1	2	3	4		R
23	I have felt despairing or hopeless	0	1	2	3	4		P
24	I have thought it would be better if I were dead	0	1	2	3	4		R
25	I have felt criticised by other people	0	1	2	3	4		F
26	I have thought I have no friends	0	1	2	3	4		F
27	I have felt unhappy	0	1	2	3	4		P
28	Unwanted images or memories have been distressing me	0	1	2	3	4		P
29	I have been irritable when with other people	0	1	2	3	4		F
30	I have thought I am to blame for my problems and difficulties	0	1	2	3	4		P
31	I have felt optimistic about my future	4	3	2	1	0		W
32	I have achieved the things I wanted to	4	3	2	1	0		F
33	I have felt humiliated or shamed by other people	0	1	2	3	4		F
34	I have hurt myself physically or taken dangerous risks with my health	0	1	2	3	4		R

THANK YOU FOR YOUR TIME IN COMPLETING THIS QUESTIONNAIRE

	(W)	(P)	(F)	(R)	All items	All minus R
Total Scores						
Mean Scores (Total score for each dimension divided by number of items completed in that dimension)						

APPENDIX 4: OSR/GSRS

Outcome Rating Scale (ORS)

Name: _____ Age (Years): _____ Sex: ❑ M ❑ F

Session #: _____ Date:_____

Who is filling out this form? Please check one: ❑ Self ❑ Other

If other, what is your relationship to this person? _____

Looking back over the last week, including today, help us understand how you have been feeling by rating how well you have been doing in the following areas of your life, where marks to the left represent low levels and marks to the right indicate high levels. *If you are filling out this form for another person, please fill out according to how you think he or she is doing.*

Attention clinician: To insure scoring accuracy, print out the measure to insure the item lines are 10 centimeters in length. Alter the form until the lines print to the correct length, then erase this message.

Individually
(Personal well-being)

|----------|

Interpersonally
(Family, close relationships)

|----------|

Socially
(Work, school, friendships)

|----------|

Overall
(General sense of well-being)

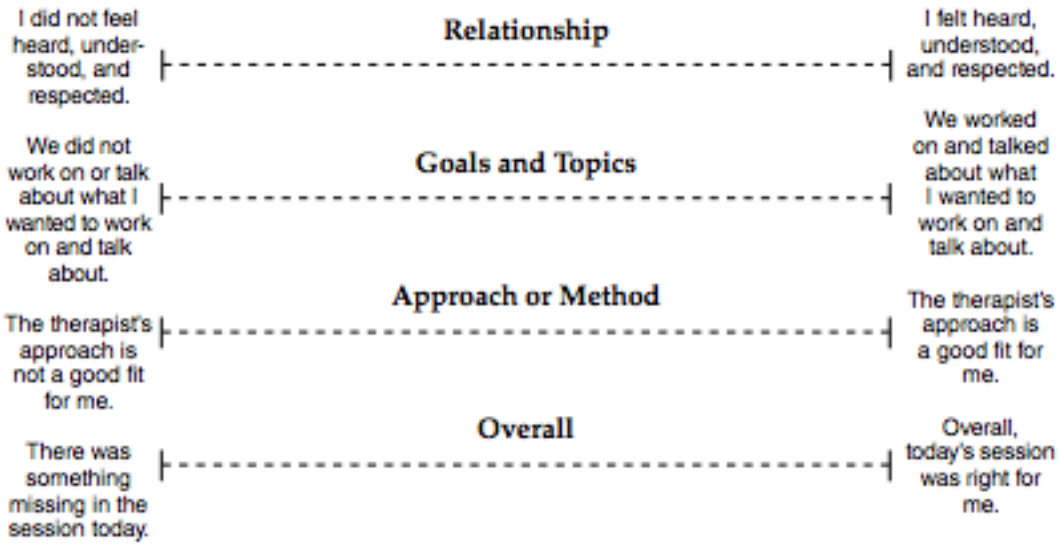
|----------|

Session Rating Scale (SRS)

Name: _____ Age (Years): _____ Sex: ❑ M ❑ F

ID #:_____ Session #: _____ Date:_____

Please rate today's session by placing a mark on the line nearest to the description that best fits your experience.



Participant Programme Evaluation Form

BLUES & TUNES PILOT PROGRAMME: Evaluating the effectiveness of Group Music Therapy for reducing PTSD-like symptoms in Front Line Workers. Your feedback matters to us. Using the survey below, please respond to each question. There is space below for additional comments. If you run out of space, please feel free to write on the back of this form.

General wellbeing-evaluation:

1. On a scale of 1 to 10, how would you rate your general wellbeing?

Very bad _____ Very good

0 1 2 3 4 5 6 7 8 9 10

Comments:

2. During the past few weeks, how often have you felt happy?

Not at all _____ All the time

0 1 2 3 4 5 6 7 8 9 10

Comments:

3. Have you noticed any difference in the way you think about life recently? If so, what?

4. In the past month, how often did you feel good at managing the responsibilities of daily life?

Not at all _____ All the time

0 1 2 3 4 5 6 7 8 9 10

Comments:

5. Imagine you had to describe yourself to someone that just met you, what would you say?

6. Over the past three months, has the quality of your sleep improved?

Not at all _____ All the time

0 1 2 3 4 5 6 7 8 9 10

Comments:

Programme Evaluation:

1. **How did you feel when you started the programme?**

Terrible _____ Excellent

0 1 2 3 4 5 6 7 8 9 10

Comments:

2. **How do you feel now?**

Terrible _____ Excellent

0 1 2 3 4 5 6 7 8 9 10

Comments:

3. **Can you describe some of your experiences in the sessions?**

4. **What were the best moments?**

5. **What were the most challenging moments?**

6. **What are the enjoyable parts of the sessions?**

7. **During the programme, how often did you feel that you had experiences that challenged you to grow positively?**

Not at all	0	1	2	3	4	5	6	7	8	9	10	All the time

Comments:

8. **What do you feel you have gained from these sessions?**

9. **If you could make changes that would make the programme better. What would you do?**

10. **How was the experience of working in a group?**

Very Bad	0	1	2	3	4	5	6	7	8	9	10	Very Good

11. **Have you noticed any difference in your interactions with others since the programme started? Please describe.**

12. **How do you think this programme has helped you deal with your stress or anxiety?**

13. **What do you think it is about the sessions that help you with that?**

14. **How was the experience of having people from within the force/with different backgrounds (eg: age/gender/job etc.)?**

15. **Taking all things together, how happy would you say you are these days?**

Any Other Comments:

	THERAPIST EVALUATION	Poor	Fair	Good	Very Good	Excellent
1	The therapist delivered sessions in a helpful manner.					
2	The therapist was knowledgeable about the topic and related issues.					
3	The therapist answered my questions effectively.					
4	The therapist made me feel heard, understood and respected					
5	The therapist used practical examples and useful techniques that I could apply to my day-to-day work and life.					

Any additional comments:

Many thanks for your time in responding to these questions.

Appendix 5: Participant Quotes

Have you noticed a difference in the way you think about life recently:

- *I believe I have a more positive outlook*
- *Putting me first*
- *I try to deal with things as they come and use techniques learnt to help with my levels of anxiety and stress*
- *Taking time for myself*
- *I have days I am motivated, can stay motivated. I could do with better focus.*
- *I can plan my days. I concentrate for longer. I don't daydream as much*

Best moments:

- *Realising that I was actually gaining something from the group techniques how to cope and how to just let go and have fun*
- *Knowing others have fears and troubles of their own. Becoming a cohesive group.*
- *I absolutely loved the last singing/humming session on the floor. I felt I even wanted to sing during the relaxation. I continued to sing in the car*
- *Guitar mediation*
- *Talking through how music can make things more positive*

Most challenging moments:

- *Attending the first group. Being outside my comfort zone*
- *The rhythmical parts. I had to concentrate more and pay more effort to stay focused not to fall behind or out of rhythm*
- *Being affected emotionally by a session unexpectedly*
- *Concentration and coordination*

Most enjoyable parts:

- *Having fun, letting go, being with others. Learning coping strategies*
- *Understanding how it can help when you cannot always talk or discuss.*
- *Touching the instruments, talking after what I experienced during the play.*
- *Listening to others and seeing the difference to what others felt.*
- *The creation of different rhythms/volumes and lengths of the music was great.*
- *Learning new skills, being with other people*
- *Meditation*

What have you gained from these sessions:

- *That it is good to try new ideas and step out of your comfort zone*
- *Techniques for coping and managing my stress and anxiety*
- *Self-belief and confidence.*
- *Taking a step back*
- *A tomtom drum and an ocean drum (awesome)!*
- *Use of instruments helped me and I will continue to use them more*
- *Better understanding of rhythm and sound and how it can work with your mind and body*
- *I started to sing more to myself*
- *I listen to music on the radio at home. Before I couldn't bare any noise in the house.*
- *Friends. Sharing a connection*

Have you noticed a difference in your interactions recently:

- *More confidence in a group setting*

- *I try to have a better outlook and use the techniques I have gained when I need to*
- *I try to use positive language and be more relaxed around others*
- *I feel comfortable to my surprise. I would not normally start talking to new people. I like to observe first, however, this setting made me feel no barriers*

HOW HAS THE PROGRAM HELPED YOU DEAL WITH STRESS OR ANXIETY?

- *It has given me some tools to use to help control my stress*
- *I give myself time to de-stress, use my instruments, focus on something I enjoy doing*
- *Breathing exercises reminded me how little attention I pay to meditation of self-check in on my breathing.*
- *Taught me to take a step back to deal with stress.*
- *Not to over think to cause me anxiety*
- *I definitely started to play more at home on my keyboard, which I used very little. I also started to sing along as I play*

WHAT HELPED YOU?

- *Understanding how sound and rhythm can be used to focus the mind, de-stress and re-engage the mind in to a different mindset. Let go of the complex and the anxiety*
- *Who knew that humming and really feeling it can affect your body responses and assist in calming you down?*
- *Experiment, choice of instruments and guide of the therapist prompted and instigated my motivations and willingness to do more. The sessions definitely kick-started my creativity that was dormant for some years now.*
- *Hearing my own voice through sounds/instruments*
- *Slowing myself down*

HOW WAS IT BEING WITH OTHER PEOPLE FROM THE FORCE

- *It was really great to share experiences with different people. We all had differing reasons for being part of the group and from being total strangers to building trust and understanding between us; having fun as well as learning techniques and responding with rhythm and sound to each other.*
- *Made no difference to me. Happy with that.*
- *I think we happened to be a very good group*
- *Enjoyable experience*
- *Took me out of my comfort zone*

HOW ARE YOU FEELING THESE DAYS:

- *I know there are days when I will struggle but I will use what I have learnt to help.*
- *I generally do feel happier and now know that you do not have to be musical or a musician to enjoy an instrument or use an instrument, and that it can make you smile and focus at the same time*
- *Much happier. I caught myself playing (which I have not done before unless I was asked or tasked) I started to envision what I can try to play next. I was looking for music books. I am looking in to getting a piano. I may start looking in to joining a local choir.*
- *Apart from this week [fathers day], building my happiness / improving*

APPENDIX 7 Reasons for Withdrawal Participant Responses via email

	Client 1	Client 2	Client 3
After how many sessions	**1**	**4**	**3**
Sessions attended	**1**	**1, 4**	**3**
Did you not like being in a group? Why?	*I think the biggest barrier for me was the fact that it was a small group that we had, I felt a little uncomfortable.*	*I had no dislike or like of the group atmosphere, All of the other participants were friendly.*	*Happy to be in a group*
Did you not like the music component? Why?	*I don't feel that music therapy is for me, thank you for letting me access the session.*	*I can not say that I did not like the music component, however I liken it to being on Oxford street at the height of Christmas shopping. It created a feeling of confused chaos.* *Many things have happened in my life which have caused me these issues and the chaos just sends me back to the worst of those times.*	*I am not sure how this would be taken forward. I was looking for coping strategies to help me every day. However, I only completed one session.*
Did you not like having a travel/ weekend/ saturday committment? Why?	**No answer**	*Until this morning this was not a problem, but I have just been told I can not claim travelling to the therapy session being 90 miles return it will get costly.* *It was secondly on a bank holiday for which I am not allowed to book the hours.* *But lastly this is on par with some of the bullying I had from my manager and it has just put me back another 3 months.*	*This is not an issue for me.*
Did you not like being with other 'co-workers'? Why	*Also the fact that I was there with co-workers – even though I did not know them – made me feel uncomfortable too.*	*No problems at all.*	*Happy to be with "co-workers"*
Do feel better and not in need of additional support? If so, was there something that helped you get to a better space?	*NA*	*My current counsellor is dealing with the sexual assault that I did not deal with when I was 11.*	*I only completed one session. I have high anxiety. I enrolled on this course to try and help me manage my anxiety on a daily basis. I am not sure how playing musical instruments will assist me when at work or at home or out and about. Therefore I am not sure that this is a coping mechanism that would work for me. However, I only completed one session and therefore do not know how the course would have concluded*
Anything else we should be aware of?		*I found the sessions stressful but could see that they were starting to get my brain to process information, but the two therapies at the same time were not a good idea.*	*It is just difficult for me to commit each week at the moment.*

Group Music Therapy for reducing PTSD-like symptoms in Front Line Workers

FUTURE PROGRAM CONSIDERATIONS

1. How can we improve program engagement?
    a. Through increased awareness and/or changing perceptions
    b. Conduct a general survey across the force to identify main areas of resistance
    c. Integrate experiental groups into stess manangement/ demands of the job training programs
    d. Hold therapy programs off site
    e. Develop two pathways: 1) open well-being group 2) closed therapy group

2. How can we best support the individual within a group context?
    a. Incorporate a pre-group assessment meeting in which the therapist and client can
        i. Determine suitablity of Music Therapy, or recommend alternative therapy options.
        ii. Review individual aims for the group
        iii. Enter in to a therapy contract
        iv. Remove therapy interfering obstacles
    b. Imbed 1:1 half way check-in
    c. Imbed 1:1 end of therapy review

3. How can we best support the emergency worker /shift with a set group?
    a. Consider scheduling different groups to accommodate shift workers schedule
    b. Consider adjusting empolyee's schedule during intervention so that they can attend
    c. Consider timing, location, travel requirements, working hours/ impact on salary

4. How can we validate the impact of Music Therapy for Emergency Workers?
    a. Compare receptiveness and impact of open well-being group with closed-therapy group
    b. Consider collection of biometric data regarding pre/peri/post group (eg: sleep, heart rate)
    c. Compare with control group
    d. Develop standardized research and implement programs across several different locations simultanously
    e. Group vs. individual therapy

Amanda Thorpe, Chroma
HCPC Music Therapist, NMT Fellow

Blues & Tunes Review

"Music gives a soul to the universe, wings to the mind,
flight to the imagination and life to everything." Plato

Thank you for participating in this pilot program. This document reflects on the aims and exercises of our three months together. As mentioned at the beginning of our journey, not everything may be apparent, or clearly understood, but the sessions have all been structured around support and developing the following areas to help reduce symptoms of poor sleep, anxiety, and PTSD symptoms.

Interpersonal Effectiveness:
These skills help you effectively change something (e.g., make or refuse a request) and meet your goals in each situation whilst avoiding any damage to the relationship, your self or the other.

Distress Tolerance:
These skills help you to accept, tolerate, and learn from suffering. Rather than avoiding pain, changing difficult situations, or walking away from circumstances that cause suffering, distress tolerance helps us deal with the pain and suffering that is inevitable to the human condition. Strategies include distracting, self-soothing, improving the moment, thinking of pros and cons; acceptance; and willingness vs. willfulness.

Emotional Regulation:
These skills help you to identify and label your emotions; reduce your vulnerability to "emotion mind"; increase positive emotional events; increase mindfulness to current emotions. These skills include observing in a non-judgmental way, describing, and participating.

Make Time For Yourself

When you're busy working and running between commitments, it might not feel possible to take a break or to take some time for yourself. But there's a reason why the airplane safety warning tells you to put the oxygen mask on yourself first – you can only help others when you are fit and able to do so. Doing small things for yourself can make a big difference, and there are lots of ideas you can try, and here are some ways in which you can use music to help.

Listen to songs you love and make your play lists… songs that fire you up or calm you down.

Listen to beats you love… and play the drums like nobody's watching!

Set yourself a daily challenge… find out the back story to a song you love, or learn the song

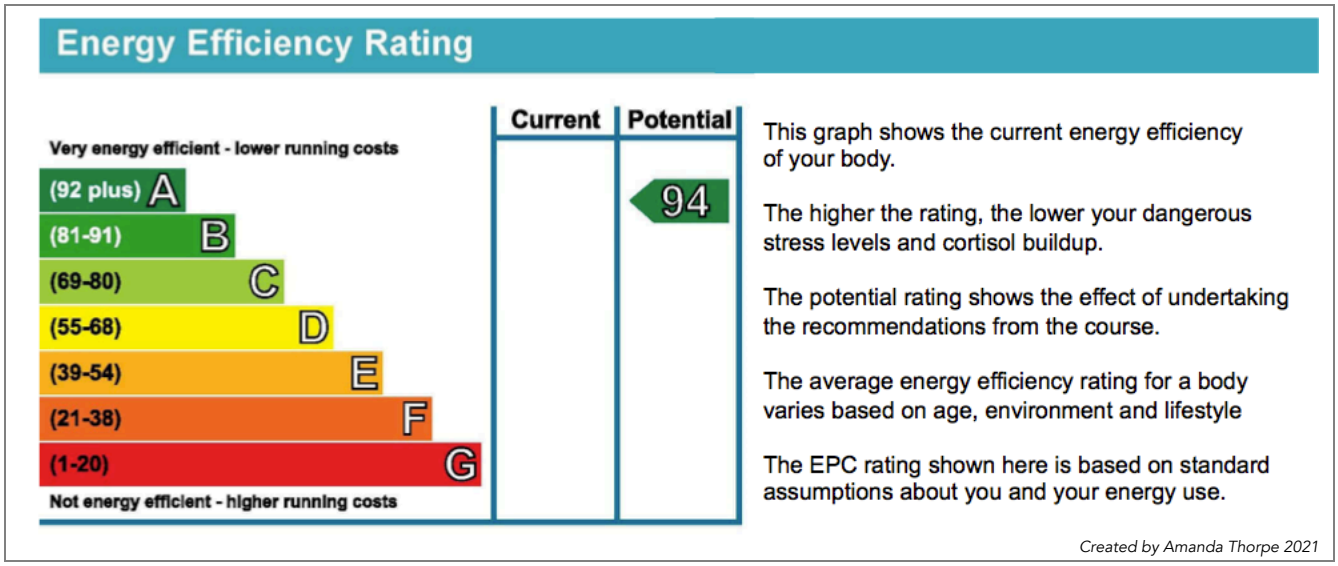
Play the songs you love and move it… dance like nobody's watching!

GROUP REVIEW

STAGE*	FEATURES	Wk	EXERCISES
FORMING	Forming the group; finding similarities; getting acquainted. Watchful; reserved	**1**	– Introduction: Paper work; outlining expectations – Getting to know each other – Free improvisation: Heart beat, reflection. Consider choice of instruments, style of playing.
		2	– Listening: Free improvisation. Leading improvisation. – Entrainment: Passing the lead. Who do you follow? Do you resist, follow the beat, how do you start/stop playing? – Disruption: Response and perception of disruption/disruptor
STORMING	Questioning, emotion, scepticism, frustration. Sense of feeling struck. Members may opt out. Alliances may form.	**3**	– Listening: Free improvisation. Leading improvisation. – Disruption: Response and perception of disruption/disruptor – Tension: Identify where stress/discomfort is held in the body – Release: Ways to dissipate stress – Vocalization: Seats faced outwards
NORMING	Managing group conflict; finding group norms; resurfacing similarities. Group cohesion.	**4**	– Expression: Think of your past week and play it. – Reflection: Improvisation with different leads. Reflect – Vocalization: Seats faced outwards
		5	– Leading / Following: Improvisation with different leads – Learning techniques: Structured drumming – Learning basic rhythms
PERFORMING	Functioning as an effective group; try new behaviours and accept new ideas; honesty, respect, authenticity. Differences can be addressed with integrity. Commitment to a common goal.	**6**	– Expression: Play an experience rhythmically. Add words. – Support: Play together, transition into an aligned shared playing – Containment: Structured playing together
		7	– Free improvisation: heartbeat, listening and responding. – Meditation: mindfulness focus on sound (in room, external, in body in room) ending with raised arms and release. – Exercise: Think of and then play a stressful moment in the week. – Think of words to go with the rhythm/emotion. – Reflect on different interpretations of the rhythm played. – Play together, then transition into an aligned shared playing
		8	– Sympathetic/Parasympathetic nervous system. – How to control stress feelings in the moment.
		9	– Creative expression. Agency. – Soundscape storybooks
ADJOURNING	Closure. The group work is done. Apprehension, impending loss of group identity, friendships. Review and evaluate the results. Saying goodbye.	**10**	– Sympathetic / Parasympathetic nervous system. – Improvisation. Rhythmic entrainment. – Tapping and breathing exercises for reducing stress. – Preparing for closure.
		11	– Rhythmic entrainment. Lead, copy, follow, join. – Anticipation: *Let's all play our drum /because its so much fun* Changing chairs, sitting somewhere not so comfortable. – Singing in the round. – Endings: how to prepare, acknowledge, gain closure for past situations, for current situations.
		12	– Reflection. – Summarize. – Conclude.

**1965 Tuckman Stages of Group Development*

What's Your Energy Efficiency Rating?



Your body is superbly designed energy efficient machine; it automatically triages energy resources to address the most significant threat to your body at any given time. If you cut yourself, your body jumps in to action, contracting blood vessels, releasing fibrin proteins, and producing extra collagen protein to seal the open wound. When faced with an external threat, your body jumps into action again. It will release adrenaline and cortisol, sharpen your senses, tighten your muscles, and increase heart rate and blood pressure, preparing your body to fight or flee. In all scenarios of threat, the amount of energy allocated to body maintenance functions—such as your immune system, internal repairs, or cognition—is reduced. And therein lies the rub.

Just like our homes, there are different ways that our body energy efficiency rating is reduced. The biggest energy waster for our body is chronic stress. Chronic stress slows down the body's natural healing processes, and further hinders the body through excess build up of the stress hormone, cortisol. Unchecked chronic stress and cortisol buildup have been linked to many chronic diseases, including stroke, heart attack and diabetes. Common coping mechanisms-—alcohol, comfort food, TV, computers—may provide temporary relief, but they do nothing to reduce cortisol in the body.

When we are in a calm relaxed state, our breath is deeper, our heart rate is slower, and our parasympathetic nervous system is engaged in muscle repair, building strength, digesting food, and making neurotransmitter hormones, including oxytocin, dopamine and endorphins. The more time we are engaged with our parasympathetic nervous system, the healthier we are. So just as you would use a plaster to keep a wound clean for optimal healing, when stressed or anxious, you can use breathing and vocal exercises to reallocate your internal energy for optimal health.

Your body does much of its repair work during sleep, so initiating deep relaxation especially before bedtime is an ideal opportunity, but you can also do the exercises in the morning, or throughout the day. Just start by engaging in focused breathing for 2 minutes.

Breathing & Mindfulness Exercises

<table>
<tr>
<td>Breathing Techniques</td>
<td>
Find some calm instrumental music that you like with a tempo between 70 and 80 beats per minutes to help keep a steady pulse.

Focused breathing:
Place your hand on your chest to help feel the sensation of breathing. Breathe in through your nose for a count of 4
Exhale with a controlled blow through the mouth for a count of 8.

As you become comfortable and familiar with the exercise, try increasing inhale/exhale counts from 4/8 to 6/12, to 8/16 and increase length of time engaged in the practice.

Stopwatch Breathing:
Rapid tapping (16th notes /60 bpm)
Breath slow controlled inhale through nose and exhale out through mouth.

Square Breathing:
Breathe in (4 count)
hold (4 count)
Breath out (4 count)
hold (4 count) [Repeat]

Belly Breathing:
Place one hand on your stomach and the other on the center of your chest.
Breathe in deeply through your nose and expand your belly.
Breathe out through your mouth, guiding the hand on your belly inwards

4, 7, 8:
Breathe in deeply for 4 beats. Feel your belly expand in the process.
Hold your breath for 7 beats.
Exhale with an audible ‘sh’ sound for 8 beats. [Repeat]
</td>
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<tr>
<td>Meditation</td>
<td>
Mindfulness
Bringing your attention and focus to knowing directly what is going on inside and outside of ourselves, moment by moment. Becoming more aware of the present moment can help us enjoy the world around us more and understand ourselves better.

Body Mapping
Pay attention to all the different parts of the body and bodily sensations in a gradual sequence from feet to head. By mentally scanning and bringing your awareness to every single part of your body, you may noticing any aches, pains, tension, or general discomfort, become familiar with it and learn how to better manage it.

Muscle Relaxation
As you breathe in, tense all your muscles, and hold for a count of 5
As you breathe out, relax all the muscles. Repeat several times
</td>
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Resonant Vocalization to stimulate the Vagus Nerve

The vagus nerve is the longest nerve in your body; it is a major component of the autonomic nervous system and a fundamental regulator of the parasympathetic nervous system that controls involuntary processes (for example digestion, heart beat, respiration). The vagus nerve is responsible for restoring relaxation after a response to stress or danger (the sympathetic nervous system).

'Vagal Tone', or strength, is determined by variations in heart rate measured between inhalation, when the heart speeds up, and exhalation when the heart slows down. The larger the difference between the two phases, the higher the vagal tone. Your vagal tone can be strengthen through daily practice of focused breathing with resonant humming.

The Exercise

Sit on the floor or in a chair with your back straight. If you are in a chair, sit slightly forward so you are not slouching in the seat. Uncross your legs, relax; if you are comfortable doing so, close your eyes. Note: After completing deep breathing exercises do not stand up or get up suddenly as you can get light headed.

You will place your hand/s on different parts of your body (head, forehead, neck, heart, diaphragm, abdomen, groin) to target and feel the resonant vibrations that are generated through your vocalization. After approximately 2 minutes of breath/hum cycles, rest for at least 30 seconds and just observe your body senses. If you would like to continue with another cycle, either repeat the same sound and target location, or move on to a different sound and target location.

Inhale: Deep breath in through the nose, expand rib cage
Exhale: Elongated vocalization, the louder the better!

Sound	Body Target	Location
Eum	Head	Imagine a Cheshire Cat grin for the 'eeeee and slowly close to the uuu-mmmm Place one hand on the top of your head. Rest the other hand on your thigh
A-im	Forehead	'aaaaaaaaay and slowly close to the uuu-mmmm One hand on the base of the skull and one hand on the forehead
I-ym	Neck	Sounds like 'I'm' 'Iiiiiiiiiii" and slowly close to the yyym-mmmm Place your palms comfortably either side of the neck
Alm	Heart	Sounds like 'calm' with out the c Hands over heart. Head slightly down, gently rotate head left to right to left
Holm	Diaphragm	'Ho' sounds like hole and slowly close to the l-mmmm Hands over diaphragm, head down and gently rotate head left to right to left
Hoom	Abdomen	Sounds like 'Whom' Hands over belly, head down and gently rotate head left to right, right to left
Om	Groin	Hands over groin area

Drumming Patterns

Tempo	*Let's all play the drum | Because it's so much fun*
Rhythms	*Ham & Cheese | Peanut Butter Sandwich |* *Tea tea & milk, tea & milk*
Conducting	*1 2 back to the grove | | 4 + 3 + 2 + 1 and stop*

Reading
Consider different ways to read. A great resource is the book, ***How to Read A Book*** by Mortimer J. Adler. Originally published in 1940, this book introduces and elucidates the various levels of reading and how to achieve them—from elementary reading, through systematic skimming and inspectional reading, critical reading, to extracting the author's message from the text.

Journaling
Consider journaling to reflect and remove unconscious clutter.

Grant me the serenity
to accept the things I can not change,
the courage to change the things I can,
and the wisdom to know the difference.