Stand Easy: An evaluation of the effectiveness and acceptability of acupuncture as a treatment for post-traumatic stress disorder for veterans in Norfolk

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Most importantly, we would like to thank all the veterans who volunteered their time to participate. Their contributions and courage have helped to give a voice to those of their comrades who are unable to speak up for themselves.

The artwork featured in this report was created by Rickie Botwright, a former service user of Stand Easy who served with the Royal Marines.

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Executive summary

- This report describes an evaluation of the Stand Easy acupuncture service. Stand Easy is a charity providing free acupuncture to veterans living with Post-traumatic Stress Disorder (PTSD) across Norfolk. The evaluation involved 26 veterans who presented to Stand Easy from July 2017 to January 2018 inclusive.

- We used routinely collected pre-treatment, post-treatment (6 weeks) and follow up (3 months) outcome measures to assess the effectiveness of the acupuncture service over a period of three months. Data were collected through three self-report questionnaires.

- The primary outcome measure was PTSD symptoms, measured through the PTSD Checklist – Civilian Version (PCL-C). The secondary outcome measure was symptoms of depression and anxiety, measured through the 12-item General Health Questionnaire (GHQ-12). We also asked participants to share their general experiences at follow up to explore the acceptability of acupuncture.

- Of the 26 participants who recorded pre-treatment outcomes, 21 (80.8%) completed post-treatment outcomes following an initial course of six weekly acupuncture sessions ("completers"). Five (19.2%) dropped out before finishing six sessions and did not record post-treatment outcomes ("non-completers").

- Using intention to treat analysis we observed significant improvements in PTSD scores (PCL-C: -29, 95% CI: [-21.5 to -36.5]) and anxiety and depression scores (GHQ-12 -6.7, 95% CI: [-4.7 to -8.7]). The effect size (Cohen's *d*) for the PCL-C was huge at 2.7 (*SD* 10.8, 95% CI: [2.0, 3.4]). The effect size for the GHQ-12 was very large at 1.8 (*SD* 3.8, 95% CI: [1.2, 2.3]).

- 100% of completers experienced reliable and clinically significant improvement in PTSD symptoms (change in PCL-C $\geq$10). At pre-treatment, 90.5% of completers met case criteria for PTSD (PCL-C $\geq$50) and no completers met case criteria at post-treatment. 92.3% of all participants met case criteria at pre-treatment compared to 19.2% at post-treatment. Four in five (80.8%) of the whole sample experienced a reliable and clinically significant improvement.

- Nine completers recorded follow up outcome measures three months after finishing their initial treatment course. Most participants were still receiving treatment from Stand Easy and so it was not possible to use follow up data to determine longer-term (3 month) effectiveness, as originally intended. Qualitative feedback from these participants suggested that acupuncture at Stand Easy was safe and acceptable compared to other treatments for PTSD.

- The positive effects observed from pre- to post-treatment were remarkable. While we acknowledge several limitations, we believe that our results clearly indicate the short-term (6 week) effectiveness and acceptability of the Stand Easy acupuncture service. Current treatments for PTSD are known to be ineffective for some individuals and we expect this evaluation to contribute to the wider evidence base concerning the use of acupuncture as an alternative or complementary treatment, justifying further research in this area.

1. Introduction

This section presents an overview of the aetiology and prevalence of PTSD in the military, the evidence for the effectiveness of recommended treatments, and the evidence for the effectiveness of acupuncture as a treatment for PTSD.

For context, the British Government defines a veteran as: "Anyone who has served for at least one day in the Armed Forces (Regular or Reserve), as well as Merchant Navy seafarers and fishermen who have served in a vessel that was operated to facilitate military operations by the Armed Forces," (Department of Health, 2008, p.4). Around 20,000 military personnel leave the British Armed Forces each year, which is approximately 10% of its total operational strength (MoD, 2015). In 2014 there were an estimated 2.8 million veterans across the UK (Royal British Legion, 2014), approximately 50,000 of whom were living in Norfolk (Fraser, 2016).

1.1 PTSD in the military

The fifth edition of the American Diagnostic and Statistical Manual of Mental Disorders (*DSM-5*), (re)classifies post-traumatic stress disorder (PTSD) as a trauma- and stressor-related disorder that a person may develop after witnessing or experiencing a traumatic event (American Psychiatric Association, APA, 2013). Characteristic indicators include: re-experiencing or intrusive symptoms, avoiding reminders of the event, negative thoughts and feelings, and hyper-arousal and reactivity (American Psychiatric Association, APA, 2013). Most people will witness or experience a traumatic event during their lives but PTSD is most commonly associated in public imagination with military service.

The symptoms of what we would now classify as PTSD are present in the earliest accounts of war. However, the clinical diagnosis was not introduced until the publication of the *DSM-III* (APA, 1980), as a result of thousands of US veterans seeking help for the effects of combat trauma in the aftermath of the Vietnam War (1955-75). The recent conflicts in Afghanistan (2001-14) and Iraq (1990-1991 and 2003-11) re-intensified academic interest on the psychological impact of military service. Numerous studies with US military personnel and veterans from this era reported high rates (up to 17%) of PTSD, observing links between PTSD and combat deployment, particularly multiple deployments, with a rise in incidence over 12 months post deployment (summarised in Richardson, Frueh & Acierno, 2010).

These troubling findings led to concerns about the mental wellbeing of UK military personnel serving alongside US troops in Iraq and Afghanistan, prompting a surge of research activity. Since 2003, The King's Centre for Military Health Research (KCMHR) at King's College London has been leading on a large cohort study involving approximately 16,000 UK military personnel and veterans. Interestingly, KCMHR studies have consistently shown low rates of PTSD (approximately 4%), although slightly higher rates have been observed among individuals who served in a combat role (6-7%) or with the Reserve Forces (5%) (Fear et al., 2010; Hotopf et al., 2006; Rona et al., 2009; Sundin et al., 2010). Moreover, no links have been observed between PTSD and combat deployment ex cetera. On the other hand, other mental health conditions, such as anxiety and depression (Goodwin et al.,

2014) and alcohol disorders (Fear et al., 2007) have been shown to be prevalent among UK military personnel and veterans.

While the rate of PTSD in the UK veteran population is thought to be similar to the non-veteran population, symptoms of PTSD in veterans have been associated with a range of adverse outcomes including high levels of dysfunction and social exclusion (Iversen et al., 2011; Iversen et al., 2009). It has been suggested about 50% of veterans present with 'complex PTSD' relating to multiple traumas (both military and non-military related) and comorbidities such as substance misuse and depression (Dalton, Thomas, Melton, Harden & Eastwood, 2018). In addition, US research has found that PTSD creates a higher financial burden to society than any other mental health condition in veterans (Currier, Holland & Drescher, 2014). Given that approximately half of cases may be linked to military service (Jones et al., 2013), there are clear moral and healthcare imperatives to provide effective treatment for those veterans who do develop PTSD.

Mental healthcare for veterans, as with all citizens of this country, is largely provided through the NHS. In addition to mainstream services commissioned by local Clinical Commissioning Groups, NHS England commissions a national network of specialist services for veterans with complex conditions who may benefit from an approach that is military sensitive. These specialist services aside, it has been suggested that the NHS is not currently optimised to meet veterans' needs (Dalton et al., 2018; MacManus & Wessely, 2013). Veterans living with conditions like PTSD may slip through the cracks between mainstream services; too complicated for primary care but not serious enough for secondary services, which are largely designed for severe psychiatric illnesses such as psychosis (MacManus & Wessely, 2013).

As a result of this perceived shortcoming, a disproportionate amount of care for veterans is provided by voluntary and community organisations (Ashcroft, 2014). In addition to established names such as Combat Stress and the Royal British Legion, the conflicts in Afghanistan and Iraq led to a wave of new agencies and there are currently more than 2,000 veteran charities across the UK (Ashcroft, 2014).

1.2 Recommended treatments for PTSD

Clinical guidance from many nations around the Western medical world recommend the treatment of PTSD in adults, including veterans, with trauma focussed psychotherapy, whereby the thoughts, feelings and memories associated with the traumatic event are directly addressed, usually through talking (Jonas et al., 2013). Many distinct therapies may be described as "trauma focussed" and there is currently no clinical consensus as to which single intervention should be preferred (Jonas et al., 2013). UK guidance from the National Institute for Health and Care Excellence (NICE) recommends Cognitive Behavioural Therapy (CBT) or Eye Movement Desensitisation and Reprocessing (EMDR) as the front-line treatments of choice (NICE, 2005; 2013). Prolonged Exposure (PE) and Cognitive Processing Therapy (CPT) are generally preferred in the US (Karlin & Cross, 2014).

Numerous meta-analyses and systematic reviews, encompassing hundreds of Randomised Controlled Trials (RCTs), have found a variety of trauma focussed therapies, including CBT, EMDR, CPT and PE, to be more effective than control or treatment as usual in the treatment of PTSD (Jonas et al., 2013; Watts et al., 2013). These interventions tend to demonstrate moderate to high improvements in PTSD symptoms, as assessed by effect sizes pre- and post-treatment (Jonas et al., 2013; Watts et al., 2013). Direct head-to-head evidence is generally insufficient to determine the comparative effectiveness of different interventions (Jonas et al., 2013; Watts et al., 2013).

Most trials have been conducted with civilian samples and so the effectiveness of trauma focussed therapies for veterans remains unclear (Beidel, Frueh, Uhde, Wong & Mentrikoski, 2011; Sharpless & Barber, 2011). Smaller effect sizes have been observed with veteran samples, which has led to suggestions that outcomes may be poorer for this population group (e.g. Bisson, Roberts, Andrew, Cooper & Lewis, 2013; Bradley, Greene, Russ, Dutra & Westen, 2005; Kitchiner, Roberts, Wilcox & Bisson, 2012; Watts et al., 2013). However, serious limitations with the quality of the evidence must be acknowledged. For one thing, the majority of trials with veterans have been conducted with older US veterans from Vietnam and Korea, who are known to present with chronic conditions, which may account for their poorer responses to treatment (Beidel et al., 2011). As such the findings may not be translatable to the wider US or UK veteran populations (Beidel et al., 2011).

A meta-analysis of 12 veteran specific RCTs (Kitchiner et al., 2012) concluded that trauma focussed therapies are likely to be effective treatments for PTSD in veterans, largely on the basis of positive findings from two well-powered and robust trials using CPT (Monson et al., 2006) and PE (Schnurr et al., 2007). Two recent observational studies conducted by one of the UK's leading military mental health charities, Combat Stress, have provided further evidence for the effectiveness of trauma focussed interventions, specifically CBT, even if these studies were uncontrolled (Murphy et al., 2015; 2016). Interestingly, these studies demonstrated long-term treatment effects (6-12 months), in contradiction to received wisdom that the benefits of therapy diminish over time (Murphy et al., 2015; 2016).

While evidence from RCTs shows that trauma focussed therapies are useful in many cases, a closer examination indicates that these interventions are far from universally effective. For one thing, psychological literature tends to focus on mean symptom change (effect sizes) as the primary measurement rather than other outcomes, such as loss of diagnosis, which are more relevant to real-world clinical practice (Najavits, 2015; Steenkamp, Litz, Hoge & Marmar, 2015). The emphasis on effect sizes disguises the fact that nonresponse to treatment can be high, with many patients improving but remaining symptomatic. For instance, one recent review of 36 RCTs found that between 33-50% of veterans receiving either PE or CPT did not demonstrate a clinically significant improvement, with approximately 66% retaining diagnosis after treatment (Steenkamp et al., 2015).

Moreover, approximately 25% of veterans enrolled in the 36 RCTs dropped out before completing treatment (Steenkamp et al., 2015). Dropout is a common problem across trials with both veterans and civilians, but it can be easy to overlook because studies with high dropout tend to be excluded from meta-

analyses on methodological grounds. In this way, although recovery from PTSD can sometimes reach 70-80% in veterans who complete treatment, high dropout rates lead to an average recovery of around 40% (Hoge et al., 2014). Given that patients and clinicians are carefully selected and supported to be involved in research, it is not unreasonable to expect dropout to be higher in real-world clinical practice (Najavits, 2015).

Treatment non-retention following a diagnosis of PTSD has been identified as a particularly significant challenge in veteran healthcare settings (Hoge et al., 2014; Steenkamp et al., 2015). Various estimates have suggested that between 40% and 60% of military personnel and veterans who could benefit from professional help for PTSD do not access services (Hoge et al., 2004; Iversen et al., 2011; Kehle et al., 2010). A wide range of psycho-social barriers to care have been reported, including stigma, negative attitudes related to treatment and poor recognition of the need for treatment (summarised in Sharp et al., 2015). Similarly, several large observational studies of US veteran healthcare facilities have indicated that less than 10% of veterans who attend at least one session of trauma focussed psychotherapy successfully complete treatment (e.g. Mott, Hundt, Sansgiry, Mignogna & Cully, 2014; Seal et al., 2010).

The reasons why some veterans with PTSD struggle to engage with trauma focussed therapies are complex (Najavits, 2015). A full exploration is beyond the scope of this discussion, but two broad observations will be particularly relevant. The first observation is that nearly 90% of UK veterans are male (Royal British Legion, 2014). There is a growing understanding that men may experience and express their psychological needs differently to women (e.g. Kingerlee, Precious, Sullivan & Barry, 2015). Amongst other things, men tend to externalise distress (e.g. Logan et al., 2008) and are more likely to exhibit avoidance and maladaptive behaviours (e.g. Green & Jakupcak, 2016). Talking about thoughts and feelings is seen by some men to be incompatible with perceived socio-cultural ideals of “manliness” (e.g. Connell, 2005), an issue which may be especially apposite for male veterans given the emphasis that military culture places on traditional masculine virtues such as strength and courage under fire.

The second observation is that there is an ongoing debate as to whether dropout in trauma focussed therapies may be due to the fact that these therapies explicitly require patients to retell traumatic events (summarised in Imel, Laska, Jakupcak & Simpson, 2013). A meta-analysis of the reasons for dropout across 42 (mostly civilian) studies concluded that therapeutic emphasis on trauma did not seem to be the primary factor, but highlighted the need for further research (Imel et al., 2013). Again, it has been suggested that veterans may find retelling traumatic events particularly unpalatable given the unusual nature of military trauma, which is often involves multiple traumas associated with intense guilt, shame and moral injury (Litz et al., 2009; Price, Gros, Strachan, Ruggiero & Acierno, 2013; Steenkamp et al., 2011; Stein et al., 2012). More generally, various studies have suggested that veterans may benefit from access to specific treatments that are sensitive to the ways of military life (e.g. Ben-Zeev et al., 2012; Dalton et al., 2018; Fraser, 2017).

To summarise this section, trauma focussed interventions have been shown to be effective treatments for adults with PTSD, including veterans, and are

recommended as front-line treatments in clinical guidance across the Western medical world. However, some veterans do not respond to treatment and dropout is a significant problem. These challenges indicate that there is clear room for improvement, highlighting a pressing need for further research to measure the real-world effectiveness of trauma focussed psychotherapy compared to other approaches (Najavits, 2015; Steenkamp et al., 2015).

2.3 Acupuncture as a treatment for PTSD

An increasing number of people are turning to complementary and alternative medicine (CAM) approaches for the treatment of PTSD and other mental health conditions (Strauss, Lang & Schnurr, 2017). CAM is a broad and hotly contested term encompassing a diverse range of techniques that are used alongside or in replacement of conventional practices from Western medicine (Grant et al., 2017). CAM approaches have several advantages: they can be delivered outside of mainstream facilities, require less disclosure than trauma focused therapies and do not have the same risks of side effects as pharmaceutical treatments (Grant et al., 2017). Touching on the previous discussion, CAM approaches may be a novel way to reach individuals with PTSD who do not wish to engage with traditional interventions, which is especially useful in populations where mental health remains stigmatised, such as veterans (e.g. Mittal et al., 2013; Outimette, Brown & Najavits, 1998; Strauss, Coeytaux, McDuffie, Nagi & Williams, 2011).

Acupuncture is a form of CAM that is often used in the treatment of PTSD. With roots in ancient Traditional Chinese Medicine (TCM), acupuncture involves inserting and manipulating fine needles in specific points of the body. According to TCM, this manipulation moves vital energy around the body, restoring balance between internal organ systems (Hollyfield, 2011). The effects of acupuncture have typically been attributed to placebo, but our understanding of the mechanisms has improved recently and it now seems that acupuncture causes neurological responses involving the automatic nervous system, the prefrontal cortex, and limbic structures of the brain involved in PTSD psychophysiology (Hollyfield, 2011).

As a holistic intervention, acupuncture is well suited to new developments in mainstream mental healthcare, which emphasise the role of the body and wellness in psychological recovery (NHS England, 2016). Limited evidence suggests that acupuncture is a safe and relatively inexpensive alternative or supplement to conventional PTSD treatments (Grant et al., 2017). However, as with many CAM approaches, there is a lack of rigorous clinical research to determine the effectiveness of acupuncture as a treatment for PTSD.

Two systematic reviews have been conducted in the last five years. The first review, involving two RCTs and four uncontrolled trials, concluded that there is encouraging evidence for the effectiveness of acupuncture (Kim et al., 2013). This conclusion was principally reached on the basis of a single well-powered RCT, which showed that acupuncture had statistically significant effects (with a non-veteran sample) compared to waitlist control and comparable effects to group CBT (Hollyfield, 2007). However, the authors of this review noted that the evidence

was not cogent due to a lack of RCTs, amongst other things, and highlighted the need for further research.

The second systematic review (Grant et al., 2017) involved seven RCTs completed since 2007, one of which was conducted with US military personnel (Engel et al., 2014) and two with US veterans (King et al., 2015; Prisco et al., 2013). This review found evidence of significant differences in PTSD symptoms favouring acupuncture versus any comparator at post-treatment and follow up. No differences were observed in related outcomes such as sleep quality and anxiety symptoms.

All seven RCTs that featured in the review were small-scale studies and the overall quality of evidence was rated as very low to low using the GRADE approach (Schünemann, Best, Vist & Oxman, 2003). In particular, serious limitations were highlighted relating to allocation concealment, blinding of assessors, selective outcome reporting, attrition and performance biases (Grant et al., 2017). To that end, the review recommended caution in promoting acupuncture as a treatment for adults with PTSD, in spite of the identified positive effects. The authors noted that their findings broadly reflected those from the previous review but stated that they were less optimistic about the current evidence base.

Although acupuncture is not recommended as a treatment for PTSD in England (NICE, 2013), the intervention is routinely practised in the US, especially with military personnel. A quarter (25%) of treatment facilities in the US military health system reportedly offer acupuncture for PTSD (Herman, Sorbero & Sims-Columbia, 2017) and uptake is estimated to have risen fourfold from 0.7% in 2010 to 2.8% in 2015 (Williams, Leslie, Clark, Mark & McNellis, 2016). Acupuncture usage in this population is overwhelmingly associated with musculoskeletal or nerve and system issues (Madsen, Patel, Vaughan & Koehlmoos, 2017; Williams et al., 2016). However, a review of individuals who received acupuncture through the military health system in 2014 found that 8.8% reported mental health diagnoses, including PTSD (Madsen et al., 2017).

2. Aims and objectives

This report describes an evaluation of the effectiveness and acceptability of an acupuncture service provided by a Norfolk charity called Stand Easy. We designed the evaluation to be as robust as possible with very limited resources. Our aim was to gather evidence that could inform further research and service development.

The evaluation had three evaluation questions, as follows:

1. How effective is acupuncture at Stand Easy at reducing symptoms of PTSD in veterans over a period of three months?
2. How effective is acupuncture at Stand Easy at reducing symptoms of depression and anxiety over a period of three months?
3. How acceptable is acupuncture at Stand Easy perceived to be compared to other treatments for PTSD?

The evaluation formed the basis of a dissertation as part of a Master of Science (MSc) in Social Research and Evaluation through the University of Huddersfield.

3. Methodology

3.1 Design

This was a mixed methods evaluation using routinely collected pre-treatment, post-treatment and follow up outcome measures to assess the effectiveness of acupuncture at Stand Easy as a treatment for veterans with PTSD. Qualitative feedback was analysed to explore the acceptability of acupuncture at Stand Easy compared to other treatments.

3.2 Setting

The evaluation involved individuals who presented for acupuncture treatment from Stand Easy during the period July 2017 to January 2018 inclusive. Stand Easy is a charity providing free acupuncture to veterans with PTSD from across Norfolk and elsewhere. Treatment at Stand Easy is practised by an acupuncturist who is a fellow of the British Acupuncture Council with 35 years of experience treating military personnel and civilians with PTSD in the Lebanon.

3.3 Treatment protocol

Treatment at Stand Easy blends elements of Five Element and TCM approaches. The first treatment session follows a specific protocol (The Seven Internal Dragons), which has been modified by the acupuncturist and is designed to remove trauma and re-energise the individual. Sessions last approximately 45-60 minutes and are usually delivered on a weekly basis. Needle stimulation is manual. In the first session, seven 1 inch (36 gauge) needles are inserted between 0.5-1 inches. Needle retention time is approximately 15 minutes. The aim is to seek a pulse response leading to the individual feeling more relaxed, present and connected. Subsequent sessions vary depending on the individual's needs.

For the purposes of this evaluation, individuals completed an initial course of six treatment sessions. This schedule was determined upon consultation with Stand Easy and is within the range cited in a systematic review (Kim et al., 2013). After the sixth session, treatment could be extended further at the discretion of the individual and the acupuncturist.

3.4 Participants and recruitment

We promoted the evaluation in local print, radio and social media but recruitment was largely through Stand Easy's routine referral routes, which include: primary care professionals, the Norfolk & Waveney Wellbeing Service and local military charities. All individuals who presented for treatment from Stand Easy during the recruitment period were asked to give their informed consent to participate in the evaluation. The acupuncturist was responsible for using their experience to apply a

set of inclusion and exclusion criteria (Table 1) to ensure that individuals only participated where appropriate (Appendix A-B).

Table 1

List of inclusion and exclusion criteria.

Inclusion	Exclusion
• Previous service in the British Armed Forces (at least one full day) • Diagnosis of PTSD by an appropriate health professional **OR** • Presence of traumatic symptoms[a]	• Insufficient English to give consent • Severe illness or injury • Current receipt of NHS therapy • Receipt of acupuncture within the last six months

[a]As defined by a score of ≥30 on the PTSD Checklist – Civilian Version (PCL-C). This criteria was added after early recruitment found that some veterans presenting to with traumatic symptoms did not have a PTSD diagnosis. The decision to extend inclusion was taken because it seemed important to include these individuals.

A target sample of 20 participants was set by BAcC at the outset of the evaluation. The sample was determined pragmatically based on historic Stand Easy activity over a period of six months. A total of 29 individuals presented for treatment from Stand Easy between July 2017 and January 2018 inclusive. All individuals consented to be a part of the evaluation. Three individuals were excluded due to missing outcome data at pre-treatment (two) or because they presented with neither PTSD diagnosis nor traumatic symptoms (one).

Twenty-six (26) individuals participated in the evaluation, of whom five (19.2%) were "non-completers" and dropped out of treatment before finishing the initial course of six sessions. Non-completers attended a median of four treatments. Non-completers were asked to explain why they wanted to leave the evaluation but none stated a reason. The acupuncturist listed the following reasons based on their treatment notes:

- Lives or works away (2)
- Leg infection (amputee) and advised by doctor not to continue (1)
- Experienced bad episode on Remembrance Day and started drinking again (1)
- No reason given (1)

Twenty-one (21) participants completed treatment, henceforth referred to as "completers". Completers attended a mean number of 9 sessions (range 6 to 16). The mean interval between treatments 1-6 was 8 days (range 3 to 26). Fifteen (15) completers (71.4%) continued to receive treatment from Stand Easy and six (28.6%) left the service after their sixth session.

Further details are shown in *Figure 1* (overleaf).

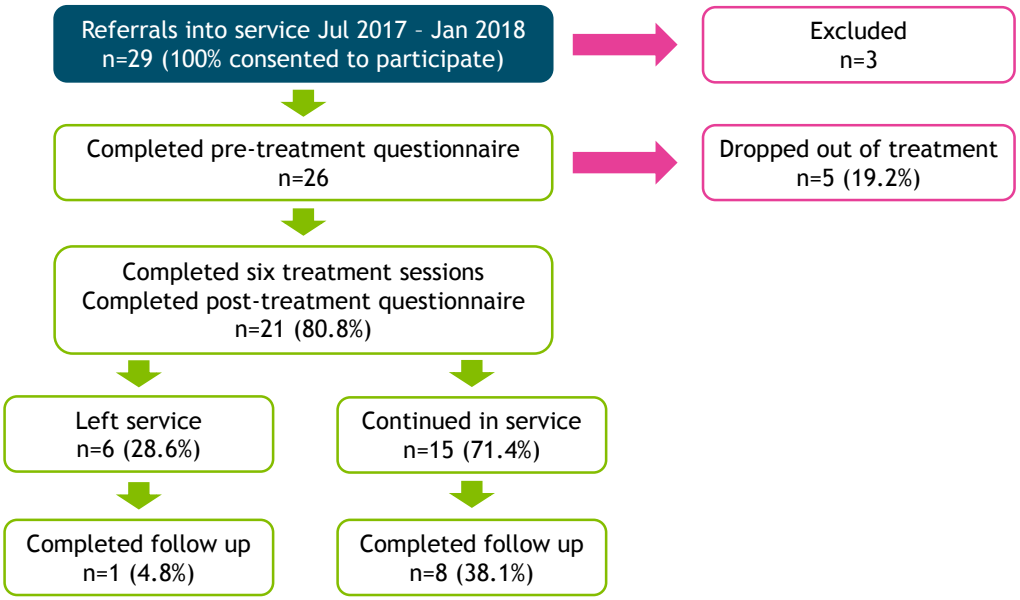

Figure 1. Participation in the Stand Easy evaluation.

3.4 Measurements

The primary outcome was PTSD symptoms and the secondary outcome was symptoms of depression and anxiety. We collected data through hard-copy, self-report questionnaires. There were three measurement points:

1. Pre-treatment – directly before first treatment session (n=26)
2. Post-treatment – directly after sixth treatment session (n=21)
3. Follow up – three months after sixth treatment session (n=9)

Pre- and post-treatment questionnaires were administered onsite by Stand Easy and passed to Healthwatch Norfolk for secure storage. Questionnaires were administered by two Stand Easy administration volunteers so that the therapist was not involved in data collection. The follow up questionnaire was posted to participants and returned directly to Healthwatch Norfolk using freepost return envelopes. Only nine participants (34.6%) completed the follow-up questionnaire.

All questionnaires may be found in Appendix C-E.

<u>PTSD symptoms</u>

PTSD symptoms were measured using the PTSD Checklist - Civilian Version (PCL-C). The PCL-C is a 17-item self-report measure reflecting symptoms of PTSD as defined in the *DSM-IV* (APA, 2000). Each item is scored from 1-5 to produce an overall score from 17-85, with higher scores indicating greater symptom severity. Scores

of ≥50 are usually taken to indicate psychiatric case criteria (i.e. symptoms consistent with PTSD) in research with veteran populations but a lower cut-off of ≥30 is sometimes used instead. Changes in PCL-C of 10-20 or more are taken to indicate reliable and clinically significant improvement (National Centre for PTSD, 2012). Numerous studies have shown the PCL-C to be a valid and reliable measure (summarised in National Centre for PTSD, 2012).

It is worth noting that the PTSD Checklist for *DSM-IV* has three distinct versions, one of which is intended for use with military populations (PCL-M). There is very little difference between the PCL-M and the PCL-C, except that the wording of the PCL-M refers specifically to traumatic events experienced during military service whereas the PCL-C refers to traumatic events *in general*. Given that many cases of PTSD in the veteran population are unrelated to service, it was decided to utilise the more inclusive wording. It should also be acknowledged that the *DSM-IV* was superseded by the *DSM-5* in 2013 (APA, 2013) and as such the PCL-C provides a measurement of PTSD based on an outdated classification. We decided use the PCL-C for *DSM-IV* because the recommended diagnostic thresholds for measures based on the *DSM-5* were unclear (Weathers et al., 2013).

Symptoms of depression and anxiety

Symptoms of depression and anxiety were measured using the 12-item General Health Questionnaire (GHQ-12). The GHQ-12 is a 12-item self-report measure for common mental disorders. A shortened version of the traditional 60-item GHQ, the GHQ-12 is widely used in research and has been shown to be a valid and reliable screening measure in general population studies (e.g. Lundin, Hallgren, Theobald, Hellgren, & Torgén, 2016; Quek, Low, Razack & Loh, 2001). There are four ways of scoring the GHQ-12. This evaluation utilised a bi-modal model, as recommended by the test author. Each item was scored from 0-1 to produce a total score of 0-12.

Participant characteristics

Participant characteristics were collected at pre-treatment, including demographics and information about military service.

General experiences

Wider qualitative feedback about general experiences of acupuncture at Stand Easy was captured at follow up through an open questionnaire.

3.5 Analysis

In order to assess whether the Stand Easy acupuncture service was effective, data were entered into SPSS v.24 for analysis. We used descriptive statistics to explore the sample and any differences in the health (pre-treatment) and characteristics of completers and non-completers. Following other studies, the PCL-C and GHQ-12 were treated as continuous variables (e.g. Hotopf et al., 2006; Rona et al., 2009). The Wilcoxon signed-rank test was conducted to identify statistically significant changes in PCL-C and GHQ-12 scores from pre- to post-treatment.

To reduce attrition bias, intention to treat (ITT) analysis applied whereby the results from non-completers were included in analysis. Last observations were carried forward, which means that non-completers were assumed to experience no change in pre-treatment results. No inferential analyses were conducted on the follow up scores for the PCL-C or GHQ-12 due to problems with missing data. These scores were reported for information.

It is considered good practice to provide an indication of the magnitude of any observed changes (Ellis, 2010). To that end, an effect size (Cohen's *d*) was calculated by dividing the change in mean scores from pre- to post-treatment by the standard deviation at pre-treatment. An effect size of 0.8 is generally interpreted to be large (Cohen, 1998), while sizes of 1.2 and 2 are taken to be very large and huge respectively (Sawilowsky, 2009). In order to identify whether there had been any real-world benefit for participants, the percentage of participants experiencing a reliable and clinically significant improvement in PTSD symptoms was determined using the minimum threshold of $\geq$10 for the PCL-C. Case criteria for PTSD was defined as PCL-C $\geq$50.

We conducted simple thematic analysis on the qualitative feedback captured at follow up to explore participants' wider experiences with Stand Easy and the acceptability of acupuncture compared to other treatments.

3.6 Ethical considerations

An evaluation proposal was approved by the ethical review panel for the Social Research and Evaluation MSc at the University of Huddersfield in June 2017. This was an evaluation of routine practice. Treatment choice remained with the patient and there was no randomisation or intervention by the evaluator. As such, the evaluation classified as "Service Evaluation" rather than "Research" and no formal NHS ethical approval was required (NHS Health Research Authority, 2016). Standard ethical practices still applied.

Individuals gave informed consent before participating (Appendix F&G) and again before completing the final questionnaire. Participants were able to withdraw at any point without giving reason. Data were anonymised and stored securely in accordance with the 1998 UK Data Protection Act. Discussions with previous Stand Easy service users helped Healthwatch Norfolk to ensure that participants were able to engage in the evaluation safely and effectively. We gave each participant a Healthwatch Norfolk information resource with details about local statutory and voluntary and community support for veterans with mental health conditions when the left the evaluation (Appendix H).

4. Results

4.1 Participant characteristics

Table 2 describes the demographic characteristics of the whole sample and compares the characteristics of individuals who did and did not complete treatment. All participants identified as White British males. The mean age was 47.3 years (*SD* 12, range 28 to 64). Most had served in the Army as Non-Commissioned Officers (NCOs) or in the ranks. The mean number of years that participants served in the military was 14.2 years (*SD* 7.4, range 4 to 25). The mean number of years between participants leaving the military and presenting to Stand Easy was 11.2 years (*SD* 10.2, range 1 to 40).

Table 2

Demographic characteristics.

Variable	Whole sample N (%)	Completer N (%)	Non-completer N (%)
Gender			
Male	26 (100.0)	21 (100.0)	5 (100.0)
Female	0 (0.0)	0 (0.0)	0 (0.0)
Ethnicity			
White British	26 (0.0)	21 (100.0)	5 (100.0)
Any other ethnicity	0 (0.0)	0 (0.0)	0 (0.0)
Age group			
<35	9 (34.6)	6 (28.6)	3 (60.0)
35-54	12 (46.2)	11 (52.4)	1 (20.0)
≥55	5 (19.2)	4 (19.0)	1 (20.0)
Service			
Royal Navy	1 (3.8)	1 (4.8)	0 (0.0)
Army	22 (84.6)	17 (81.0)	5 (100)
Royal Air Force	3 (11.5)	3 (14.3)	0 (0.0)
Rank on discharge			
Officer	1 (3.8)	1 (4.8)	0 (0.0)
NCO	18 (69.2)	15 (71.4)	3 (60.0)
Private or equivalent	7 (26.9)	5 (23.8)	2 (40.0)
Years served			
1-9	11 (42.3)	9 (42.9)	2 (40.0)
10-19	6 (23.1)	5 (23.8)	1 (20.0)
≥20	9 (34.6)	7 (33.3)	2 (40.0)
Years since discharge			
1-9	17 (65.4)	13 (61.9)	4 (80.0)
10-19	2 (7.7)	1 (4.8)	1 (20.0)
≥20	7 (26.9)	7 (33.3)	0 (0.0)

Table 3 describes the mental health of the whole sample with a comparison between completers and non-completers. The majority of participants reported that they had received a diagnosis of PTSD from a medical professional. On average (mean) participants received their diagnosis 3.3 years ago (*SD* 3.4, range 1 to 13). We did not ask how long participants had been symptomatic but all felt that their condition was at least partially related to trauma experienced in the military. Given that the mean number of years since discharge was 11.2 years, we felt it was reasonable to conclude that participants had been experiencing traumatic symptoms for a considerable period of time before diagnosis.

Nearly two thirds of participants were taking some form of antidepressant medication at pre-treatment. Participants endorsed high levels of symptomatic distress, as measured by the PCL-C and GHQ-12 at pre-treatment. Completers and non-completers scored similarly on both measures.

Table 3

Information about the participants' mental health.

Variable	Whole sample N (%)	Completer N (%)	Non-completer N (%)
Formal PTSD diagnosis			
Yes	23 (88.5)	19 (90.5)	4 (80.0)
No	2 (7.7)	1 (4.8)	1 (20.0)
Missing	1 (3.8)	1 (4.8)	0 (0.0)
Years since diagnosis			
<5 years	15 (57.7)	14 (66.7)	1 (20.0)
5-9 years	7 (26.9)	4 (19.0)	3 (60.0)
≥10 years	1 (3.8)	1 (4.8)	0 (0.0)
Missing[a]	3 (11.5)	2 (9.5)	1 (20.0)
Condition related to military			
Yes	20 (76.9)	16 (76.2)	4 (80.0)
Partially	6 (23.1)	5 (23.8)	1 (20.0)
No	0 (0.0)	0 (0.0)	0 (0.0)
Medication at pre-treatment			
Yes	16 (61.5)	14 (66.7)	2 (40.0)
No	10 (38.5)	7 (33.3)	3 (60.0)
Outcomes at pre-treatment			
PCL-C	64.3	64.0	65.8
GHQ-12	8.8	8.4	10.6

[a]This includes two participants who did not have a formal PTSD diagnosis.

Outcome measures aside, the information described in Tables 2 and 3 was self-reported and could not be validated without access to the participants' military and patient records. There were no obvious differences between completers and non-completers, although this was not tested due to the small sample size.

4.2 Outcome measures at pre- and post-treatment

Data were non-normally distributed and so non-parametric testing was conducted. Significant reductions were observed on both the PCL-C (Z = -4.016, p<.001) and GHQ-12 (Z = -3.858, p<.001) from pre- to post-treatment, indicating an improvement in PTSD symptoms and symptoms of depression and anxiety. For information, the PCL-C and GHQ-12 were found to have high internal consistency at pre- and post-treatment (PCL-C a = .88, .92; GHQ-12 a = .74, .95).

Using ITT analysis, the mean PCL-C score at post-treatment was 35.3, which is a mean change of -29 (95% CI: [-21.5 to -36.5], range 0 to 56) from pre-treatment. The mean GHQ-12 score at post-treatment was 2.1, which is a mean change of -6.7 (95% CI: [-4.7 to -8.7], range 0 to 12). Substantial effect sizes were observed for the PCL-C and GHQ-12 from pre- to post-treatment. The effect size for the PCL-C was huge at 2.7 (*SD* 10.8, 95% CI: [2.0, 3.4]). The effect size for the GHQ-12 was very large at 1.8 (*SD* 3.8, 95% CI: [1.2, 2.3]). These effect sizes should be treated as conservative estimates due to the inclusion of non-completer data.

Figure 2 shows the median and range of the pre- and post-treatment PCL-C scores. The GHQ-12 scores have not been displayed because most post-treatment scores were 0 and so the data did not lend itself to this kind of visualisation.

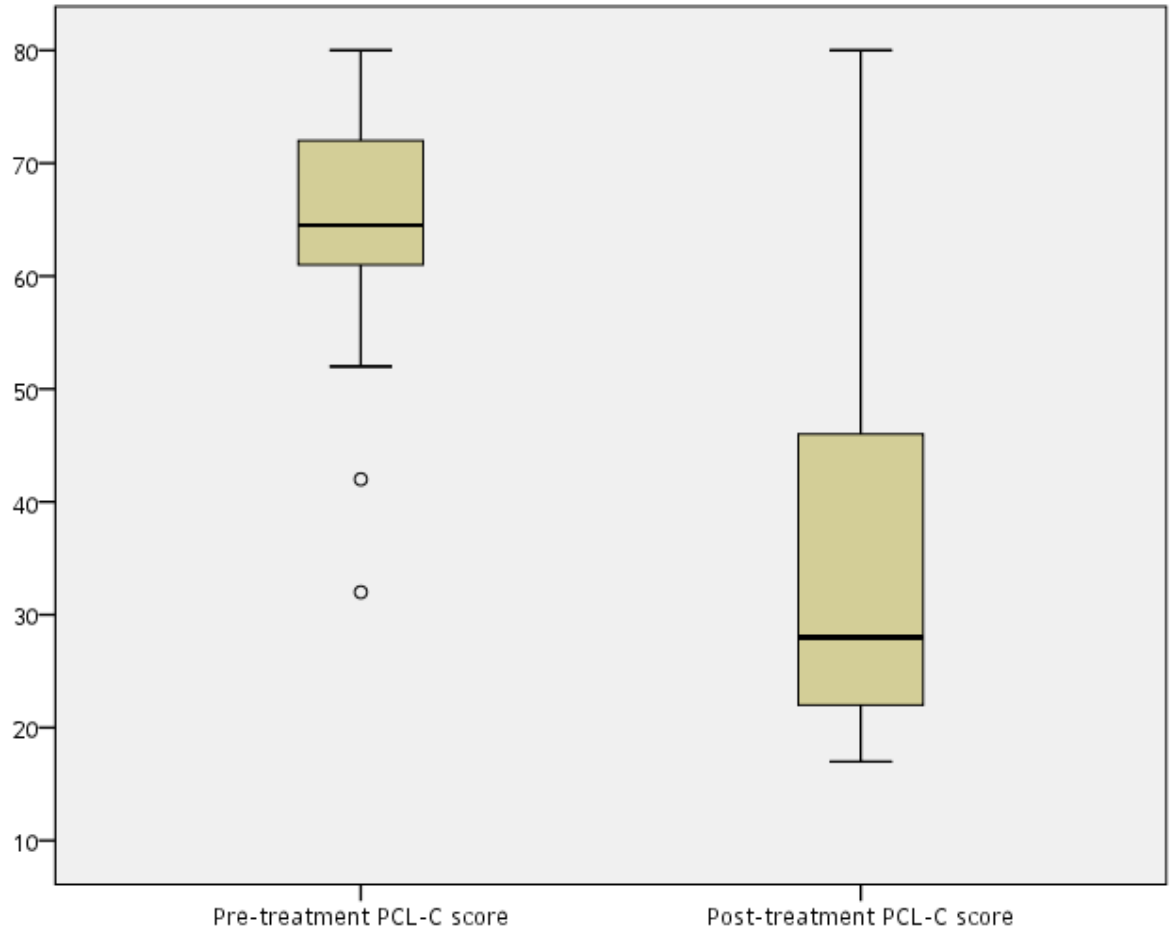

Figure 2. Boxplots of pre- and post-treatment PCL-C scores.

At pre-treatment, 90.5% of completers met case criteria for PTSD on the PCL-C (≥50). No completers met case criteria at post-treatment. All completers experienced a reduced PCL-C score at post-treatment of ≥10, which is indicative of reliable and clinically significant improvement. Including non-completers, for whom only a pre-treatment score was recorded, 92.3% met case criteria at pre-treatment, which reduced to 19.2% at post-treatment. Four in five (80.8%) of all participants experienced a reliable and clinically significant improvement.

Figure 3 illustrates the pre- and post-treatment PCL-C scores for all participants. Each circle represents a single participant, with the pre-treatment score on the *y* axis and the post-treatment score on the *x* axis. The dashed lines mark the threshold for case criteria. The pink line marks improvement (shown by any circles beneath this line), the blue line marks a reliable and clinically significant improvement of ≥10 and the green line marks an improvement of ≥20.

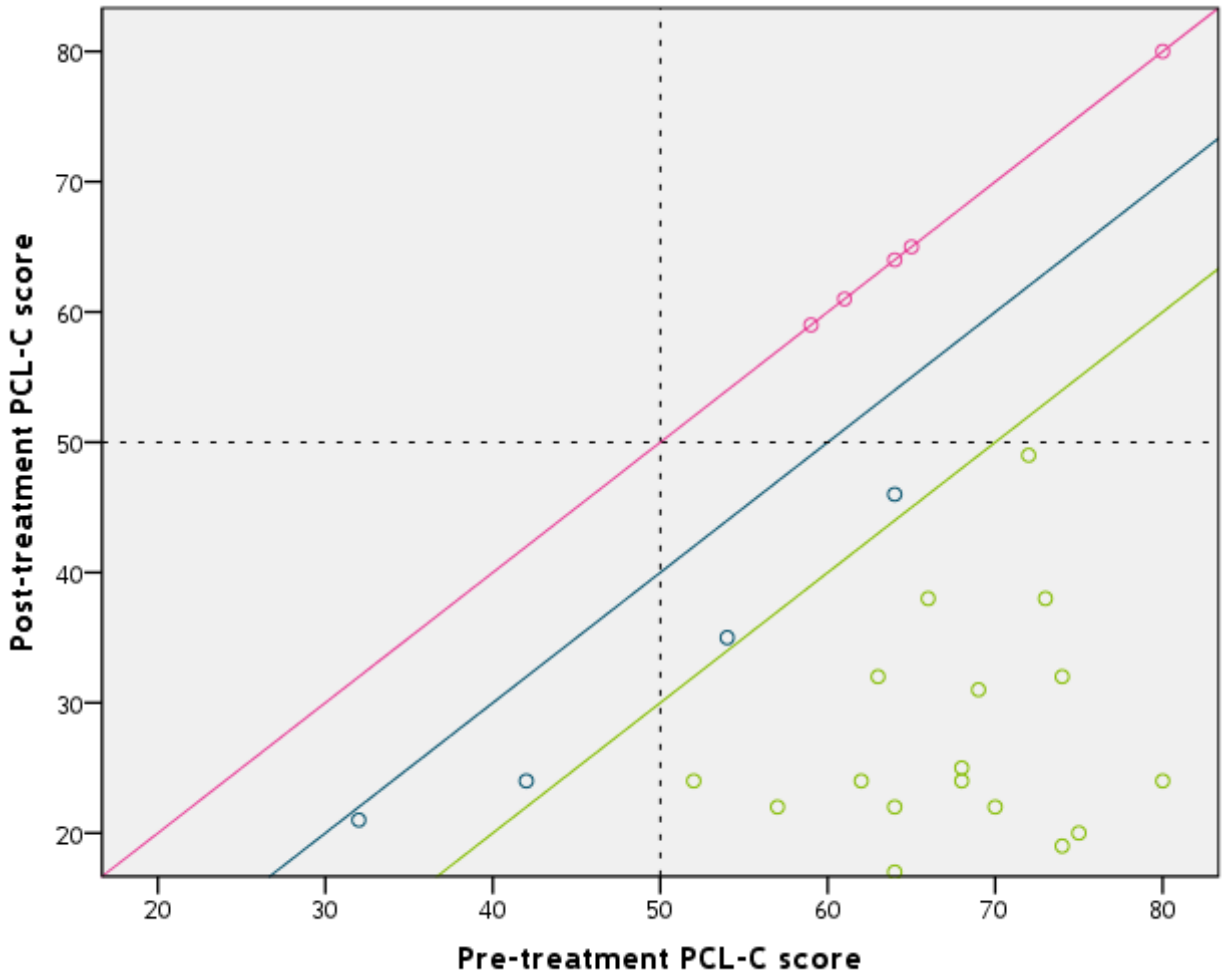

Figure 3. Pre- and post-treatment PCL-C scores for each participant.

4.3 Outcome measures at follow up

Nine participants (34.6%) completed the follow up outcome measures three months after their sixth treatment session. Data from these participants suggested that the positive effects observed at post-treatment were sustained over this period, as shown in Table 4. All nine participants reported a reduced PCL-C score at follow up of ≥10 compared to pre-treatment. None met case criteria at follow up.

Table 4

Mean scores at pre-, post-treatment and follow up for the nine participants who completed outcome measures all three stages of the evaluation.

	Pre-treatment		Post-treatment		Follow up	
Measure	**Mean (Range)**	**SD**	**Mean (Range)**	**SD**	**Mean (Range)**	**SD**
PCL-C	65.2 (52-80)	9.7	27 (17-46)	9.1	33.2 (24-41)	7.2
GHQ-12	10.1 (6-12)	2.4	0 (0-0)	0	0.9 (0-8)	2.7

The follow up measure was intended to assess the longer-term benefits of acupuncture once treatment had ended. However, seven of the nine participants (77.8%) who completed the follow up questionnaire chose to remain in the Stand Easy Service and received at least three additional treatment sessions between post-treatment and follow up. In this way, the follow up results are perhaps best interpreted as an indication that the positive effects of acupuncture were sustained over a period of three months while treatment continued.

Four participants left the Stand Easy service at least one month before they completed the follow up questionnaire. These participants recorded a mean change in PCL-C score from pre-treatment to follow up of 24.8 (range 12 to 48), indicating that the effects of acupuncture were sustained for these individuals for at least one month after treatment ended. The five participants who had received a treatment session within one month of follow up recorded a greater mean change of 37.8 (range 16 to 55). With such a small sample it was not possible to establish if the difference in outcomes between these two groups was significant.

Interestingly, one participant who had not received treatment for two months indicated that he felt he would benefit from some “top-up sessions” in his response to the follow up questionnaire (see next section).

4.5 General experiences

The follow up questionnaire involved nine, largely open-ended, questions to enable participants to share their general experiences with the Stand Easy acupuncture service in more detail. Feedback was captured from nine individuals, which is 34.6% of all participants (completers and non-completers). While informative, their experiences may not be reflective of the whole sample and the feedback should therefore be interpreted with some caution.

The first question asked participants to describe any changes they had experienced in their health and happiness as a result of acupuncture. All participants reported positive changes, reflecting improvements in several key PTSD symptoms as well as making general comments about increased positivity and happiness:

- I feel calmer and more in control. I have less angry moments and am sleeping significantly better. However, I have not had treatment for over two months now and feel that I would benefit from some top-up sessions.
- Relaxed, more content, improved sleep.
- Anxiety levels lowered, sleep improved, more relaxed, more sociable.
- A little more positive, whereas before I was seeing the downside of a lot of things. A better understanding of how the body works and reacts to acupuncture.
- Back pain reduce, sleeping better. Now have a reason to get up each day. Starting to look forward.
- Although some symptoms remain, overall there has been a more calming effect and reduction in certain areas.
- Feeling more happy with myself and coping better with other people as well as situations in general.
- I have felt that the acupuncture treatment has been beneficial, although the PTSD symptoms are still with me, in a less invasive way and I still have thoughts of various incidents in my head but generally they are fewer than before treatment.
- Feel much happier and in a far better place then I was.

Most participants felt that they had experienced these changes within a week of their first treatment session (6, 66.7%) or within the first six weeks of treatment (2, 22.2%). One participant (11.1%) reported experiencing effects sometime later.

Participants were asked whether they had experienced any negative side effects. One participant (11.1%) reported the following:

- I felt “a bit rough” the day after sometimes but it was always just a temporary feeling.

Eight participants had received at least one form of treatment for PTSD within the last five years. These participants were asked what distinguished acupuncture from previous treatments. Four (50%) felt that acupuncture was different because it had actually worked:

- Simple - it worked.

One (12.5%) participant felt that acupuncture was preferable to their negative experiences with other therapies (CBT and/or EMDR):

- I felt relaxed going to sessions, didn't feel pressured into talking about situations. I lay on a bed and [the acupuncturist] does his work as with therapies I'm already stressed before I have an appointment and extremely exhausted.

Another participant (12.5%) reported positive experiences with therapies but felt that acupuncture compared favourably:

- Talk therapy has been very useful in the past, reliving my "vivid" experiences was not the whole treatment. Acupuncture is certainly another positive avenue to explore.

Two participants (25.0%) said that acupuncture was more useful than medication:

- Medication isn't a cure, it just masks symptoms. Acupuncture makes you feel better and returns you to being whole.
- Although medication has suppressed some symptoms there have been side effects and reduction of such feels artificial even if effective. Acupuncture seems to produce a natural calming effect even if slow, but appears to be making a levelling off effect, overall, and has been beneficial in easing the negative effect of many symptoms.

Participants were directly asked whether the fact that they did not have to talk about their thoughts and feelings or relive traumatic experiences was a helpful or unhelpful aspect of the acupuncture treatment. All participants said they had found this useful:

- Helpful because I struggle talking to strangers.
- Very helpful due to me not having to use as much of my energy.
- I found not talking especially to a non-veteran helped. However, if an ex-service veteran with combat experience could administer acupuncture as well as discuss it would make a massive difference.
- Very useful with an open mind and a willingness to accept that acupuncture works, it can and does achieve an instant relief.
- It is very helpful as I am not expected to open up to a stranger who knows nothing of the things I've seen/done and experienced.

- Yes, helpful because I didn't have to keep re-visiting my trauma(s) although the treatment of acupuncture seemed to help me by not talking specifically about trauma(s).
- Yes very helpful, I also have not thought about my past experiences since coming.
- I found it incredibly helpful. I could feel my body reacting to the acupuncture treatment almost immediately - I am not convinced the talking therapies did any good at all.

Participants were asked to report the most positive aspects of the acupuncture service at Stand Easy. Six comments (50.0%) related to the friendly and calming manner of the acupuncturist:

- Always a very calming experience before, during and after. Made to feel very individual and not patronised.
- [The acupuncturist] was able to put me at ease with a calm, re-assuring demeanour. I felt I was able to relax whilst receiving treatment. He is to be thanked for his caring attitude to sufferers of PTSD.

Six comments (50.0%) related to the treatment itself, which was found to be quick, easy and effective:

- It's quick, easy and doesn't take long.
- It works and was positive straight away.

When asked how the Stand Easy service could be improved, three participants (33.3%) could not say and one (11.1%) identified practical challenges with the location and parking availability. Five participants (55.6%) felt that the service should be made more available to veterans across the country:

- The service I received was suitable to my needs. I cannot think of any area I might improve. I would recommend that veterans with the PTSD diagnosis should try acupuncture at Stand Easy.
- The treatment itself you cannot fault. However access to treatment, i.e. more clinics across the country (I appreciate and understand that this is not possible currently).

Seven participants responded to an invitation to leave any other feedback. Two participants (28.6%) left general comments:

- I'm so relieved that I found this service, for me and my family.
- Acupuncture has been a very positive experience for me. Although PTSD is something I have to live with on a daily basis, any help is very welcome.

Two participants (28.6%) reiterated their belief that the service needed more promotion and availability:

- This service needs an advertising surge, not enough people know about it.
- It should be widely promoted and available to all people with PTSD - it has been a life saver - quite literally.

Three participants (42.9%) commented on the personal qualities of Stand Easy staff and volunteers:

- Courteous, confidential in approach, not made to feel like just another patient and someone is listening.
- The people are kind and understanding and do not judge anyone.
- Firstly [the acupuncturist] made me feel very comfortable and helped me out of the mess I was in. I have tried other forms of treatment and if anything they made my life harder. Stand Easy really helped me to focus and with the help of the treatment I was able to start living a normal, happy life again.

5. Discussion

In this evaluation we observed that veterans with PTSD who completed six sessions of acupuncture treatment with Stand Easy reported statistically significant improvements in PTSD symptoms from pre- to post-treatment. Significant improvements were also observed in symptoms of anxiety and depression.

Apart from the five non-completers, whom we assumed experienced no benefits, 100% of participants experienced an improvement in PTSD symptoms from pre- to post-treatment. Moreover, every participant who completed the initial treatment course experienced a reliable and clinically significant improvement. At pre-treatment, 90.5% of completers met case criteria for PTSD. No completers met case criteria at post-treatment, even if qualitative feedback showed that some were still living with symptoms. Using ITT analysis, 92.3% of participants met case criteria at pre-treatment compared to 19.2% at post-treatment. Four in five (80.8%) of the whole sample experienced a reliable and clinically significant improvement in PTSD symptoms.

The improvements in symptoms from pre- to post-treatment were very striking. Focusing on PTSD symptoms, our effect size was more than twice as large as that reported in a recent observational study of a 6-week CBT course for veterans (Murphy et al., 2015), although it should be noted that this result was at 6 month follow up (no post-treatment scores were reported). Interestingly, the effect size was also much larger than those reported in other acupuncture studies (e.g. Engel et al., 2014; Hollyfield et al., 2007; King et al., 2015; Prisco et al., 2013). We recommend care when comparing results between studies but it is clear that the short-term benefits observed in this evaluation were quite remarkable in the context of the wider literature. If anything, our effect sizes were conservative given the inclusion of data from non-completers.

Limited information suggested that the benefits remained at three month follow up. However, this finding should be treated with some caution due to the fact that only nine participants completed the follow up measure. Critically, most of these participants chose to continue receiving acupuncture after they had completed their initial treatment course, which means that it is not possible to interpret the follow up results as a measure of the sustained benefits of acupuncture once treatment ended. Given that the effects of therapy generally diminish over time this is an important limitation. That said, the positive effects observed at follow up do at least provide further evidence of the effectiveness of acupuncture while treatment continues.

The fact that participants wanted to continue receiving acupuncture may be a testament to their positive experiences with Stand Easy. Acupuncture is a holistic intervention and it is possible that participants continued to receive treatment for reasons other than PTSD. However, it may also suggest that the six week schedule was not felt to be sufficient for the treatment of PTSD. Other studies have used a 12 week protocol (e.g. Hollyfield et al., 2007) and there is a need for further research to explore this issue in more detail.

Our dropout rate compared favourably with rates observed in other studies with veterans (e.g. Currier et al., 2014, Murphy et al., 2015; Najavits, 2015) and non-veterans (e.g. Imel et al., 2013). Individuals who did not complete treatment

attended several sessions (median 4) and the reasons for dropout, as stated by the acupuncturist, were not related to treatment. Taken together, these findings indicated that acupuncture was generally found to be an acceptable treatment.

Qualitative feedback from the nine participants who completed the follow up questionnaire showed that acupuncture compared very favourably to other treatments. Only one participant reported that they had experienced negative effects, suggesting that acupuncture was generally a safe treatment. Participants were very positive about staff and volunteers at Stand Easy and felt that a useful aspect of the acupuncture treatment was that they were not required to talk about their thoughts and feelings (this question was directly asked). This finding links to wider research suggesting that male veterans, and men in general, may benefit from non-disclosive forms of therapy, as discussed in the Introduction, and indicates that acupuncture could be an acceptable alternative to mainstream psychotherapy for such individuals.

In most cases positive effects were noticed within six weeks, usually as early as the first treatment session. This suggests that acupuncture could be usefully employed in the short-term to prepare individuals as they wait for courses of psychotherapy through mainstream services. This could be particularly valuable given the national shortfall in mental health provision (Parliamentary and Health Service Ombudsman, 2018). Again, it is important to stress that information from the follow up questionnaire was based on a very small sample and must therefore be treated tentatively.

While several limitations are acknowledged (see next section), this evaluation has gathered important evidence to demonstrate the short-term effectiveness and acceptability of the Stand Easy acupuncture service. We believe that this evidence justifies further research in this area, as described in the Conclusion.

6. Strengths and weaknesses

6.1 The service evaluation approach

A service evaluation approach enabled us to undertake a close examination of individuals in real-world settings, yielding results about routine practice at Stand Easy that we expect will be instructive to further research and service development. This is an important strength compared to RCT design, because the results gained through RCTs are increasingly recognised to represent ideal scenarios far removed from the day-to-day realities of clinical practice, which undermines their validity as assessments of effectiveness (e.g. Najavits, 2015).

That said, it must be noted that this was an evaluation of a specific acupuncture service rather than an assessment of acupuncture as a treatment for PTSD in general. Treatment was provided by a single acupuncturist and it was therefore impossible to distinguish therapy and therapist effects in the analysis. By consequence, it is unclear whether our results should be taken as evidence of the effectiveness of acupuncture *per se* or the effectiveness of acupuncture as practised by the Stand Easy acupuncturist.

The improvements we observed were so considerable that it would be reasonable to attribute at least some of the benefit to acupuncture. However, the fact that our effect sizes were much larger than those reported in other acupuncture studies is indicative of the significance of therapist effects in this evaluation. Given that veterans may respond better to a military sensitive treatment (as discussed in the Introduction), it is plausible that the acupuncturist's experience treating this population group played a key role in recovery. Indeed, in the follow up questionnaire several participants highlighted the personal qualities of the acupuncturist as the most positive aspect of the Stand Easy service.

Similarly, the Stand Easy acupuncturist does not follow a consistent protocol (after the initial session), preferring to vary treatment according to individual need. It would not have been appropriate to dictate treatment in this evaluation but the lack of consistency further undermines broad conclusions. In this way, further research with a number of providers would be needed to fully assess the effectiveness and acceptability of acupuncture as a treatment for PTSD in general.

6.2 Limitations

This evaluation was designed to be as robust as possible with very limited resources. Nonetheless, we acknowledge that practical limitations necessitated some sacrifices in evaluation design. Key limitations are set out in full beneath.

<u>Confounding</u>

This evaluation did not have a control group and so it is impossible to measure what proportion of the symptomatic improvements would have occurred due to natural recovery or placebo effects. Similarly, while current NHS treatment for PTSD was one of the exclusion criteria, there were no controls for other variables, such as changes in medication, which may have affected results.

It is unlikely that the unusually large benefits observed in this evaluation could be explained without reference to acupuncture as a major factor. Moreover, taking duration since leaving the military as a proxy measure, it is plausible that participants had been experiencing PTSD symptoms for many years before presenting to Stand Easy, which reduces the likelihood of spontaneous recovery.

Information and measurement bias

The evaluation only used two outcome measures. While both the PCL-C and GHQ-12 were found to have high internal consistency, utilising a variety of instruments would have increased the validity of the results. The PCL-C and GHQ-12 are self-report measures and are susceptible to the biases affecting measures of that kind. The diagnostic thresholds that we referenced are well established but must be treated as approximations. PCL-C and GHQ-12 scores cannot be interpreted as replacements for formal clinical assessments and some participants may have been misclassified in terms of their case criteria and symptomatic severity.

On a related note, two administration volunteers at Stand Easy were responsible for administering the pre- and post-treatment questionnaires. This means that the majority of data were collected by people with a vested interest in the organisation under study who were not experienced in social research methods. Confidence in the data is increased by the fact that the follow up questionnaire, which was administered by Healthwatch Norfolk, presented similar results.

Lack of robust follow up data

Data from the follow up measure were not sufficiently robust to support conclusions about the longer-term benefits of acupuncture. Less than half of all participants completed the follow up questionnaire and most who did were still receiving treatment from Stand Easy at that time. As such, follow up results cannot be interpreted as a measure of the longer-term benefits of acupuncture after treatment, as originally intended, although they may be taken as further evidence of the effectiveness of acupuncture while treatment continues.

Generalisability

Our sample was broadly similar to clinical samples in other research (e.g. Murphy et al., 2015). However, some population groups were under-represented or not represented at all, such as women and individuals from an ethnic minority background. Due to the small and non-representative sample, as well as the other limitations just described, we recommend that great care is taken before generalising from the results of this evaluation.

Funding

We acknowledge that this evaluation was funded by the British Acupuncture Council but it is important to state that we did not perceive any conflict of interest. Healthwatch Norfolk is established in statute as the *independent* champion for health and care service users in Norfolk. Our role under the Health and Social Care Act (2012) is to represent the views and experiences of patients and the public and we discharge this responsibility through all our research and evaluation activities, whether commissioned by a particular organisation or not.

7. Conclusion

This evaluation observed significant improvements in PTSD symptoms and symptoms of depression and anxiety in a sample of 26 veterans over a period of six weeks. These improvements were remarkable, both in their own right and compared to previous research, providing good evidence for the short-term effectiveness of acupuncture as practised at Stand Easy. Only one participant reported experiencing any negative effects and the Stand Easy service was found to be acceptable compared to other treatments.

The evaluation was unable to overcome some of the key shortcomings with previous acupuncture research (highlighted by Grant et al., 2017). In particular, problems administering the follow up questionnaire meant that it was not possible to measure longer-term effectiveness over a period of three months, as originally intended. Also, the evaluation focused specifically on a single provider and so great caution should be taken when generalising results.

These limitations notwithstanding, we believe that our results make a positive contribution to the evidence base regarding the effectiveness and acceptability of acupuncture as a treatment for veterans with PTSD, justifying further research in this area.

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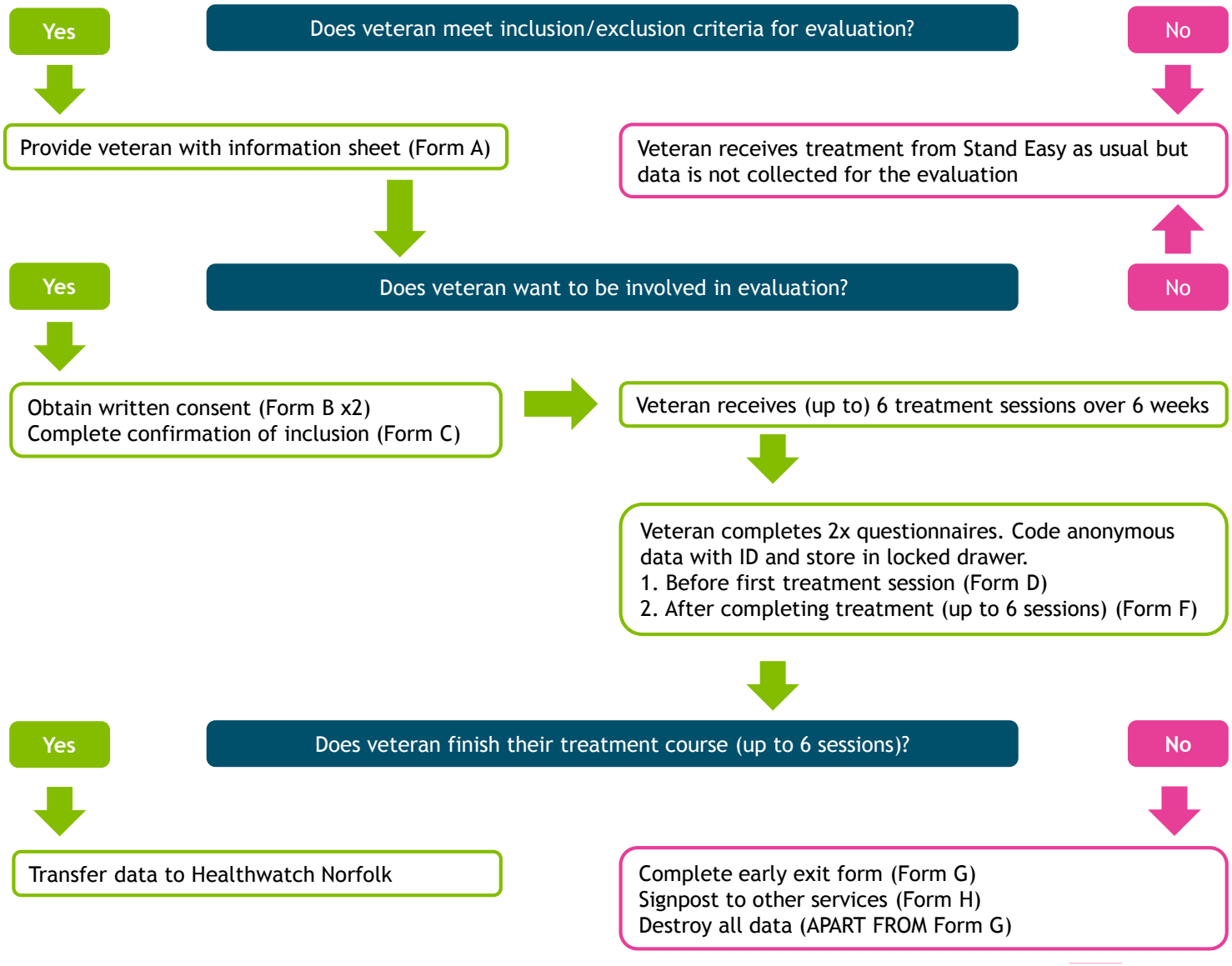
Appendix A: Evaluation flow chart for Stand Easy



Healthwatch Norfolk evaluation of Stand Easy

Form C: Confirmation of inclusion in evaluation

Note: For Stand Easy purposes only.

Participant ID:		
	Yes	**No**
Does the client have sufficient understanding of English to give informed consent to be a part of this evaluation?	☐	☐
Is the client currently receiving therapy from an NHS mental health service?	☐	☐
Has the client received acupuncture within the last six months?	☐	☐
Is there any evidence of severe illness or injury? *This includes but is not limited to: dependency on drugs and/or alcohol, psychotic symptoms, prominent homicidal or suicidal ideation and physical conditions unsuitable for acupuncture.*	☐	☐
Are you satisfied that the client is suitable for inclusion in this evaluation?	☐	☐

Name of Therapist: …….

Signature of Therapist: ……

Date: ……

Healthwatch Norfolk evaluation of Stand Easy

Form D: Health and wellbeing questionnaire (1)

This section in blue should be completed by Stand Easy

Date: _____ ID: _____

How many treatments have been received so far? _____

NOTE: THIS QUESTIONNAIRE SHOULD BE ADMINISTERED BEFORE THE FIRST TREATMENT SESSION

Instructions to participants

Thank you for agreeing to be a part of this Healthwatch Norfolk evaluation to measure the effectiveness and acceptability of acupuncture as a treatment for veterans with post-traumatic stress disorder (PTSD). This questionnaire is the first of three questionnaires we will be asking you as part of the evaluation over the next few months. The questionnaire has 12 short questions about you and your health and wellbeing.

As we explained when you gave your consent, any information that you give as part of this evaluation will be securely stored by Stand Easy and passed onto Healthwatch Norfolk in accordance with the UK Data Protection Act 1998. Healthwatch Norfolk will use your feedback alongside feedback from other veterans to produce a written report to share with Stand Easy, The British Acupuncture Council and The University of Huddersfield.

All feedback will be anonymous. Your name will not be attached to your information and you will not be named in the report.

If you have any questions about the evaluation, please contact the Healthwatch Norfolk researcher, Edward Fraser, as follows:

Tel: 0808 168 9669

Email: edward.fraser@healthwatchnorfolk.co.uk

1. How long did you serve in the British Armed Forces?

Year enlisted: _____ Year discharged: _____

2. What branch of the Forces did you serve with?

- ☐ Army
- ☐ RAF
- ☐ Royal Navy
- ☐ Royal Marines

3. What was your rank on discharge?

Army	RAF	Royal Navy
☐ Pte/Mne	☐ AC/LAC/JT	☐ AB
☐ LCpl to Cpl	☐ Cpl	☐ LH
☐ Sgt to WO1	☐ Sgt to WO	☐ PO to WO1
☐ 2nd Lt to Maj	☐ Plt Offr to Sgn Ldr	☐ Mid to Lt Cdr
☐ Lt Col and above	☐ Wg Cdr & above	☐ Cdr & above

4. What was your age on your last birthday?

_____

5. What is your gender?

- ☐ Female
- ☐ Male
- ☐ Prefer not to say

6. What is your ethnic group?

Choose one section from A to E, then tick one box which best describes your ethnic group or background…

A. White

- ☐ English/Welsh/Scottish/Northern Irish/British
- ☐ Irish
- ☐ Gypsy or Irish Traveller
- ☐ Any other white background

B. Mixed/Multiple

- ☐ White and Black Caribbean
- ☐ White and Black African
- ☐ White and Asian
- ☐ Any other Mixed/Multiple background

C. Asian/Asian British

- ☐ Indian
- ☐ Pakistani
- ☐ Bangladeshi
- ☐ Chinese
- ☐ Any other Asian/Asian British background

D. Black/African/Caribbean/Black British

- ☐ African
- ☐ Caribbean
- ☐ Any other Black/African/Caribbean/Black British background

E. Other ethnic group

- ☐ Arab
- ☐ Any other ethnic group
- ☐ Prefer not to say

If other, please describe:

7. In what year were you first diagnosed with PTSD?

_____

8. Is your PTSD related to your time in the military?

- ☐ Yes
- ☐ No
- ☐ Partially (please explain):

9. What medication are you currently taking to help with your PTSD? (*If you are not taking any medication, please skip to the next question).*

Name of medication	Current dosage per week

10. Below is a list of problems that veterans sometimes have in response to stressful experiences. Please read each problem carefully and put an "X" in the box to indicate how much you have been bothered by that problem in the LAST MONTH…

Response	Not at all (1)	A little bit (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
Repeated, disturbing memories, thoughts, or images of a stressful experience from the past?					
Repeated, disturbing dreams of a stressful experience from the past?					
Suddenly acting or feeling as if a stressful experience were happening again (as if you were reliving it)?					
Feeling very upset when something reminded you of a stressful experience from the past?					
Having physical reactions (e.g., heart pounding, trouble breathing, or sweating) when something reminded you of a stressful experience from the past?					
Avoid thinking about or talking about a stressful experience from the past or avoid having feelings related to it?					
Avoid activities or situations because they remind you of a stressful experience from the past?					
Trouble remembering important parts of a stressful experience from the past?					
Loss of interest in things that you used to enjoy?					
Feeling distant or cut off from other people?					
Feeling emotionally numb or being unable to have loving feelings for those close to you?					
Feeling as if your future will somehow be cut short?					
Trouble falling or staying asleep?					
Feeling irritable or having angry outbursts?					
Having difficulty concentrating?					
Being "super alert" or watchful on guard?					
Feeling jumpy or easily startled?					

11. If you experienced any of the problems on the previous page, how DIFFICULT have the problems made it for you to do your work, take care of things or get along with other people?

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
☐	☐	☐	☐

12. Below are some questions about your general health. Please read each question carefully and put an "X" in the box to indicate how often in the LAST FEW WEEKS you have…

Response	Better than usual	Same as usual	Worse than usual	Much worse than usual
Been able to concentrate on whatever you're doing?				
Lost much sleep over worry?				
Felt that you were playing a useful part in things?				
Felt capable of making decisions about things?				
Felt constantly under strain?				
Felt that you couldn't overcome your difficulties?				
Been able to enjoy your normal day to day activities?				
Been able to face up to your problems?				
Been feeling unhappy or depressed?				
Been losing confidence in yourself?				
Been thinking of yourself as a worthless person?				
Been feeling reasonably happy all things considered?				

Healthwatch Norfolk evaluation of Stand Easy

Form F: Health and wellbeing questionnaire (3)

This section in blue should be completed by Stand Easy

Date: _____ ID: _____

How many treatments have been received so far? _____

NOTE: THIS QUESTIONNAIRE SHOULD BE ADMINISTERED AFTER THE SIXTH SESSION (OR, IF EARLIER, ON SUCCESSFULLY FINISHING TREATMENT)

What was the outcome of the treatment programme? *Please select ONE option…*

- ☐ Participant continued to receive treatment from Stand Easy for PTSD
- ☐ Participant continued to receive treatment from Stand Easy for another reason
- ☐ Participant left Stand Easy and was referred to another service for treatment for PTSD
- ☐ Participant left Stand Easy but did not require further treatment for PTSD
- ☐ Other, please specify:

_____
_____
_____
_____

Instructions to participants

Thank you for agreeing to be a part of this Healthwatch Norfolk evaluation to measure the effectiveness and acceptability of acupuncture as a treatment for veterans with post-traumatic stress disorder (PTSD).

This questionnaire is the second of three questionnaires we will be asking you as part of the evaluation over the next few months. The questionnaire has 3 short questions about your health and wellbeing.

As we explained when you gave your consent, any information that you give as part of this evaluation will be securely stored by Stand Easy and passed onto Healthwatch Norfolk in accordance with the UK Data Protection Act 1998. Healthwatch Norfolk will use your feedback alongside feedback from other veterans to produce a written report to share with Stand Easy, The British Acupuncture Council and The University of Huddersfield.

All feedback will be anonymous. Your name will not be attached to your information and you will not be named in the report.

If you have any questions about the evaluation, please contact the Healthwatch Norfolk researcher, Edward Fraser, as follows:

Tel: 0808 168 9669

Email: edward.fraser@healthwatchnorfolk.co.uk

When you complete this questionnaire you will have finished your six weeks' of treatment with Stand Easy. Thank you for participating in this evaluation.

As explained in the Information Sheet, please note that we will be contacting you again in three months to complete the final questionnaire.

1. Below is a list of problems that veterans sometimes have in response to stressful experiences. Please read each problem carefully and put an "X" in the box to indicate how much you have been bothered by that problem in the LAST MONTH…

Response	Not at all (1)	A little bit (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
Repeated, disturbing memories, thoughts, or images of a stressful experience from the past?					
Repeated, disturbing dreams of a stressful experience from the past?					
Suddenly acting or feeling as if a stressful experience were happening again (as if you were reliving it)?					
Feeling very upset when something reminded you of a stressful experience from the past?					
Having physical reactions (e.g., heart pounding, trouble breathing, or sweating) when something reminded you of a stressful experience from the past?					
Avoid thinking about or talking about a stressful experience from the past or avoid having feelings related to it?					
Avoid activities or situations because they remind you of a stressful experience from the past?					
Trouble remembering important parts of a stressful experience from the past?					
Loss of interest in things that you used to enjoy?					
Feeling distant or cut off from other people?					
Feeling emotionally numb or being unable to have loving feelings for those close to you?					
Feeling as if your future will somehow be cut short?					
Trouble falling or staying asleep?					
Feeling irritable or having angry outbursts?					
Having difficulty concentrating?					
Being "super alert" or watchful on guard?					
Feeling jumpy or easily startled?					

2. If you experienced any of the problems on the previous page, how DIFFICULT have the problems made it for you to do your work, take care of things or get along with other people?

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
☐	☐	☐	☐

3. Below are some questions about your general health. Please read each question carefully and put an "X" in the box to indicate how often in the LAST FEW WEEKS you have…

Response	Better than usual	Same as usual	Worse than usual	Much worse than usual
Been able to concentrate on whatever you're doing?				
Lost much sleep over worry?				
Felt that you were playing a useful part in things?				
Felt capable of making decisions about things?				
Felt constantly under strain?				
Felt that you couldn't overcome your difficulties?				
Been able to enjoy your normal day to day activities?				
Been able to face up to your problems?				
Been feeling unhappy or depressed?				
Been losing confidence in yourself?				
Been thinking of yourself as a worthless person?				
Been feeling reasonably happy all things considered?				

Healthwatch Norfolk evaluation of Stand Easy

About this questionnaire

Thank you for continuing to be a part of this Healthwatch Norfolk evaluation to measure the effectiveness and acceptability of acupuncture as a treatment for veterans with post-traumatic stress disorder (PTSD). Your feedback is really important to help us improve mental health services for veterans in Norfolk and elsewhere across the country.

This questionnaire is the third and final questionnaire that we will be asking you to complete as part of the evaluation. The questionnaire has 14 short questions about your experiences with acupuncture and your current mental health and wellbeing. It should take about 15-20 minutes to complete. Where possible, please return your completed questionnaire within one week using the return envelope provided.

As we explained when you gave your consent, any information that you give as part of this evaluation will be securely stored by Stand Easy and passed onto Healthwatch Norfolk in accordance with the UK Data Protection Act 1998. Healthwatch Norfolk will use your feedback alongside feedback from other veterans to produce a written report to share with Stand Easy, The British Acupuncture Council and The University of Huddersfield.

All feedback will be anonymous. Your name will not be attached to your information and you will not be named in the report.

If you have any questions about the evaluation, please contact the Healthwatch Norfolk researcher, Edward Fraser, as follows:

Tel: 0808 168 9669

Email: edward.fraser@healthwatchnorfolk.co.uk

1. Please describe any changes you experienced in your health and happiness as a result of having acupuncture…

2. How soon after you began having acupuncture did you start to experience these changes? (Please tick ONE response)

- ☐ Within a week after I finished my first treatment
- ☐ During my first six weeks of treatment
- ☐ Sometime later
- ☐ I don't know / does not apply to me

3. Did you experience any negative side effects from acupuncture? (e.g. pain, excessive bleeding etc.)

- ☐ No
- ☐ Yes (please describe):

4. What other treatments for PTSD have you received WITHIN THE LAST FIVE YEARS? (Please tick ALL that apply. If you have not received any treatment or medication within the last five years then please move onto question 6).

- ☐ Cognitive Behavioural Therapy (CBT)
- ☐ Eye Movement Desensitisation and Reprocessing (EMDR)
- ☐ Other talking therapies or counselling
- ☐ Medication (e.g. anti-depressants)
- ☐ Other (please specify):

5. What distinguishes acupuncture from the treatments for PTSD you have had before?

6. Acupuncture does not *necessarily* involve talking about your thoughts and feelings, or reliving traumatic experiences. Please describe whether you found this to be a helpful or unhelpful aspect of the treatment…

7. What do you think are the most positive aspects of the acupuncture service at Stand Easy?

8. What aspects of the acupuncture service do you think could be improved?

9. Do you have any other feedback about your experiences of acupuncture or the service at Stand Easy?

10. Are you currently receiving treatment for PTSD? (Please tick ONE response)

- ☐ No, I am not currently receiving treatment for PTSD because I do not feel that I need any treatment
- ☐ No, I am not currently receiving treatment for PTSD because of another reason (please specify):

- ☐ Yes, I am receiving treatment from Stand Easy for PTSD
- ☐ Yes, I am receiving treatment from Stand Easy for another reason
- ☐ Yes, I am receiving treatment for PTSD from another organisation (please specify which organisation):

- ☐ Other, please specify:

11. What medication are you currently taking to help with your PTSD? (If you are not taking any medication, then please move onto the next question).

Name of medication	Current dosage per week

12. Below is a list of problems that veterans sometimes have in response to stressful experiences. Please read each problem carefully and put an "X" in the box to indicate how much you have been bothered by that problem in the LAST MONTH…

Response	Not at all (1)	A little bit (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
Repeated, disturbing memories, thoughts, or images of a stressful experience from the past?					
Repeated, disturbing dreams of a stressful experience from the past?					
Suddenly acting or feeling as if a stressful experience were happening again (as if you were reliving it)?					
Feeling very upset when something reminded you of a stressful experience from the past?					
Having physical reactions (e.g., heart pounding, trouble breathing, or sweating) when something reminded you of a stressful experience from the past?					
Avoid thinking about or talking about a stressful experience from the past or avoid having feelings related to it?					
Avoid activities or situations because they remind you of a stressful experience from the past?					
Trouble remembering important parts of a stressful experience from the past?					
Loss of interest in things that you used to enjoy?					
Feeling distant or cut off from other people?					
Feeling emotionally numb or being unable to have loving feelings for those close to you?					
Feeling as if your future will somehow be cut short?					
Trouble falling or staying asleep?					
Feeling irritable or having angry outbursts?					
Having difficulty concentrating?					
Being "super alert" or watchful on guard?					
Feeling jumpy or easily startled?					

13. If you experienced any of the problems on the previous page, how DIFFICULT have the problems made it for you to do your work, take care of things or get along with other people?

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
☐	☐	☐	☐

14. Below are some questions about your general health. Please read each question carefully and put an "X" in the box to indicate how often in the LAST FEW WEEKS you have…

Response	Better than usual	Same as usual	Worse than usual	Much worse than usual
Been able to concentrate on whatever you're doing?				
Lost much sleep over worry?				
Felt that you were playing a useful part in things?				
Felt capable of making decisions about things?				
Felt constantly under strain?				
Felt that you couldn't overcome your difficulties?				
Been able to enjoy your normal day to day activities?				
Been able to face up to your problems?				
Been feeling unhappy or depressed?				
Been losing confidence in yourself?				
Been thinking of yourself as a worthless person?				
Been feeling reasonably happy all things considered?				

Thank you

You have now finished the questionnaire. Thank you again for taking the time to be a part of this evaluation. Healthwatch Norfolk has been working to improve services for veterans since April 2015, and your contribution will help to give a voice to those of your comrades who are unable to speak up for themselves.

Please return your completed questionnaire to Healthwatch Norfolk using the return envelope provided as soon as possible.

This questionnaire allowed you to give detailed feedback about your experiences with acupuncture. Healthwatch Norfolk would like to publish some of your quotes alongside quotes from other veterans in a written report, which will be shared with Stand Easy, The British Acupuncture Council and The University of Huddersfield, and other stakeholders. As always, all quotes will be anonymous and no names will be used in the report, which means that nobody will know who said what.

Please confirm that you give your permission for Healthwatch Norfolk to publish your (anonymous) quotes by signing below:

Name of Participant: …….

Signature of Participant: ……

Date: …….

Next steps

Healthwatch Norfolk will be going through all the feedback that has been collected from local veterans over the next few months, and the plan is to publish the written report in April 2018. Please speak to staff at Stand Easy if you would like to be kept in touch about this piece of work.

If you feel you need some further support with your mental health, you will find enclosed a map of services for veterans in Norfolk. If you would like any further information, please contact Edward Fraser at Healthwatch Norfolk as follows:

Tel: 0808 168 9669

Email: edward.fraser@healthwatchnorfolk.co.uk

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Form A: Information sheet

What is Healthwatch Norfolk?

Healthwatch Norfolk is the independent consumer champion for health and care across the county. It is a registered charity and it is responsible for helping local people have their say about how their services are designed and delivered.

What is this evaluation about?

Stand Easy is a local charity that provides acupuncture to veterans with Post-traumatic Stress Disorder (PTSD) and other mental health problems. Stand Easy has asked Healthwatch Norfolk to evaluate their service using some money from the British Acupuncture Council. This evaluation is also part of a Masters in Science (MSc) at the University of Huddersfield. This is an opportunity for you to help Healthwatch Norfolk find out whether acupuncture is an acceptable and effective treatment so that it can be used to help other veterans with PTSD across Norfolk.

How can I get involved?

The evaluation will run from 01/07/2017 until 01/04/2018 and is open to veterans with a diagnosis of PTSD who would like to be involved. As part of the evaluation, you will receive up to six sessions of acupuncture from an experienced therapist over a period of six weeks. You will be asked to complete a short survey rating your current mental health at three stages:

1. Before your first treatment session
2. After your sixth session
3. Three months later

You will also be asked some simple questions about you and your experiences.

What will happen to my information?

Any information that you give as part of this evaluation will be securely stored by Stand Easy and passed onto Healthwatch Norfolk in accordance with the UK Data Protection Act 1998. All feedback will be anonymous. This means that your name will not be attached to your information. Healthwatch Norfolk will share your anonymous feedback (alongside feedback from other veterans) with The British Acupuncture Council and The University of Huddersfield. We will also publish your feedback in a written report but you will not be named in this report. Healthwatch Norfolk and The British Acupuncture Council may store your information for up to one year after the end of the evaluation (01/04/2018) to enable further analysis.

Important information

Participation in this evaluation is completely voluntary and if you do not wish to take part you will still be able to receive treatment from Stand Easy. You are free to withdraw from the evaluation without giving reason at any point until 31/03/2018. At this stage, we will be publishing the final report and it will no longer be possible for you to withdraw your information.

If you have any questions about the evaluation, please contact the Healthwatch Norfolk researcher, Edward Fraser, as follows:

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Form B: Consent form

Note: Two copies will be signed. One will be given to the participant and the other will be filed by Stand Easy.

Please read the following statements carefully and note that by initialling each box and leaving your signature below, you are giving your informed consent to be a part of this evaluation.

☐ I confirm that I have read and understood the Information Sheet related to this evaluation, and have had the opportunity to ask questions.

☐ I understand that my participation is voluntary and that I am free to withdraw at any time (before the publication of the final report 31/03/2018) without giving any reason.

☐ I understand that all my feedback will be anonymised.

☐ I give permission for Healthwatch Norfolk, University of Huddersfield and the British Acupuncture Council to have access to my anonymised responses.

☐ I agree to take part in the above evaluation.

Name of Participant: …….

Signature of Participant: …….

Date: …….

Name of Therapist: …….

Signature of Therapist: …….

Date: …….

Appendix H: Information resource detailing local mental health support for veterans

Form H: Information about local services

If you have concerns about your mental health you can speak to your GP about what support is available on the NHS:

healthwatch Norfolk
www.healthwatchnorfolk.co.uk

Veterans Stabilisation Programme (VSP): 16 week CBT/mindfulness based out patient programme. For PTSD and conditions where a veteran specific approach is preferred. Referrals made via The Wellbeing. Veteran status must be identified. Also contact The Walnut Tree Project.
Tel: 0300 123 1503 (NSFT) / 07494 799 023
Further details: click here

Veterans & Reservists Mental Health Programme (VRMHP): Assessment by MOD consultant psychiatrist with treatment guidance. Based in Nottingham. For veterans & reservists deployed since 1982 whose mental health may have suffered as a result of service. GP referrals preferable.
Tel: 0800 032 6258
Further details: click here

If NHS treatment is not found to be suitable, there are several free and veteran specific resources in the Third Sector, in addition to wider mental health resources like Mind:

Step 1: Supportive online community where members can anonymously share their problems. Guidance from trained professionals 24/7. For mild to moderate common conditions.
Tel: 0203 741 8080
Further details: click here

Step 2: 'Hidden Wounds' provides support and self-help skills remotely or face to face. For mild to moderate common conditions, anger and alcohol.
Tel: 0808 2020 144
Further details: click here

Steps 2-4: For mild conditions to complex PTSD. Inpatient treatment in 3 national centres, complemented by community support. Local monthly support group in Norwich.
24/7 Helpline: 0800 138 1619
Further details: click here

Step 3: Up to 12 free sessions from a local, accredited psychotherapist. For mild to moderate conditions (usually common mental health). GP referrals preferable.
Tel: 01263 863 900
Further details: click here

Bespoke alcohol and drugs service provided by veterans. Part of the Matthew Project and Norfolk Recovery Partnership.
Tel: 01603 626 123
Details: click here

A range of support via contact centres in King's Lynn & Norwich. Treatment through the wellbeing service. For mild to moderate conditions.
Tel: 0300 111 2030
Details: click here

Veteran specific acupuncture and alternative treatments for PTSD. Based in Norwich. Especially suitable for those who don't want talking therapies.
Tel: 01603 666 546
Details: click here