



Combining psychotherapy with craniosacral therapy for severe traumatized patients: A qualitative study from an outpatient clinic in Norway

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ABSTRACT

Background: Craniosacral therapy (CST) is an established complementary modality for several health complaints. A clinic for psychosomatics in Norway has included CST into a multimodal treatment approach for severely traumatized patients. The aim of this study was to investigate and describe the indications for the use of craniosacral therapy within trauma therapy. Specifically, to explore treatment philosophy, criteria for improvement, treatment aims, and the evaluation of the risk profile of the multimodal treatment approach.

Methods: Semi-structured individual interviews (n = 8) and one focus group interview were conducted with the therapists at the Clinic for Psychosomatics, Hospital of Southern Norway, Kristiansand, Norway. The text data were transcribed verbatim, and the analysis of the material was conducted according to conventional and direct content analysis.

Results: The therapists at the clinic applied a holistic treatment approach, based on their understanding of mind and body as one entity. To access emotions and traumata, they used a mixture of different treatment techniques. The therapists experienced patients with severe bodily symptoms as being less cognitively present and attributed this to the symptoms craving most mental resources. The craniosacral therapists' specific aims and task within the multimodal trauma therapy was to ease these physical complaints, so that cognitive and emotional resources could be utilized for therapy. The psychotherapists found that emotions and traumata were more accessible after CST. The general treatment goals were to increase symptom tolerance levels and to enable better self-care. Furthermore, the ability to transform negative behaviors and develop positive alternatives were considered to be signs of improvement.

Conclusion: The study participants considered that patients with complex traumas, including post-traumatic stress disorder, seemed to benefit from this multimodal treatment approach and appreciated its' holistic treatment philosophy, including craniosacral therapy. With regard to patient safety, the study participants recommended that craniosacral therapy for severely traumatized patients should only be provided in cooperation with psychotherapists, or other highly qualified health personnel working in specialized institutions.

1. Background

In psychology, the term trauma is used in situations that adversely

affect the individual's mental health or personality development.¹ Post-traumatic stress disorder (PTSD) can occur following exceptionally threatening or traumatic events.^{2,3} Common symptoms include

Abbreviations: NAFKAM, The National Research Center in Complementary and Alternative Medicine; PTSD, Post-traumatic stress disorder; TFCBT, trauma-focused cognitive behavioral therapy; EMDR, Eye movement desensitization and reprocessing; CBT, cognitive behavioral therapy; CSF, cerebrospinal fluid; CAM, complementary and alternative medicine; IRCT, International Rehabilitation Council for Victims of Torture; NET, Narrative Exposure Therapy; DPS, District Psychiatric Center; TMJ, temporomandibular; HSCL 25, Hopkins symptom check list 25

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re-experiencing the trauma (in form of nightmares, flashbacks, and distressing thoughts), and avoiding reminders of the traumatic event. In addition, feelings of shame and guilt, self-destructive behavior, psychosomatic symptoms, somatic disorders, somatic pain disorders, and symptoms of hyper-arousal (feeling on the edge, being easily startled, feeling angry, having difficulties sleeping, and problems concentrating) are common.^{3,4}

In Norway, like in many other countries in the world, the use of physical or psychological violence including torture is prohibited by law as it is in conflict with human rights.⁵ Nonetheless, a Norwegian, national cross-sectional study among 4,527 respondents found a prevalence of lifetime rape of 9.4 % in women and 1.1 % in men. Half of the women were raped before the age of 18. Moreover, a total of 5.1 % of men and 4.9 % of women had experienced severe physical violence from their parents during childhood. Severe physical violence as well as rape occurred more frequently among individuals who perceived their financial situation as poor.⁵

A recent study in Norway⁶ reported a general lifetime prevalence of PTSD in women of 4.3 % and of 1.4 % in men. The average duration of the suffering was 9 years for women and 17 years for men. In the United States, the 12-month prevalence for posttraumatic stress disorder was 3.5 % in 2005.⁷ PTSD remains a serious problem for the Western societies and successful treatment is paramount. A Cochrane systematic review from 2016 included 70 studies, with a total of 4,761 participants. The results suggested some limited evidence for the use of individualized trauma-focused cognitive behavioral therapy (TFCBT) and Eye Movement Desensitization and Reprocessing (EMDR) in the treatment of PTSD.³ However, even though a substantial number of studies were included, poor study design and low sample size indicate that results should be interpreted with caution. There was also insufficient evidence information available to evaluate whether psychological therapy might be harmful.

TFCBT is a specialization of Cognitive Behavioral Therapy (CBT) and includes a number of specific techniques to overcome a traumatic event, mostly aiming at changing the way a person thinks and acts.⁸ EMDR is also commonly used to treat patients with trauma.⁹ The therapy involves evoking distressing trauma-related images, beliefs, and bodily sensations, while the therapist guides eye movements rhythmically from side to side.¹⁰ The mechanisms of EMDR are poorly understood. It has been suggested that the rhythmic, bilateral stimulation while trauma related memories are brought into awareness, inhibits trauma related memories by activating the working memory and/or by requiring dual attention.¹¹

1.1. Craniosacral therapy

Within CST theory, the craniosacral system is defined as a functional physiological system, including the membranes and Cerebrospinal Fluid (CSF) surrounding the spinal cord and brain, the bones to which membranes are attached to and the connective tissue related to these membranes.^{12,13} The system is hypothetically described by Upledger¹⁴ as a semi-closed hydraulic system which produces and reabsorbs cerebrospinal fluids.¹⁴ Manual palpation of this system supposedly affects sensory, motor, cognitive, and emotional processes in the nervous system.^{15,16} Moreover, disruption of the normal flow of the CSF is believed to induce chronic pain and illnesses attributed to physical trauma.^{14,17} Craniosacral Therapy (CST) is commonly described as a Complementary and Alternative (CAM) treatment and is mostly applied by trained craniosacral therapists, or by osteopaths and other health care providers with appropriate training. A systematic review from 2012¹³ evaluating the effectiveness of CST in different pathological conditions highlighted that pain and quality of life/well-being, can be improved by the use of CST. However, substantial heterogeneity in terms of the applied techniques in addition to generally small sample sizes made it difficult to draw conclusions.

1.2. Theoretical approach

The manual of the International Rehabilitation Council for Victims of Torture (IRCT)¹⁸ addresses the importance of providing interventions that target the mind and body, because the body is considered to be the site of both injury and healing. Body postures and facial expressions are an inert part of an emotional reaction, and somatosensation and embodiment play a critical role in emotional processing.¹⁹ Traumatizing experiences are often somaticized and represented in the body,²⁰ which, indicates the need to treat the body as well, as it may function as “the key to the soul”.²¹ Zeenberg²² emphasizes the importance of non-verbal therapy for PTSD patients. He describes a clinical model from Hungary, where nonverbal therapists use art, movement, and creative writing in rehabilitation settings. Zeenberg writes: “The idea is to move the deeper part of the soul of severely tortured persons” (p. 37).

Holism is a treatment philosophy that applies “wholeness” as the principle of reason as opposed to the study of isolated parts.²³ A holistic approach is often aspired in psychology, biology, sociology, and anthropology etc. and fits well with the theoretical approach of the International Rehabilitation Council for Victims of Torture (IRCT).¹⁸

The term *Manipulative and body-based practices* includes several modalities in which the therapist moves or manipulates one or more parts of the patient’s body. In general, many of these *Manipulative and body-based practices* aspire also a holistic approach in their treatment philosophy and they may be used to treat pain, stress, anxiety, and depression, as well as to increase well-being, often in addition to conventional treatment. Examples include chiropractic treatments, physical therapy, massage therapy and craniosacral therapy.²⁴ In addition to unspecific effects related to relaxation and well-being, it has been suggested that this group of interventions influences chronic pain at nociceptor and spinal cord levels.²⁵ A review from 2014 about the role of touch specific C-fibres,²⁶ suggests a specific biological mechanism for the relaxation and anxiolytic effect of manipulative and body-based practices. The affective effects of touch have been acknowledged by the CAM field as a favorable active component of many of manipulative and body-based practices.²⁷ In addition, social bonding and interaction have been shown to affect the endogenous opiate system, resulting in the release of neuropeptides such as endorphins and oxytocin.²⁸

Therefore, the more or less recent acknowledgement of the C-fibre touch system and its relevance for humans, provides a physiological bases for holistic treatment approaches in trauma therapy and corresponds well with the clinical recommendations.

1.3. The aim of this study

The Clinic for Psychosomatics, Hospital of Southern Norway, Kristiansand, Norway has CST as part of their therapeutic portfolio. This study aims to explore the value of craniosacral therapy as an “add on” to psychotherapeutic treatment within a holistic treatment setting for severely traumatized patients. Semi-structured interviews and one focus group interview were performed with the therapists working at the clinic. We also wanted information regarding the indications for applying CST, the aims of treatment, treatment philosophy, how signs of improvement are defined and risk profile concerns.

2. Methods

2.1. Design

We applied a qualitative approach in order to obtain subjective information from clinical therapists regarding CST, and to address how the intervention is used in practice.²⁹ This design was supposed to generate hypotheses for subsequent quantitative research and provide the corresponding theoretical framework.³⁰

Table 1
Characteristics of the participants.

Name	Gender	Age	Year in practice	Education/skills	Reasons for becoming a therapist	Treatment philosophy
A	female	49	20	Psychologist (psychology specialist); EMDR supervisor; Schema-therapy for personality disorder; sensorimotor- psychotherapy.	Bookworm as a child, mother worked as a psychiatric nurse. Interested in psychology from 14 years of age.	The perspective of trauma has been important for understanding mental health; treatment optimist; holistic approach to health; mental and physical health are connected; Mental disorders do not exist in a vacuum.
B	female	51	10	Social worker; cognitive behavior therapy; sensorimotor-psychotherapy. Worked at the child welfare authorities for 17 years before becoming a therapist.	As social worker, she wanted to work more therapeutic and applied for a position at the clinic.	Body oriented approach to psychotherapy; the importance of reflection and understanding yourself; Exercise and movement.
F	female	61	9	Master in mental health; EMDR; cognitive behavioral therapy; narrative exposure; Background as administrative employee at the clinic; agronomist and worked with movies (animation movies).	Always wanted to study psychology, but the time was never right.	Pragmatic approach to treatment; keep it simple; good at talking with people; Psychoeducation (appeals to reason when facing emotions) and narrative exposure. She must understand the process herself to teach the patients.
H	male	53	5	Physical therapist; family therapy; relations and parenting; EMDR; sensorimotor-psychotherapy; Communicology; mindfulness; acupuncture and Chinese herbs; relaxation and breathing exercises.	Fascinated by the relationship between humans and between humans and nature. The importance of flexibility and balance and how our natural abilities of healing can be developed.	Holistic approach to health and treatment; The importance of balance; Psychotherapy combined with body-based treatment.
S	female	63	20	Medical doctor; specialist in community medicine; EMDR-therapist; sensorimotor- psychotherapy; breathing exercises.	Has always wanted to become a medical doctor; Has been interested in nature, biology and social science since childhood.	The benefit of thinking holistic in contact with somatics. Sometimes you have to treat the body to get access to the emotions and then the mind.
M	female	36	9	Psychologist (soon psychology specialist);EMDR –therapist.	Trained as a psychologist because it is so interesting. It's meaningful to be able to support people in their struggle for a better life, and seeing them achieve their goals.	Adjust the treatment to each individual patient. Body oriented approach. Work according to what the body tells. Holistic approach.
F	male	50	2	Psychology specialist; EMDR; sensorimotor- psychotherapy; Clinical hypnosis.	He worked as a musician in the military. After a significant evaluation, he decided to study psychology.	Building relationships, everyone has the ability to get out of difficult situations; He facilitate the development of good abilities and skills to master in life.
N	female	53	14	Officers' training school; Norwegian Military Academy; foreign service; craniosacral/posturology therapist; teambuilding; sensorimotor- psychotherapy; cognitive behavior therapy; trauma therapy; coaching.	Worked with counseling and teambuilding after military service. Personal experiences made her develop an interest for working with the body combined with counseling.	The importance of recovering strength; increase function for patient satisfaction; experience based practice.

2.2. Study area

The study location was the psychiatric outpatient clinic at the Hospital of Southern Norway that specializes in trauma-focused treatment. The clinic applies several modalities such as EMDR, cognitive therapy for PTSD, sensorimotor psychotherapy, metacognitive therapy, body oriented psychotherapy, CBT, stabilizing treatment, as well as elements of Narrative Exposure Therapy (NET). To date, 227 patients have been treated at the clinic (January 2017 until December 2018), 28 of these patients received CST. Interviews were performed at the clinic during working hours, and eight of eleven therapists agreed to participate.

2.3. Participants

The outpatient clinic employs 11 therapists (including the manager). The participants had varying professions, including a psychologist, a psychiatrist, a social worker, a physiotherapist, a specialist in community medicine, a mental health/psychotherapy practitioner, as well as a craniosacral therapist. All therapists had extensive experience with trauma treatment (Table 1: Characteristics of the therapists).

Criteria for receiving treatment at the clinic includes PTSD, exposure to violence, acute traumatic incidents, sexual assaults, and injuries from torture. The typical patient has been in mental health care for a long time. Normally, the patients are referred from another hospital department, or from the DPS (District Psychiatric Center). The average monthly referral to the clinic is about $n = 7$.⁴

2.4. Individual semi-structured interviews

The interviews were based on an open-ended and semi-structured design. A thematic interview guide was developed and applied to guide the conversation to relevant topics according to the research questions. One of the strengths of semi-structured interviews is the potential to produce specific answers to the questions of interest. This approach creates an informal setting and encourages the participants to tell their story at their own pace and manner.³¹ The interview guide consisted of the following main questions: *What (which criteria) makes you refer your patients to the craniosacral therapist?; What (which criteria) prevents you from referring your patients to the craniosacral therapist?; Describe a cooperation procedure between yourself and the craniosacral therapist for typical patient; How have the patients changed after craniosacral treatment? How do you explain possible improvements in the patients after this treatment?; In the treatment you provide, what causes change in the patients?; How do you explain possible worsening in the patients?; What are the signs of worsening?* The complete interview guide is attached as supplementary material.

2.5. Focus group interview

Group interview is a qualitative research method that uses guided group discussions to generate a rich understanding of the participants' experiences and beliefs about a specific topic.³² The design draws on three fundamental strengths: (i) exploration and discovery (ii), context and depth, and (iii) interpretation. The group dynamics may reveal reflections of individual practice and experience that may not be disclosed in individual interviews.³³ The mediator (TS) facilitated the group ($n = 5$) discussion after completion of the individual interviews. The interview guide included the following questions: *In your opinion, what is your hypothesis/hypotheses behind the changes observed in the patients, following Nora's treatment?; In your opinion, how do you explain improvements in the patients?; Have you experienced worsening in any of the patients after the treatment?; a) Types of worsening b) Explanations/Rationale for this worsening c) How is this handled/Routines?*

2.6. Data analysis

The interviews were recorded, transcribed and anonymized. We coded directly from the text data and employed phrases and words applied by the participants. We applied a qualitative content analysis to analyze the transcribed interviews. A content analysis is a systematic examination of text by identifying and categorizing themes.³⁴ In addition, it classifies and develops categories, and preforms the coding.³⁵ In this study, some codes were predefined and others were defined during the analysis.³⁶ They were grouped according to the questions in the interview guide. Groups with overlapping information were merged into five main themes and they were renamed according to key information in the text.³¹ The quotations were analyzed in Norwegian before being translated into English. Two of the authors (TS and MK) read the data several times and discussed the various steps of the analysis process.

3. Results

Five themes arose from the data analysis: 1) Rationale for using craniosacral therapy, 2) A holistic treatment approach, 3) Aims of the treatment, 4) Signs of improvement, 5) Handling adverse effects and the benefit of teamwork.

The "me" refers to the first author who performed the interviews.

Most of the patients were Norwegian citizens on long-term therapy, who had been referred to trauma treatment. However, some were refugees (victims of torture¹). Nonetheless, no typical patient could be identified. The patients were between 20–60 years old, of both genders, all suffered from complex traumas. Many of them had grown up feeling insecure for many years, suffered from childhood trauma, parental abandonment, sexual assault, and violence. Most of them were women with complex symptoms, dissociation and severe PTSD. In addition to personal problems and psychosomatic disorders, there was health complaints related to the body and pain, insomnia, and nightmares. Many of them functioned rather poorly in daily life.

During the first consultation, the therapists focused on getting to know the patient and establishing a therapeutic relationship, they examined why the patients had been referred to the clinic, and what kind of help they needed. Then, they checked for personal resources, whether the patients had the ability to take on a meta-perspective, and whether they were able to reflect on their own feelings. Important elements of this work were to establish contact, and provide safety and meaning.

In addition, they evaluated potential resources in the patients' environment (family, network, and friends). Maria told me that when meeting the patient for the first time she would not start by filling in paper-work, due to the possibility of the patients dropping out. During the first consultation, the craniosacral therapist focuses on balance, measuring postural balance in the ankle joints, temporomandibular joint (TMJ), and the eyes.

3.1. Rationale for using craniosacral therapy for patients with complex traumas

The therapists experienced that they were unable to help patients with a lot of pain, they told me that severe traumatic experiences often manifest themselves in the body. The craniosacral therapists (Nora's)

¹ Torture victims who had a need for an evaluation according to the Istanbul protocol. This protocol is the first set of international guidelines for documentation of torture and its consequences. It became an official United Nations document in 1999. The Protocol is intended to serve as a set of international guidelines for the assessment of persons who allege torture and ill treatment, for investigating cases of alleged torture, and for reporting such findings to the judiciary and any other investigative body.

job is *hands on*, to help reduce physical pain so that other therapists can work on psychological issues. She *identifies muscle tensions, and provides treatment that actively regulates the body*", Bente said that it is important that patients are exposed to being touched, in order to learn body awareness.

Amalie told me that Nora performs craniosacral therapy and works on muscles, focusing on bodily symptoms. Her experience is that when Nora works with the patients, tensions and emotions are relieved. She elaborated:

Lots of emotions emerge, which I can proceed to work with. Patients tell us that they have less pain in their body and that they sleep better (after treatment with Nora, author comment).

Different treatment methods, more bodily oriented ones as well as variations of CBT are applied at the clinic and the general attitude is that "humans are more than their brains".

And, I work mostly with brains, Frida claimed.

She also commented that patients' bodies have to be considered, and it is important to take care of both parts. After treatment with Nora, it was often easier for her to address mental and emotional problems, patients experienced less pain and were less tense. "*Craniosacral therapy may be an important supplement to find the connection between the body and emotions*", Frida argued.

The clinic manager Solveig was familiar with Nora's work before employing her, she offered Nora a job because of Nora's interest and experience in trauma therapy. Solveig told me that craniosacral therapy releases energy, that can help the patients overcome their traumas, and that the small manipulations that Nora performs can move and affect the body. She believes that dopamine levels can be affected by exercise, and the autonomic nervous system through breathing exercises. She elaborated:

We must be open to new ways of doing things! Just look at the change in treating stomach ulcers after *Helicobacter pylori* bacteria was identified as a cause, leading to current antibiotic treatment.

Maria claimed that they (the psychology profession), need to focus more on the body because traditional psychotherapy alone does not work for severely traumatized patients. She elaborated: there are so many things these patients are unable to relate to, and which do not make sense from an intellectual point of view. Maria believes that experiences are stored in the body. However, at the same time, the body is often disregarded, it is the body that the patients escape from. She said:

After treatment with Nora they are more available for therapy.

The craniosacral therapist told me that her aim is to treat physical pain, although she often has to support and comfort patients emotionally during treatment. In such challenging situations, she has to utilize all her professional experience.

She added:

When you have lots of pain in your body, you are not cognitively present. In addition, your sense of achievement is often low.

Bente told me that there are many unclear issues regarding Nora's work conditions at the clinic. She is employed as a craniosacral therapist, but works as a counselor outside the clinic. It can be difficult separating the two roles. Bente thinks that Nora is placed into a "box" regarding her role at the clinic, and that it is difficult for her to be in that box.

In summary, the therapists claimed that craniosacral therapy is an important key to initiating change in cases where they experience that verbal communication is insufficient.

3.2. A holistic treatment approach

The body centered arts practitioner and scientist Amber Elisabeth

Gray (Gray²) has visited the clinic twice. She provides body centered therapy and sensorimotor psychotherapy, and focuses on how memories and experiences are stored in the body, and how bodily resources can be stimulated and reactivated. Gray has educated the therapists at the clinic, and has inspired the implementation of dynamic and body oriented treatment approaches. Herman explained:

In our clinic, our approach is holist, using the body as a means to access the mind when patients suffer from traumas. Provoking a paradigm shift.

The therapists see the need for using a variety of tools to access trauma when treating complex cases. Attempts are made to approach the problems from different angles.

Herman elaborated:

I have always been focused on the body that is where feelings are stored. You can access memories through different treatment approaches.

Solveig also emphasized the benefit of thinking holistically, recognizing the head, neck, and body as being connected. She finds it meaningful to access feelings and memories through the body. She said: "*In this way, we support the self-healing power of the organism.*" Maria customizes treatments to each patient's needs. She thinks it is important to focus on the body rather than on psychotherapy, which she thinks relates too much to the cognitive abilities. She said:

It feels more meaningful for the patients to work with signs from the body. It is often too difficult (for the patients) to answer intellectual questions.

Amalie told me that she thinks holistically (*body/emotions*). She thinks that the emotional history of a person affects the nervous system, the immune system, and the hormones, and that the body symptoms are closely connected to emotional expressions. Moreover, she claimed that expressions of illness are often related to the patient's emotional history. She believes that life has an impact on us and that mental disorders rarely exist in a vacuum. As a practitioner, she has an optimistic approach, she claims that crises may disclose matters that were previously inaccessible. The result is that people can have the ability to change throughout their lives. The success of this therapeutic approach relies on building a trusting relationship between therapist and patient, as well as tailoring treatment to suit each individual patient. Amalie finds it important to define this relationship.

The relationship (patient-therapist) must have an unambiguous purpose. The therapist must have a meta-perspective and apply a familiar methodology.

The craniosacral therapist explained that in her view the body creates postural imbalance as an answer to parental abandonment, violence, and traumas that causes pain. Thus, whenever she touches and manipulates the body, the tightness of the nerves and muscles are relieved so that the patients can let go and relax. According to her, the body releases energy when this imbalance is restored. These changes make the patients feel that they matter and that they are important to other people.

Summary: The aims of treatment at the clinic are to support patients

² Amber Elisabeth Gray is currently the Director of Restorative Resources Training and Consulting, and its non-profit counterpart, Trauma Resources International, and is a clinical adviser with The Center for Victims of Torture in the US. She has worked for almost 20 years with people who have survived human rights abuses, war, natural disaster, as well as with humanitarian response teams. Gray is a longtime practitioner of body centered arts and sciences (Somatic Psychology, Life Impressions Bodywork, energy medicine, craniosacral therapy, yoga, and shiatsu), and a board-licensed mental health professional. She is an award winning dance movement therapist and an authorized Continuum Movement Teacher. She

and promote them develop healthy self-help habits. The therapists' aim to identify different resourceful factors in patients who have survived trauma with the aim that patients learn how to activate and utilize these resources, in order to have the best possible life.

A holistic treatment philosophy, in which the body is an important tool is used by the clinical therapists, when they treat traumatized patients. They do not consider full recovery to be possible, but aim to facilitate patients to be able to live fulfilled lives. Frida concluded:

Some patients are beyond complete recovery. However, at the end of the day, we must be pleased with the results achieved.

3.3. Aims of the treatment

The therapists' aim of the treatment was to help patients understand and find meaning in their traumatic experiences. Care is an element that has often been absent, for example in their childhood, and the therapists worked to facilitate self-care. Traumatized patients often have a negative view of themselves, suffering from poor self-esteem, feelings of worthlessness and often with no sense of love for themselves. Moreover, there are many things trauma patients do not remember and are unable to describe in words. Therapists often find that the patients want to escape from their bodies, as some experience dissociation. In the view of the therapists, their task is to help the patients feel complete again, and to accept themselves as whole and integrated persons.

Amalie and Bente told me that one aim of the treatment is to help patients to develop a higher emotional tolerance level. Herman explained that an important aim is to support the patients to develop a better relationship with themselves, by understanding themselves on a deeper level, improving self-acceptance, and by learning how to put themselves first. He elaborated:

That they (patients) know their limits. That means that they know what to choose and what not to choose.

Part of this work consisted of providing symptom relief (for example, improved sleep and fewer flash backs), making it possible to work more comprehensively on the patients' traumas.

The craniosacral therapist explained that treatment primarily aims at improving patient health and function, facilitating the increased availability of resources for psychotherapy. She also pointed out that a body in pain demands attention and energy, with no surplus left to work on emotions. When pain is reduced, resources become available to work on the emotions.

3.4. Signs of improvement

The therapists at the clinic may use questionnaires to measure the patients' mental health (Hopkins symptom checklist, HSCL 25) and coping mechanisms. In addition, the patients need to cope with the fact that they will most likely never completely recover. This is a process that demands patience.

To accept and move on is a mental process. It has to do with self-acceptance.

Amalie claimed that patient resources are more important than emotional intensity in therapy. She assesses combinations of symptoms and patient resources rather than that she is focusing on individual symptoms.

Bente told me that a sign of improvement is an increase in pain endurance, often due to better self-understanding and pain tolerance, without resorting to self-harm, suicide, alcohol and substance abuse. She believes that patients need to understand that pain is not always constant- it can go away. She feels relieved when patients ask, *what can I do now to be good to myself and manage to cope with difficult situations in less destructive ways*. Then they take control of their life.

According to Frida, one measure of symptom severity is whether the

patients are able to function in their everyday life. Signs of improvement are when they get more access to their feelings, and become more conscious of how the body and emotions affect each other.

According to the craniosacral therapist, signs of improvement are related to how patients experience pain. Coping better with everyday life, improved sleep quality and a sense of contentment, indicates better overall health.

She claimed:

The patients are better if their eyes are more focused, if they are more spontaneous, and take more pleasure in things that were previously exhausting.

Maria claimed that signs of improvement are when she does not need to spend so much time on grounding exercises, or when patients do not lose concentration, or have fewer hallucinations, and are less self-destructive, as well as being able to disengage from destructive relationships and to then have the power to break the contact.

3.5. Handling of adverse effects and the benefit of teamwork

Frida told me that the patients sometimes get worse before they get better. This may happen when the patients are with her or with the craniosacral therapist. This applies especially to patients who have numerous issues they would rather like to forget. Higher degrees of illness are often associated with worsening when treatment is initiated. When treatment is too challenging to endure, it is discontinued after 3–4 sessions. Nora and Frida inform the patients that they may get worse (before getting better), with the aim to *give the patients a sense of control*.

Maria claimed that patients quite often get worse and no one knows exactly what causes or triggers these reactions. Frank elaborated:

Experiences from previous therapy sessions may make symptoms more apparent, possibly provoking a breakthrough, helping patients to move on.

Sometimes, patients are referred to other kinds of treatment at the hospital. Bente often refers them to the local Nursing and Health Care Department. When *adverse effects of the treatment* were discussed in the focus group interview, most of the participants claimed that there were few cases of adverse effects at the clinic. However, when the therapists reflected on the theme together, they agreed that patients with severe symptoms are difficult to treat. In situations where the therapists are uncertain of what to do, or they do not see signs of improvement, they have the possibility to present the case to the rest of the team. This often results in a change of perspective, the identification of alternative approaches and treatment suggestions.

Amalie told me:

I think this is a very important factor. I feel totally convinced about that. If we practiced without having colleagues and the knowledge that is here, we would be in trouble.

The craniosacral therapist claimed that professional expertise and being part of a professional team are fundamental. The assurance that severely ill patients are adequately taken care of, gives her confidence as a therapist.

In summary, many patients experienced worsening after treatment, especially initially. Symptom worsening was not registered as an adverse effect at the clinic. However, difficult cases were discussed by the interdisciplinary team.

4. Discussion

The most prominent finding was that the therapists at the clinic applied a holistic treatment strategy, which corresponds to and reflected their view of the patients as whole persons, their own role as therapists, and their treatment philosophy. To access emotions and

traumata, they used an eclectic approach with a mixture of different modalities such as EMDR, sensorimotor-psychotherapy, narrative exposure, and breathing therapy.

The rationale for using craniosacral therapy as an addition to psychotherapy, was that patients who are in pain, are less cognitively present because pain is all-consuming, demanding all their mental and bodily resources. According to the therapists at the clinic, craniosacral therapy reduced physical pain, thereby allowing for the mobilization of the mental resources necessary for psychotherapy. Emotions and trauma became more easily accessible and available for therapeutic techniques.

The global aims of treatment were to increase the patients' emotional control and to provide tools to improve self-care. Signs of improvement were defined as the ability to transform and modify negative behaviors and instead do beneficial things (e.g. visiting a good friend) rather than resorting to self-destructive behaviors, such as intoxication (alcohol, drugs etc). Increased self-acceptance, engagement in social activities that previously had been troublesome and better sleep quality were also considered to be signs of improvement.

According to the therapists, many patients deteriorated throughout the course of therapy, especially in the beginning. Sometimes this worsening was so severe that the patients decided to refrain from further treatment. Difficult cases were often presented to the multidisciplinary team, where other approaches and alternative treatment strategies were discussed. Up to this point in time, no deterioration has been observed, no major harm to the patients has been registered. The most likely reason for this is that the team of therapists is highly qualified, they are used to handling serious events, and have established coping routines. Moreover, patients who were not accessible for therapy were referred to other departments at the hospital, or institutions in the community.

4.1. Adverse effects and healing crisis

No systematic routines have been established yet in order to document worsening of symptoms as adverse effects. The reason for this might be that these events were considered to be a *healing crisis*. A healing crisis is defined as a temporary exacerbation of symptoms on the way to more definite improvement.³⁷ Nonetheless, as worsening of symptoms is accepted to a certain degree within psychotherapy and monitored as a part of the healing process, it is important that therapists (both conventional and CAM) increase their awareness of such events. It is important with regard to patient safety that therapists do not ignore signs of serious events and thereby provoke a dangerous situation for the patients.³⁸ One of the recommendations based on the results of this study is to establish a documentation routine for such events.

4.2. Mixture of different techniques

Trauma therapy is difficult, complex, and often frustrating. It requires therapist experience, personal strength and integrity. One of the most striking findings in this study was the openness of the therapists and the management of the clinic, towards this multimodal and holistic approach. The group applied unconventional and creative lines of action in order to help patients overcome horrifying life experiences and severe traumas. Facilitated, by prioritizing teamwork and always being open in their choices of therapeutic modalities.

Many psychotherapists dealing with similar cases express that only trusting evidence-based therapies and applying very specific treatments may not be sufficient to treat PTSD.³⁹ Yalom⁴⁰ argues that the elements that are most likely to make psychotherapy effective are the *throw-ins*. This is a cooking metaphor referring to minor ingredients that potentially greatly enhance flavor.³⁹ Harry Stack Sullivan⁴¹ suggests a caring relationship as a *throw-in*, helping the patient bear and put into perspective the burden of loss, that goes beyond simple desensitization of trauma memories. We suggest that craniosacral therapy may be another

beneficial trauma therapy *throw-in*; further supporting the assumption that a mixture of techniques is a possible way forward in this field.³⁹ Steven Southwick, Director of Veterans Affairs Connecticut PTSD/Anxiety Disorders program, appreciates the value of CAM modalities such as mindfulness, logo therapy³ and exercise in the treatment of war veterans; based on the fact that too many veterans continue to suffer even after receiving evidence-based treatment.

Neuroscientific evidence has demonstrated that *hands on* therapies have positive emotional effects on humans. The role of touch in humans and its fundamental meaning for social animals have been well established in neuroscience (for overviews, see (^{26 43})) This suggests a distinct beneficial component of many manipulative modalities.⁴⁴ The identification of a defined affective C-fiber system may explain the fundamental role of light touch for human well-being, provoking relaxation, pleasure, and anxiolytic effects in humans. The identification of a potential, neurophysiological component adds credibility to the clinical experiences reported by the participating therapists in this study. That said, the question about the specificity of CST arises. From a physiological point of view, not only CST but also other manipulations activating the C-fiber system for pleasant touch could be expected to provide positive effects, in specific situations for severely traumatized subjects. Indeed, there seems to be evidence that other manipulations, e.g. massage might be helpful in some situations during a trauma therapy session.⁴⁵ Further research is necessary to provide additional evidence for both CST and other manipulations provoking activation of the light-touch C-fiber system, as well as comparisons of the efficacy of the different methods.

4.3. Strengths and limitations of the study

The findings of this qualitative study should be interpreted in light of its limitations. As previously stated, it is not clear whether the reported effects are specific for CST or whether similar effects could be expected from other manipulations activating C-fiber system. In any case, the activation of this system seems to open pathways for trauma patients and seems to make them more susceptible for psychotherapy. This study focused on a small group of therapists who participated in a single interview and a focus group interview. Had a greater number of therapists been interviewed, additional insights may have been obtained into the practice of psychotherapy combined with craniosacral therapy for severe traumatized patients. In this study

we presented reflections based on experiences from a specific, small, and new field, which is under debate from a biomedical point of view and considered more alternative than complementary. Considering the small population in Norway, the *narrow* field, the few number of clinics, and limited access to clinicians/therapists/patients, the extensive experience and professional skills of the therapists enhance the credibility of the findings, despite the small sample size.

In order to strengthen the credibility of the study, different approaches for data collection were used, namely individual interviews and a focus group interview. The rationale for this approach was to examine the research questions from different perspectives, thereby enhancing trustworthiness and internal validity of the study.³¹ The researcher is the most important tool in qualitative research. In this study the researcher collected the data and if necessary, made decisions where needed. The researcher's integrity, including knowledge, experience, honesty, and sense of justice is crucial for securing good quality research. The research team continually evaluated and commented on the integrity and critical attitude towards the work.²⁹

³ Logotherapy is based on the belief that human beings have an inner drive toward finding meaning in life. Logotherapy has a radically optimistic view and human potential, and is based on the philosophy of Victor Frankel (1905–1997).⁴² Frankel V. Kjempende livstro. English: Man's Search for Meaning. Oslo: Aventura Forlag A/S; 1993.

4.4. Implication for further research and clinical practice

A qualitative study may be a suitable approach to map this field of interest. Such data may also be used as a basis for a subsequent quantitative approach using quasi-experimental designs.⁴⁶ We are not convinced that severe trauma/PTSD is a condition suitable for a large, randomized controlled trial (RCT), since the patient population is rather small and heterogeneous. Moreover, quantitative research conditions required for an RCT such as e.g. randomization may induce ethical challenges when carried out on groups of highly vulnerable patients. Nonetheless, there is a wealth of quasi-experimental designs available (see⁴⁶) which provide a suitable compromise between scientific strength and ethical responsibility.

One possibility is to develop questionnaires (based on data from qualitative studies) for use in a cross-sectional study.³⁰ Another approach may be to conduct a prospective observational study of patients with PTSD using craniosacral therapy as an add-on to psychotherapy, with the aims to record symptoms and other functions, evaluating change over time and subjectively experienced benefits. Risks as a result of treatment from both the patient's and therapists' perspective could also be recorded. The aim of such a study could be to generate a hypothesis and data for sample size calculation, to be used in a larger study.⁴⁷

5. Conclusion

According to data from this qualitative study, patients with complex traumas including PTSD benefit from being treated holistically, with a mixture of different treatment modalities, including a bodily oriented modality such as craniosacral therapy. According to the study participants, this modality was particularly beneficial for patients who did not benefit from psychotherapy due to physical complaints. However, in order to prevent harm to patients, craniosacral therapy for severely traumatized patients should only be provided in cooperation with psychotherapists, or other highly qualified health personnel working in professional institutions. Routines for documenting adverse effects are recommended.

Availability of data and materials

Data is not available due to Norwegian privacy regulations. Applications for any data must comply with Norwegian privacy regulations.

Authors' information

The research team consisted of people with different relevant competence in relation to the research project. The first author (TS) holds a PhD in medical science. The second author (MK) is a social anthropologist. She holds a PhD in Health Science. The third author (BL) is a medical doctor, she holds a PhD in medical science. The fourth author (AEK) holds a PhD in medical science. The fifth author (TW) is a medical doctor with a PhD in neurophysiology. The sixth author (JH) is a physical therapist and holds a PhD in Health Science. The last author (FM) is professor in health services research. She holds a PhD in Psychology.

Consent for publication

Written informed consent was obtained from the participants.

Ethics and approval and consent to participate

The study was approved by Norsk Senter for Forskningsdata (NSD, Norwegian Centre for Research Data), project number 697680. Informed consent was collected from the therapists who participated in

the project. Confidentiality was protected through anonymizing the material as well as different ways of presenting the material. We used pseudonyms in this publication to protect the confidentiality of the participants. This work was conducted to prevent undesired consequences for the participants. In research projects applying interviews, the researcher inevitably develops a more or less close relationship with the participants. Thus, ethical conflicts between the participants and research process may occur.³⁶ However, no such ethical conflicts were detected during the research project. The participants were given the opportunity to read and approve of their own quotations used in the article. This study meets the standard of the Helsinki Declaration of 1975, last revised in 2013

Authors' contribution

FM and AEK developed the project protocol. TS developed the qualitative part of the study protocol and conducted the interviews and analyzed the data together with MK. BL, JH and TW contributed with expert input. All authors contributed to the draft, reviewed subsequent versions of the manuscript, and approved the final manuscript.

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Declaration of Competing Interest

The authors declare that they have no conflict of interest.

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Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.ctim.2020.102320>.

References

1. Raaheim A, Raaheim K. *Psykologiske fagord. English: Psychological vocabulary*. Bergen: Fagbokforlaget Vigmostad & Bjørke AS; 2004.
2. Bisson JI, Cosgrove S, Lewis C, Roberts NP. Post-traumatic stress disorder. *BMJ*. 2015;351.
3. Bisson JL, Roberts NP, Andrew M, Cooper R, Lewis C. Psychological therapies for chronic post-traumatic stress disorder (PTSD) in adults. *Cochrane Database Syst Rev*. 2013(12).
4. Bækkelund H, Bergerud-Wichstrøm M, Mørck A, Endsjø M, Aareskjold J. *Implementeringen av kunnskapbasert behandling av PTSD hos voksne i klinikk. Oppsummering av pilotprosjekt. English: The implementation of knowledge based treatment of PTSD in adults in clinics. Summary of a pilot project*. Oslo: Norwegian Centre for Violence and Traumatic Stress; 2017.
5. Thoresen S, Hjemdal OK. Vold og voldtekt i Norge. En nasjonal forekomststudie av vold i et livsløpsperspektiv [Violence and rape in Norway. A national prevalence study with a life course perspective.]. *Norwegian only Oslo: Nasjonalt kunnskapssenter om vold og traumatisk stress*. 2014.
6. Lassemo E, Sandanger I, Nygård JF, Sørgaard KW. The epidemiology of post-traumatic stress disorder in Norway: trauma characteristics and pre-existing psychiatric disorders. *Soc Psychiatry Psychiatr Epidemiol*. 2017;52(1):11–19.
7. Kessler RC, Chiu W, Demler O, Walters EE. Prevalence, severity, and comorbidity of 12-month dsm-iv disorders in the national comorbidity survey replication. *Arch Gen Psychiatry*. 2005;62(6):617–627.
8. Berge T, Repål A. *Denindre samtalen. Kognitivterapi praksis. English: The inner conversation. Cognitive therapy in practice*. Oslo: Gyldendal Norsk Forlag AS; 2004.
9. Schnyder U, Ehlers A, Elbert T, et al. Psychotherapies for PTSD: what do they have in common? *Eur J Psychotraumatol*. 2015;6:28186-.
10. Shapiro F, Liliot D. EMDR therapy for trauma-related disorders. In: Schnyder U,

- Cloitre M, eds. *Evidence based treatment for trauma-related psychological disorders*. London: Springer; 2015.
11. Sack M, Zehl S, Otti A, et al. A comparison of dual attention, eye movements, and exposure only during eye movement desensitization and reprocessing for posttraumatic stress disorder: results from a randomized clinical trial. *Psychother Psychosom*. 2016;85(6):357–365.
 12. Upledger JE, Vredevoigt J. *Craniosacral therapy*. Seattle: East-land Press; 1983.
 13. Jäkel A, von Hauenschild P. A systematic review to evaluate the clinical benefits of craniosacral therapy. *Complement Ther Med*. 2012;20(6):456–465.
 14. Upledger JE. Craniosacral therapy. In: Novey DW, ed. *Clinician's complete reference to complementary and alternative medicine*. St. Louise, MO: Mosby; 2000:381–392.
 15. Downey PA, Barbano T, Kapur-Wadhwa R, Sciote JJ, Siegel MI, Mooney MP. Craniosacral therapy: the effects of cranial manipulation on intracranial pressure and cranial bone movement. *J Orthop Sports Phys Ther*. 2006;36(11):845–853.
 16. Ferguson A. A review of the physiology of cranial osteopathy. *J Osteopath Med*. 2003;6(2):74–84.
 17. Davis L, Hanson B, Gilliam S. Pilot study of the effects of mixed light touch manual therapies on active duty soldiers with chronic post-traumatic stress disorder and injury to the head. *J Bodyw Mov Ther*. 2016;20(1):42–51.
 18. International Rehabilitation Council for Torture Victims (IRCT). *Shedding light on a dark practice. Using the Istanbul Protocol to document torture*. Copenhagen: International Rehabilitation Council for Torture Victims (IRCT); 2009.
 19. Nummenmaa L, Glerean E, Hari R, Hietanen JK. Bodily maps of emotions. *Proc Natl Acad Sci USA*. 2013;115(37):9198–9203.
 20. Gray AEL. The body remembers: dance/movement therapy with an adult survivor of torture. *Am J Dance Ther*. 2001;23(1):29–43.
 21. Allodi F. The body in political violence. *Torture*. 1996;9(4):100–105.
 22. Zeeburg NS. Torture: a public health puzzle in Europe. *Torture*. 1998;8(4a):21–46.
 23. Thornquist E. *Vitenskapsfilosofi og vitenskapsteori - for helsefag*. English: *Philosophy of science in health science education*. Bergen: Fagbokforlaget Vigmostad & Bjørke AS; 2003.
 24. National Cancer Institute at the National Institutes of Health. *NCI dictionary of Cancer terms. Manipulative and body-based practice*. . [cited 2019 08.01]. Available from: Bethesda, MD: National Cancer Institute; 2018 <https://www.cancer.gov/publications/dictionaries/cancer-terms/def/manipulative-and-body-based-practice>.
 25. Musial F, Michalsen A, Dobos G. Functional chronic pain syndromes and naturopathic treatments: neurobiological foundations. *Forschende Komplementärmedizin*. 2008;15:97–103.
 26. McGlone F, Wessberg J, Olausson H. Discriminative and affective touch: sensing and feeling. *Neuron*. 2014;82:737–755.
 27. Musial F, Weiss T. The healing power of touch; the specificity of the "unspecific" effects of massage. *Forschende Komplementärmedizin*. 2014;21:282–283.
 28. Uvnaes-Moberg K. Oxytocin may mediate the benefits of positive social interaction and emotions. *Psychoneuroendocrinology*. 1998;23:819–835.
 29. Holliday A. *Doing and writing qualitative research*. London: Sage; 2007.
 30. Kvale S. *Interviews. An introduction to qualitative research interviewing*. Thousand Oaks California: Sage; 1996.
 31. Malterud K. *Kvalitative metoder i medisinsk forskning. En innføring*. English: *Qualitative methods in medical research. An introduction*. 3. ed. Oslo: Universitetsforlaget; 2011.
 32. Morgan DL, Krueger RA, Flemming M, ed. *The focus group kit*. London: SAGE Publications Ltd.; 1998.
 33. Malterud K. *Fokusgrupper som forskningsmetode for medisin og helsefag*. English: *Focus groups as research method for medicine and health sciences*. Oslo: Universitetsforlaget; 2012.
 34. Pope C, Mays N. Qualitative research: reaching the parts other methods cannot reach: An introduction to qualitative methods in health and health services research. *BMJ*. 1995;311:42–45.
 35. Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. *Qual Health Res*. 2005;15.
 36. Kvale S, Brinkmann S, Anderssen TM, Rygge JF. *Det kvalitative forskningsintervju*. English: *The qualitative research interview*. Oslo: Gyldendal akademiske forlag; 2009.
 37. Calabrese C. Clinical research in naturopathic medicine. In: Lewith George, Jonas Wayne B, Walach Harald, eds. *Clinical research in complementary medicine*. Edinburgh: Churchill Livingstone; 2002.
 38. Stub T, Alraek T, Salamonsen A. The red flag! risk assessment among medical homeopaths in Norway: a qualitative study. *BMC Complement Altern Med*. 2012;12(1):150.
 39. Yehuda R, Spiegel D, Southwick S, Davis LL, Neyland TC, Krystal JH. What I have changed my mind about and why. *Eur J Psychotraumatol*. 2016;7(33768).
 40. Yalom ID. *Eksistensiell psykoterapi*. English: *Existential psychotherapy*. København Hans Reitzels Forlag A/S; 2001.
 41. Sulliva HS. *The interpersonal theory of psychotherapy*. London: Taylor & Francis group, Tavistock Publications Limited; 1953.
 42. Frankel V. *Kjempende livstro*. English: *Man's search for meaning*. Oslo: Aventura Forlag A/S; 1993.
 43. Grunwald M. *Human haptic perception. Basics and applications*. Basel: Birkhäuser; 2008.
 44. Musial F, Weiss T. The healing power of touch: the specificity of the "unspecific" effects of massage. *Forschende Komplementärmedizin / Res. Complementary Med*. 2014;21:282–283.
 45. Kosely H. *Traumaerfaring und Berührung*. English: *experience of trauma and touch*. vol. 2. Der Schmerzpatient; 2019 (In press).
 46. Harris AD, McGregor JC, Perencevich EN, et al. The use and interpretation of quasi-experimental studies in medical informatics. *J Am Med Inform Assoc*. 2006;13(1):16–23.
 47. Czajkowski SM, Powell LH, Adler N, et al. From ideas to efficacy: the ORBIT model for developing behavioral treatments for chronic diseases. *Health Psychol*. 2015;34(10):971–982.