# Compassionate Recovery and Neurological Empowerment (CRANE): A trauma focused pilot intervention for women in prison with complex needs who engage in self-harm.

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## Abstract

The high prevalence of interpersonal trauma for women in custody is well known. The mental health sequelae of such experiences can include lifelong patterns of harmful behaviour directed towards both the self and others. Responding effectively to such concerns has presented a considerable challenge to prison services. Based on our clinical experience we proposed CRANE (Compassionate Recovery and Neurological Empowerment) as an integrative approach to treating 'prolific' and acute acts of self-harm and suicidal ideation as symptoms associated with interpersonal trauma. CRANE draws on compassion focused therapy (CFT), and other trauma focused approaches, to promote participant recovery and stability. This is reflected in CRANE's four integrated strands, which include body centred trauma psychoeducation, trauma memory processing and a strengths-based approach to developing positive connections to self and others. This practice paper outlines these strands along with clinical illustrations from a pilot delivery and direction to theory, to help consider the benefits and challenges participants experienced from this intervention.

Keywords: women's prisons; self-harm; trauma informed; compassion focused therapy

## Women in prison: a gender responsive approach

Internationally, the number of women in prison is increasing (Lenihan, 2020). However, women still account for a minority of prisoners, constituting just four percent of the UK's prison population (Ministry of Justice, 2020). Despite this, women in custody present with considerable clinical challenges and vulnerabilities (Ministry of Justice, 2022). For example, women account for 22 percent of all self-harm incidents in UK prisons (Mahoney, 2022). As such, there has been considerable discussion about designing forensic services that respond effectively to the complex clinical needs seen in women's prisons (Fitzpatrick et al., 2022; Vince & Evison, 2021).

## Interpersonal trauma

High levels of complex interpersonal trauma within women's prison have been evidenced in previous research (Howard et al., 2017; Walker, 2021). However, it is imperative to understand the complex behavioural manifestation of trauma symptoms within a forensic context and to identify effective treatment approaches (Mahoney, 2019, Kelman et al, 2022). Understanding

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interpersonal trauma from a gendered perspective is also important if this is to be achieved (Olff & Langeland, 2022). This includes accounting for the experiences of intimate partner violence and childhood sexual abuse, as well as other ongoing traumatic experiences, such as imprisonment, the loss of motherhood and the removal of children (Kelman et al., 2022; Ramsay, et al., 2021).

## A compassionate response to self-harm

Delivering trauma informed services for women in prison has gained considerable traction (Mahoney et al., 2020). Responding efficaciously to complex trauma in women's prisons includes helping to reduce high levels of self-harm and suicidal behaviours (Warren et al., 2021). To date, such interventions have often been brief, produced mixed results, lacked rigorous evaluation and frequently do not include participants with particularly challenging behaviours (Hoge & Chard, 2018; Mahoney et al., 2019).

There has been recognition of the need for greater clinical insight when addressing challenging behaviours in forensic settings (Byrne & Ni Ghrada, 2019). Initial findings have also suggested that Compassion Focused Therapy (CFT) could be a particularly useful and clinically acceptable approach to addressing high levels of trauma in forensic services (da Silva et al., 2020; Taylor, 2017, Taylor & Hocken 2021). Cleare et al. (2019) have indicated that this may also be the case for the treatment of self-harm. As such, the evolutionary basis of CFT may be particularly helpful when conceptualising harmful behaviours as having developed within a survival context due to adverse life experiences (Hocken et al., 2022; Nandi et al., 2015). For example, many abused women develop self-harm as a 'survival' or 'safety' strategy to regulate their emotional distress through the release of endorphins (Steine et al., 2020; van Vliet & Kalnins, 2011). Addressing accompanying feelings of shame and isolation, which can lead to a cycle of negative emotional arousal and self-injury, has also been seen as a particular strength of CFT (Irons & Lad, 2017). Despite the theoretical and evidence-based appeal of CFT a coherent treatment framework for the use with women in custody has been lacking.

## The need for a new approach

Concern has been expressed about a small group of women who have been identified as engaging in 'prolific' levels of self-harm (Ramsay, 2021). The authors posited that a CFT based intervention, in combination with other well-established trauma therapies, was likely to assist in providing the responsivity and treatment intensity needed for this population. As an integrative approach 'offending' behaviour was conceptualised as being part of an individual's clinical presentation rather than a specific therapeutic focus (Willmont & Jones, 2022).

## CRANE: An integrative, compassion focused manual for interpersonal trauma

Compassionate Recovery and Neurological Empowerment (CRANE) is a new medium-term transdiagnostic psychotherapy manual for women who have experienced interpersonal trauma and whose symptoms include self-harm. Recovery is defined as a reduction of psychological trauma symptomatology and an increased insight into the function of self-harm for the individual. The overall treatment process seeks to combine a body centred and cognitive understanding of interpersonal trauma from a compassion focused perspective within a supportive group environment (Herman, 2020; Khoury, 2019).

It has long been recognised that a survivor's recovery journey will encompass different stages, which will require different therapeutic responses (Cloitre et al., 2011; Herman, 1992). As such the different 'strands' that constitute CRANE are designed to ensure stabilisation of challenging and harmful behaviours and to establish a new compassion-based schematic understanding of traumatic memories. The following sections of this paper outline the clinical and theoretical basis of the strands that comprise CRANE (Beutel et al., 2019). University

ethics and prison service permissions were requested and granted as part of the approval process.

## CRANE: Outlining treatment delivery and content

The pilot delivery of CRANE included 24 twice weekly sessions in the same dedicated prison treatment facility. Given that clinical experience indicates a non-linear recovery trajectory, CRANE was designed to have a flexible approach to an individual's 'treatment' needs. Strands were therefore designed to be amenable to both a stand-alone and 'rolling' delivery where participants have the option of re-joining the intervention (Hayes et al., 2007; Lewis & Hasking, 2020).

To assist with a more holistic approach as well as establishing trust and rapport CRANE was delivered in small group sessions (n=4) with participants who were in the same residential location. Two chartered and registered forensic psychologists (BC and GS) delivered the therapeutic material and assisted with ensuring that the group participated in adjunctive therapeutic activities with other support services on a weekly basis. The facilitators also provided additional support and motivation for participants for any interpersonal difficulties, including lapses in self-harm and custodial rule infringements. Participants were also given the option of working on an individual basis during trauma disclosure sessions. Facilitators received supervision from the first author (AM) as well as from other experienced CFT practitioners and networks.

## CRANE treatment delivery phases

CRANE can be divided in four distinct treatment phases, as follows:

### *Phase 1: Assessment and treatment introduction*

The CRANE team had to consider which women might benefit most from the intervention. Consultation with a range of stakeholders assisted in identifying women within the establishment who engaged in 'prolific' and acute acts of self-harm. This included multiple suicide attempts whilst in the community and whilst in custody. Consideration was also given to other challenging behaviours/presenting difficulties, as well as release dates, and participation in other substantive interventions.

Facilitators worked with potential participants to ensure appropriate motivation and treatment readiness (Harris & Fallot, 2001). Establishing safety, trust and collaboration within the group context was considered paramount and an overall treatment goal (Herman, 2020). Treatment goals and the overall CRANE model were shared with potential participants and psychometrics administered (Berman et al., 2022). Case conceptualisation and a collaborative approach to formulation were considered essential prerequisites.

### *Phase 2: Psychoeducation*

Assisting the management of interpersonal trauma symptoms and developing a coherent framework for recovery are important initial treatment goals (Courtois, 2020; Herman, 1992). This was considered an essential foundation from which to help prepare participants to process traumatic memories and to ensure an ongoing comprehensive resourcing for affect management and dissociative difficulties. Throughout this phase improvements in relational functioning were also focused on through the concerns that participants discussed in the group. As such, participant interactions that triggered a self-harm response were identified and alternative compassionate responses encouraged (Walker et al., 2021).

### *Phase 3: Trauma memory processing*

The treatment literature has highlighted the need for interventions to help survivors address their traumatic memories (Herman et al, 1992). There is concern that avoidance of traumatic memories, including by therapists, may prevent progress being made (de Jongh et al, 2016). However, the efficacy of exposure treatments has also been questioned particularly with respect to complex dissociative disorders (Chu et al, 2011). To this end developing a strengths-based narrative that promotes a compassionate understanding of often multiple traumatic experiences is crucial (Herman, 2020). It is recognised that this is an intensive emotional process in which participants need to be supported as they make sense of their traumatic experiences (Hull & Corrigan, 2019). Addressing 'stuck points' within a compassionate narrative is seen as key for the resolution of cognitions and beliefs associated with these experience (Kearney et al., 2021),

### *Phase 4: Treatment endings and moving forward*

Therapeutic endings can be a challenging process particularly for clients with disrupted attachment experiences (Burke et al., 2016). In this respect treatment termination has the potential to reactivate attachment issues, such as autonomy separation and concerns about the potential lack of support from the group that has been established (Finlay, 2016). This final phase therefore helps to plan for lapses in wellbeing by ensuring the availability of an appropriate network of support.

## CRANE treatment strands

CRANE is divided into four strands, or modules, as illustrated in Table 1. These largely reflect the overall treatment phases already outlined. Further detail as to the treatment goals and rationale are provided next, along with clinical illustrations. The provided illustrations are not based on a single client and are not intended for evaluative purposes.

### *Strand 1: Safety and stabilisation (10 sessions, two sessions per week)*

The first strand of the psychoeducation phase of CRANE seeks to develop group cohesion and participant understanding of a compassion-based 'road map' to recovery (Ekhtiari et al., 2017). This strand is predominantly based on exercises that develop a body centred approach to managing basic emotions (Hull & Corrigan, 2019; Schwartz et al., 2021). This neuroscience-informed resource includes a series of grounding and breathwork techniques to help manage the sympathetic nervous system and cortical arousal (Dana, 2020). This is based on adapted forms of mindfulness and soothing rhythm breathing exercises, to help participants establish a sense of coherence (Schäfer et al., 2019). This is an important foundation in promoting a caring and compassionate response both to the self and others (Gilbert, 2014; Matos et al., 2017). Practice, preparation, and persistence are emphasised as part of a deliberate effort to use the breath as a means of helping the body synchronise the heart to a slower rate (Steffen et al., 2021).

*Clinical illustration*

Ms A presents with high levels of self-criticism and shame, which manifests in self-harm and suicidal behaviours. In the months prior to CRANE Ms A had been hospitalised on multiple occasions. Ms A's self-criticism was intrinsically linked to her index offence and she often experienced internal conflict about committing suicide, i.e. "I do not deserve to live, but I also do not deserve to die. I should continue to be punished for my actions and prison is that punishment". In addition, Ms A presented as socially anxious, making a group environment a significant challenge for her, at first.

During this strand Ms A developed an understanding of new emotion regulation techniques, although she found it difficult to practice some exercises within sessions due to

feelings of embarrassment. Another initial barrier to Ms A's skills application was her dissonance about feeling less distressed, given her belief that she should be punished.

Compassionate imagery exercises were key tools to support Ms A and helped to develop insights into her fears, blocks and resistance to compassion. These insights centred on how her traumatic and abusive experiences had impacted on her, i.e. "it's how your body reacts to any event, no matter how small and insignificant they may seem to someone else…. I don't think my brain is entirely fucked up anymore. I've learned exactly how much things affect your brain and development, and how they can cause problems. I've learned to accept this and not hate myself so much for certain things". This proved to be a critical turning point for Ms A that allowed her to utilise self-soothing skills to manage highly active threat response states.

***Strand 2: Developing compassionate insight (5 sessions, 2 sessions per week)***

Developing insight and robust protocols for relational safety is an important pre-condition for participant recovery. This second strand in the psychoeducation phase seeks to help participants build confidence, emotional literacy and understand their 'neuroception' of relational safety (Porges, 2017; Steffen et al., 2021). This material utilises the CFT three systems model and emphasises a participant's 'inner wisdom' when responding to interpersonal difficulties (Gilbert, 2022). This seeks to cement the earlier introduction to compassion through continued use of imagery-based exercises (Tucci et al., 2018).

*Clinical illustration*

Ms B's emotional regulation survival strategies included self-injury and suicidal ideation that escalated when relationships ended. These relationships were often unstable and included relationships with other prisoners on the wing. This resulted in heightened self-critical thoughts and feelings of sadness, which presented as expressions of anger. During this strand Ms B developed insight into the way her abusive experiences as a child left her feeling vulnerable and threatened in relationships and how feelings of rejection, when triggered, were slow to 'deactivate'. This reinforced other negative beliefs, such as "I'm disgusting", "I'm bad", "I'm unsafe" and "I'm not wired right" and perpetuated a cycle of seeking out relationships to gain reassurance, approval, and validation. Ms B begun to recognise that impulsively starting new relationships exposed her to further abusive situations. During CRANE Ms B also developed insight into the need to develop compassionate self-care and to feel secure in herself.

***Strand 3: Telling my story (5 sessions, 2 sessions per week)***

Participants are provided with an opportunity to write about and discuss their abusive experiences and to construct a therapeutic narrative that supports an adaptive resolution of their traumatic memory (Resick et al., 2017; Schauer et al., 2011). The therapeutic goal from this narrative-based process is to address avoidance strategies that may have prevented participants thinking about their trauma. It is important facilitators have an awareness of a participant's 'window of tolerance' and where possible attend to emotionally disturbing material in brief sequential doses when accessing the traumatic memory network and ultimately more adaptive information (Siegel, 2001). Participants are encouraged to identify 'stuck points' in terms of 'fears, blocks and resistances', and to reconsider how these impact on their recovery in key areas of relational functioning (Gilbert & Mascaro, 2017; Resick et al., 2017).

*Clinical illustration*

Ms C presented with difficulties managing self-injurious and suicidal behaviour both in the community and in custody. Historically, Ms C had shared little of her 'story', with her quiet and closed demeanour being the result of considerable levels of shame and anxiety. As her therapeutic alliance developed, Ms C slowly shared her story and how her abuse had impacted

her. In doing so, she disclosed for the first time the presence of highly self-critical auditory hallucinations. Ms C also came to a greater understanding of her self-harm, i.e. "…when I am stressed, or stressful events are occurring he [the voice] appears. He is loud and controlling. He frightens me. Harming myself helps to quieten him in the immediate sense". This led Ms C to conclude when relating to her vulnerable self, "… it is understandable that you felt unsafe, adults have hurt you… self-harming helps to relieve the emotions in the moment for a few minutes, you do it for a reason, do not judge yourself for that – but you have come to realise that it's not the answer".

***Strand 4: Compassionate Me Moving Forward***

This final strand helps participants reflect on the insight they have gained from CRANE. As a final strand there is also an important element of planning for participants ongoing recovery. This includes therapeutic letter writing to a participant's 'inner critic' with a particular focus on discussing issues of shame and guilt. This involves participants revisiting their trauma narrative to enhance appropriate strength-based narratives (Dana, 2020). Central to this strand is the continued development of a collaborative formulation where fears, blocks and resistances are further identified and supportive connections emphasised (Dale-Hewitt & Irons, 2016). This includes the further use of imaginary exercises to help participants strengthen flows of compassion towards the self and other supportive relationships.

*Clinical illustration*

During this strand Ms D reflected on how her insight had developed, i.e. "I know the difference between my emotions – anger, sadness, happiness. Before it was jumbled into anger. I have a better understanding of why I am the way I am… and that's OK.' Ms D also had a more compassionate approach when describing herself and her experiences, i.e. "I'm not a bad person… I have learnt that things weren't my fault – I didn't ask for these things to happen to me… I can be compassionate to myself now." Ms D also used compassionate letter writing exercises as a therapeutically safe way to further her recovery. Ms D wrote to her younger self - "You have power and control that you never realised you have. You were just a child. It was not your fault!". This was also evident in the more compassionate self-talk Ms D started using, e.g. "I tell myself I can get through it. I don't need to hurt myself anymore. I did it out of frustration, anger and to let badness out. I don't need to do it anymore. I have more insight into it but sometimes it's hard to stick in my brain".

***Table 1***

*CRANE: Intervention design and therapeutic goals*

| Phase/Strand | Key components | Theoretical and therapeutic concepts |
|---|---|---|
| **Phase 1** | **Assessment and treatment introduction** | Establishing clinical need and therapeutic relationship (Harris & Fallot, 2001). |
| **Phase 2** | **Psychoeducation** | Initial treatment and safety stage (Herman, 1992); Interoceptive awareness and insight; Polyvagal theory (Porges, 2017); Mindfulness, compassionate mind training (Gilbert, 2022). |
| **Strand 1:** *Safety and Stabilisation* | Session 1-5: Introduction to interpersonal trauma and compassion-based recovery. Emotional regulation skills: mindful movement, three minute breathing space, coping with intrusive thoughts, difficult feelings, flashbacks, nightmares and dissociation. | |
| | Sessions 6-10: Coping with anger, grief, depression, self-harm, shame and guilt. Emotion regulation skills: soothing rhythm breathing, self-compassion, relaxation, safe space exercises. | Shame-based insight (Gilbert, 2003; Kaufman, 1989); Development of emotional competence and relaxation skills (Dana, 2020). |
| **Strand 2:** *Developing compassionate insight* | Keeping safe and feeling safe in relationships. Understanding and addressing difficulties that can impede recovery. | Compassion Focused Therapy (Gilbert, 2014); Polyvagal Theory – neuroception/relational safety outside of awareness (Porges, 2017; Tucci et al., 2018). |
| **Phase 3** | **Trauma memory processing** | Cognitive processing therapy, narrative therapy, compassionate focused therapy (Gilbert & Mascaro, 2017; Resick et al., 2017). |
| **Strand 3:** *Telling my story* | Reframing of the trauma narrative to promote healing and recovery. Compassionate letter writing, identifying fears, blocks and resistances, flows of compassion. | |
| **Phase 4** | **Reconnection** | |
| **Strand 4:** *The compassionate me moving forward* | Deepening compassion-based skills and positive connections with others; collaborative and empowered formulation. | Polyvagal 'Re-Story Exercise' (Dana, 2020); Compassionate flows; Reconnecting to others – personal connection plan (Herman, 1992). |

## Discussion

As an integrative treatment CRANE has sought to incorporate the promising work of various trauma focused psychotherapies (Behan, 2019). This includes polyvagal theory, which the therapy team regarded as frequently providing therapeutically useful insights (Dana, 2020). However, as a principal model CFT has been particularly suited to the needs of our highly complex and challenging client group. Recent reviews have suggested that successfully implementing psychosocial interventions with such clinically challenging populations maybe particularly difficult (McIntosh et al., 2021). Whether this is because other treatment models lack efficacy or there is a paucity of quality research is debatable. That paucity extends to the availability of efficacious interventions for women in the criminal justice system and especially those with histories of interpersonal trauma and chronic and enduring self-harm (Mahoney, 2022). Indeed, an important ongoing commitment to the development of CRANE is the ongoing effort required to establish its efficacy.

The number of women who have currently participated in the pilot intervention is small and may remain so with respect to staffing and other resource considerations (Kelman et al., 2022). However, this is an extremely vulnerable population whose chronic and enduring self-harming behaviours require appropriate resourcing (Ramsay et al., 2021). In this regard adequately powered clinical trials may not be immediately possible and other approaches to evaluating CRANE, such as a well-constructed logic model and analysis of clinical change approach may be as equally valid (Tournier et al., 2020). Similarly, the clinical skill and commitment of the current facilitators involved in this pilot implementation have may likely be important factors in any potential efficacy of this pilot trial (Frost et al., 2020). Although yet to be evaluated, facilitators report that participants found CRANE useful and acceptable, as suggested in the clinical illustrations included. Early behavioural indicators, for example a reduction in acts of self-harm, would support this. Nevertheless, iatrogenic harm and other unintended consequences need to be monitored for (Parry et al., 2016).

Herman (1992, 2020) has been a strong advocate for group-based interventions when working with survivors of interpersonal trauma. Group based interventions may have pragmatic and therapeutic benefits beyond individual treatment protocols. As noted by the clinical illustrations presented here there were times when the group was a considerable source of support for participants and times when individual support was required. The need to correctly configure this mixed modality of support for each participant is essential. From an organisational and treatment perspective CRANE has provided a therapeutic *structure* from which to engage women who would not otherwise have received the support they required. Despite this, as noted in the clinical illustrations, this was seldom a straightforward process and required time and dedication from the treatment team. Having the support and backing of prison service management has been crucial.

## Limitations

Delivering any intervention in a prison-based setting is challenging (Beaudry et al., 2021). Given the nature of the clinical and forensic difficulties that participants present with, appropriate risk management strategies were always given priority. Facilitators noted that a considerable amount of time was spent managing participant distress outside of sessions and working on occasions to prevent transfers, mid treatment, to other establishments. Similarly, the delivery of CRANE has been undertaken by two dedicated and experienced therapists. Replicating this facilitator expertise, and indeed training, would be important for the success and integrity of delivery by other treatment teams. In addition, it is also noted from participant and facilitator feedback that too much material was included in the pilot manual for each session. Ensuring the contents of sessions is responsive but also matches participant learning

style and ability is an important consideration that has led to some retrospective adjustments. Finally, it is important to acknowledge that all the authors have a professional interest in ensuring the success of CRANE. Any inherent biases, both in delivery of the intervention and any interpretation of outcomes, should be acknowledged (Yarborough, 2021).

## Conclusions

Concern has been expressed about the rise in self-harm within women's prisons. Addressing high rates of self-harm is a key priority for HMPPS. Women who engage in chronic and enduring levels of self-harm, whilst a minority, are the largest contributors towards recorded statistics in self-harm. They present as an extremely vulnerable population with substantive clinical needs. Our construction of CRANE, as a trauma focused treatment protocol, has sought to respond to the underlying concerns that this group of women presented with. Whilst further research is required initial findings suggest that this compassion centred approach is both useful and acceptable. Clinical and management-based challenges undoubtably require commitment if such approaches are to be implement effectively. A commitment is also required to continue developing and establishing the evidence base in effective practices for this population of extremely vulnerable women.

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