The development of Couple HOPES: a guided online intervention for PTSD and relationship satisfaction enhancement

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**ABSTRACT**

**Background:** Couple HOPES (Helping Overcome PTSD and Enhance Satisfaction) was created to help overcome a range of barriers to accessing psychotherapy for posttraumatic stress disorder (PTSD) and commonly associated intimate relationship problems.

**Objective:** Couple HOPES is a guided, online self-help intervention adapted from Cognitive-Behavioural Conjoint Therapy for PTSD that aims to improve PTSD and enhance relationship satisfaction.

**Method/Results:** This paper describes the processes and principles used to develop the Couple HOPES intervention platform as well as the coaching model and manual used to promote engagement and adherence to the intervention.

**Conclusions:** Current research and future directions in testing Couple HOPES are outlined.

**Desarrollo de HOPES para Parejas: Una intervención guiada en línea para mejoramiento de satisfacción de relación de pareja y TEPT**

**Antecedentes:** HOPES para Parejas (Ayuda para superar el TEPT y Mejorar la Satisfacción) fue creado para ayudar a superar un rango de obstáculos para acceder a psicoterapia para Trastorno de Estrés Posttraumático (TEPT) y problemas íntimos de pareja comúnmente asociados.

**Objetivo:** HOPES para Parejas es una intervención guiada en línea de autoayuda adaptada de la Terapia Conjoint Conductual para TEPT, cuyo objetivo es mejorar el TEPT y la satisfacción en la relación.

**Método/Resultados:** Este artículo describe los procesos y principios usados para desarrollar la plataforma de intervención HOPES para Parejas, así como el modelo de entrenamiento y el manual usado para promover el compromiso y adherencia a la intervención.

**Conclusiones:** Se delinearon la investigación actual y direcciones futuras respecto al estudio de HOPES para Parejas.

**夫妻希望的开发对PTSD和关系满意度提升的在线指导性干预**

**背景:** 夫妻希望 (帮助克服PTSD和提升满意度) 的开发是为了帮助克服评估创伤后应激障碍(PTSD)和通常相关的亲密关系问题的心理治疗的障碍。

**目的:** 夫妻希望是一种在线指导的自助干预措施，改编自PTSD认知行为疗法，旨在改善创伤后应激障碍并提升关系满意度。

**方法/结果:** 本文介绍了开发夫妻希望干预平台的过程和原理，以及用于促进参与和坚持干预的指导模型和手册。

**结论:** 概述了对夫妻希望考查的当前研究和未来方向。

Posttraumatic stress disorder (PTSD) is a severe and debilitating condition associated with substantial individual, relational, and societal costs and significant intimate relationship impairments (Korte, Jiang, Koenen, & Gradus, 2020; Monson, Friedman, Dekel, Ennis, & Macdonald, in press). Relationship distress is a risk factor for poor outcomes among those in individual PTSD treatment (Monson et al., in press). Yet, there are substantial barriers to accessing evidence-based, face-to-face, couple therapy for PTSD. To overcome such individual, social, and institutional barriers, we developed Couple HOPES (Helping Overcome PTSD and Enhance Satisfaction; www.couplehopes.com), an online, guided couple self-help intervention that aims to reduce PTSD symptoms and improve relationship satisfaction. This paper...
outlines the decision-making processes in developing Couple HOPES and offers future directions for testing.

1. **Background and development of Couple HOPES**

The role of close relationships in the aetiology, maintenance, and treatment outcomes in PTSD inspired the development of a conjoint intervention that simultaneously seeks to improve PTSD and relationship satisfaction: Cognitive-Behavioural Conjoint Therapy for PTSD (CBCT; Monson & Fredman, 2012). CBCT is a manualized cognitive-behavioural therapy that targets PTSD by encouraging patients to approach trauma-related stimuli and challenge trauma-related cognitions. As a couple treatment, CBCT works to enhance relationship satisfaction with education on communication skills and targeting specific ways PTSD may operate in the context of the relationship. CBCT includes 15 sessions over 3 phases: 1) psychoeducation, establishing the therapy rationale, and increasing safety in the relationship; 2) communication skills training and reducing avoidance; and 3) dyadic cognitive interventions targeting trauma-focused and present-focused cognitions that maintain PTSD and relationship problems. Across several studies, CBCT has significantly reduced clinician-, patient-, and partner-rated PTSD symptoms and improved relationship satisfaction. CBCT also demonstrates improvements in a range of other outcomes (Liebman, Whitfield, Sijercic, Ennis, & Monson, 2020 for review).

Despite empirical support for CBCT, face-to-face treatments are often unavailable due to a lack of trained clinicians and geographical dispersion or are not sought due to stigma, time, or financial constraints (Kazdin & Blase, 2011). Although individual Internet-based treatments are effective for reducing PTSD (Sijbrandij, Kunovski, & Cuijpers, 2016), these treatments do not target the broader relationship context in which PTSD is embedded. Consequently, we created Couple HOPES to address these gaps by adapting CBCT to a self-directed online format. In transforming CBCT into Couple HOPES, two questions were particularly germane: What to give couples (i.e. intervention content)? and How to deliver it to them (i.e. intervention delivery)?

2. **Determining intervention content**

2.1. **Target population**

We created Couple HOPES to be applicable regardless of trauma type (e.g. combat, sexual trauma, natural disaster) and the different presentations of the psychopathology of PTSD. At present, the intervention is being tested with military members, veterans, first responders, and healthcare workers given the especially strong associations these groups have between PTSD and intimate relationship dysfunction (Taft, Watkins, Stafford, Street, & Monson, 2011). Our exclusion criteria include severe intimate violence and imminent suicidality in either partner for safety reasons.

2.2. **Content selection**

CBCT includes various interventions aimed at multiple mechanisms. The next step in developing Couple HOPES was to create a parsimonious intervention that required the least amount of modules, content, coaching and financial costs as possible, while achieving improvements in PTSD symptoms and relationship satisfaction. We elected to keep the sequential nature of CBCT in which active elements build on each other. The result was seven modules of engaging streamed videos and within-module exercises that are approximately 20–30 minutes long as well as out-of-module practice assignments (see Table 1). Aiming for universal applicability, we provide examples from different trauma in the psychoeducational videos and materials, use actors of different ethnic/racial backgrounds, and depict both same- and different-gender couples.

In determining essential intervention elements, the first three authors of this manuscript (i.e. primary developer of CBCT/Couple HOPES and two experts in conjoint therapies for psychopathology) held a series of meetings to review the CBCT manual and identify key components to be retained for Couple HOPES. First, retaining psychoeducation regarding trauma recovery in a relational context was perceived to be essential to build an intervention rationale (e.g. Whitworth, 2016). Next, communication skills (e.g. listening; identifying, expressing, and reflecting what one is feeling and thinking) were retained for two reasons: 1) communication behaviour is associated with both relationship satisfaction and PTSD symptoms (Fredman et al., 2017, for review), and 2) team members believed such skills would be important to promote effective dialogue between partners regarding all subsequent intervention components. As in CBCT, couples are instructed to do ‘major approach’ (i.e. in vivo exposure) assignments in a graded fashion, beginning with something moderately distressing to increase the potential for mastery (Brown, Zandberg, & Foa, 2019). Couple HOPES advances CBCT-informed approach assignments by asking each partner to do ‘mini approach’ assignments, or smaller day-to-day activities that reflect a lifestyle of approaching versus avoiding (e.g. completing household task on to-do list). These assignments are designed to overcome the generalized avoidance observed in PTSD and these couples. We also enhanced education about and targeting of partner accommodation of PTSD symptoms given its importance for
Table 1. Couple HOPES module content and practice assignments.

| Module            | Content                                                                 | Practice Assignment                                                                 |
|-------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 1 Introduction    | - Welcome to Couple HOPES - Psychoeducation about PTSD and relationships - Rational for conjoint recovery from PTSD - Practice assignments - Expert tips | - Daily Catching Nice: Couples practice ‘catching each other doing something nice’ to bolster positivity |
| 2 Safety Building | - Review PTSD and relationship outcomes - Brief review of prior module - Trauma Impact Questions review - Psychoeducation about conflict and negative behaviours that decrease safety in relationships - Presentation of Time-Out strategy to manage conflict and enhance safety - Practice assignments - Expert tips | - Trauma Impact Questions: Couples answer questions regarding the impact of trauma on their relationship and their own thoughts and behaviours |
| 3 Listening       | - Review PTSD and relationship outcomes - Brief review of prior module - Reviewing the Time-Out skills and practice - Psychoeducation about avoidance in PTSD - Introduce communication skills for listening (e.g. paraphrasing) - Record avoided people, places, situations, and feelings - Practice assignments - Expert tips | - Daily Catching Nice - Time-Outs: Couples stop a conversation amidst periods of high arousal to prevent further escalation and conflict and return to the conversation after a brief outline - Avoidance List: Each partner adds to their avoidance list people, places, situations, and feelings they avoid because of PTSD - Daily Paraphrasing: Partners record when they notice each other paraphrasing to recognize listening efforts |
| 4 Approaching     | - Review PTSD and relationship outcomes - Brief review of prior module - Avoidance list review - Psychoeducation about approaching instead of avoiding - How to do approach activities - Practice assignments - Expert tips | - Daily Paraphrasing - Major Approaches: Partners aim to engage in approaching of/ exposure to at least three items on their avoidance list - Mini Approaches: Couples approach small activities daily they typically avoid |
| 5 Feeling         | - Review PTSD and relationship outcomes - Brief review of prior module - Pick new approach tasks together - Introduce notion of Communication Channels (sharing versus solving channel) - Introduce communication skills for sharing: identifying, expressing, and reflecting feelings - Practice communication of feelings - Expert tips | - Sharing Feelings: Couples record when their partner expresses their feelings - Major Approaches - Mini Approaches - Channel Checking: Individuals catch their partner doing two communication channel checks |
| 6 Thinking        | - Review PTSD and relationship outcomes - Brief review of prior module - Continue approach activities - Psychoeducation about connection between thoughts, feelings, and behaviour - Discussion of role of thoughts in PTSD - Introduce communication skills for sharing: identifying, expressing, and reflecting thoughts - Practice communication of thoughts - Expert tips | - Sharing Thoughts and Feelings: Daily, couples paraphrase and record an event, thought, and feeling their partner shared with them - Major Approaches - Mini Approaches - Trauma Impact Questions |
| 7 Moving Forward  | - Review PTSD and relationship outcomes - Brief review of prior module - Reflect on progress throughout intervention - Review intervention content - Plan for the future - Expert tips | - Planning the future: Couples discuss skills they found helpful, what they can commit to continue doing, and a plan if they return to old habits or move away from learned skills |

relationship satisfaction and outcomes in CBCT (Fredman et al., 2016). Accommodation refers to behaviour changes by others that aim to minimize the occurrence of PTSD symptoms, such as taking over certain chores, avoiding physical contact, and not sharing thoughts or feelings that might invoke anger. Partners are provided education about accommodation and are encouraged to practice modifying such behaviours to alter the relationship system and promote recovery.

Finally, a related decision was whether to keep the dyadically-focused trauma processing in the adaptation, which is a central focus of the third phase of CBCT. We chose not to include a formal process for challenging trauma-related cognitions based on available data showing that CBCT leads to significant improvements before such processes are introduced in standard and accelerated group CBCT delivery (e.g. Fredman et al., 2019). Instead, a module is devoted to education about the role of cognition in emotions and behaviours (see Resick, Monson, & Chard, 2016). This module includes example cognitions associated with PTSD and relationship distress and assignments to monitor trauma- and PTSD-focused cognitions.

3. Intervention delivery considerations

In designing the intervention, we sought to promote both adherence to the programme and user engagement.
We conceptualized adherence as a categorical variable that indicates whether users are compliant with program components and instructions such as attending scheduled phone calls with coaches, watching videos in each module, and having completed the practice assignments enough to progress to the next module (i.e. each partner completing at least one entry per skill targeted). Nonadherence is targeted in coaching calls (see coaching section, below). In contrast, we conceptualized engagement as a continuous variable that reflects the extent to which participants engage with the platform through various methods including the number of platform logins, the frequency of homework attention (i.e. completing practice assignments every other day versus daily), and the extent to which they message their coach. Thus, while adherence reflects whether or not couples ‘did the intervention,’ engagement reflects ‘how much they did the intervention.’

Designing the mode of delivery itself involved careful consideration of function and promotion of user engagement. The Couple HOPES content is delivered via videos rather than solely through text given research that video-based psychoeducation produces superior knowledge outcomes compared to text (e.g. Murphy, Chesson, Walker, Arnold, & Chesson, 2000). Our videos include both animations with audio voiceover and role play videos to illustrate concepts. Two professional actors function as ‘hosts’ of the program, describing intervention content and practice assignments, and several others play ‘couples’ to demonstrate Couple HOPES skills. To lend credibility to the program, each module concludes with a brief video wherein the first author directly addresses the camera and provides ‘expert tips’ to optimize skill implementation.

Next, we carefully considered ways to elicit user engagement by focusing on how the content interacted with the platform’s design. We invested in graphic design to translate the intervention’s spirit into outward-facing visual components on the platform that enhance clarity. We also invested in gamification, which involves applying typical elements of game playing (e.g. point scoring, markers of progression) to the program to reinforce user engagement. For example, couples complete measures of PTSD symptoms and relationship satisfaction before each module, and a feedback graph presents the users with these scores to help them observe progress from one module to the next. We also gamified intervention progress, wherein users ‘unlock’ subsequent modules by completing prior ones. The overall intervention progress bar and module menu (i.e. a list that allows users to move between current and previously completed modules and shows them future locked modules) communicates and incentivizes progress.

We also introduced several features to increase the generalizability of Couple HOPES skills to clients’ lives. For example, the videos within each module are broken into parts, and couples are instructed to use these breaks to practice the skill just taught and enter their responses before moving onto the next video. Between-module practice maintains the conjoint frame of the intervention, such that both members of a couple have user accounts that are connected to each other. Consequently, each member can view each other’s practice entries and the scores for their pre-module assessments. To further enhance skills generalization, we designed an app through which couples can enter their practice assignment responses into the platform in real-time, without requiring immediate computer access. The app, available for both iOS and Android operating systems, allows for entering practice assignment responses, notifications, and secure messaging.

4. Coaching model and manualization

Some level of personal contact is associated with better outcomes with online self-help interventions for PTSD as well as general couples’ interventions (e.g. Rothman, Roddy, & Doss, 2019; Sijbrandij et al., 2016). To overcome barriers to access based on jurisdictional registration/licensure laws, and because prior online interventions have successfully used non-therapist coaches (e.g. Doss et al., 2016), we elected to use a coaching model. All coaches are individuals with bachelor’s degrees or higher, but do not necessarily have clinical training. The coach monitors changes in symptom and relationship satisfaction scores and assists with engagement and completion of both the module content and practice assignments. The function of the coach and what they target in their interactions with couples has an explicitly hierarchical design: to first see how the couple is faring in terms of symptoms, and second to address barriers to adherence and engagement with the program. Examples of barriers that may be targeted include content comprehension issues, avoidance of practice assignments or module completion, and worsening of symptoms or relationship functioning. Coaches address these barriers by clarifying content that is not understood, encouraging couples to use the skills introduced as they progress through the program, and providing support and motivation for couples’ continued efforts.

Coaches complete an 8-hour standardized training specific to the program, with an emphasis on understanding the principles of trauma recovery (e.g. non-avoidance, approaching increasingly difficult situations) and the specific elements of Couple HOPES. They then participate in weekly 1-hour consultation meetings, including review of audiorecorded coaching calls to maintain fidelity to the coaching model. Coaches also train on a specific protocol for assessing and managing any severe physical violence or
suicidality/self-harm occurring during the intervention, and these events are reported to the relevant ethics board and used for monitoring safety.

Upon enrolment, a coach is assigned to each couple. There are four 15-minute scheduled calls that occur after the couple completes modules 1, 3, 5, and 7 (end of intervention). There is an early emphasis on program engagement and adherence followed by checking in at intervals to support the couple’s progression. The final call is designed to summarize the program and to validate completion of the work. One additional 15-minute coaching call is available on an as-needed basis for issues such as low adherence, symptom exacerbation, or comprehension problems.

5. Future directions

Consistent with the recommended progression in intervention development (Guidi et al., 2018), a systematic case series of 10 couples in which one partner has likely PTSD is nearly completed. These initial cases reveal promising results and raise several questions that warrant further consideration. First, in the hopes of expanding reach, it would be worthwhile to test the efficacy and viability of Couple HOPES with different types of dyads (e.g. family members, friends) or possibly with individuals. Relatedly, it will be essential to understand whether certain client characteristics may predict who is most likely to succeed in the program (e.g. readiness to change, initial relationship satisfaction, or PTSD severity).

Future dismantling studies are needed to examine which components (i.e. modules, practice assignments, or coaching) maximally contribute to the program’s efficacy. For example, coaches strive to help couples complete the program and to engage with the content as they progress. However, it remains unclear how many couples desire or require coaching, and the specific role coaches should play to be most helpful. It is also unknown how behaviours such as discussing symptom change, reviewing content, or troubleshooting barriers to completing assignments may affect outcomes.

Couple HOPES may offer a possible solution to a growing disparity between individuals in need of PTSD interventions and current interventions that are available. At the same time, it has also raised questions regarding who can benefit from brief self-help online interventions, how we can enhance their reach and impact, and, more fundamentally, how and why online interventions do and do not work. Couple HOPES reflects our goal to deliver evidence-based care to as many people as possible, as quickly as possible. We are hopeful that the decision-making we outlined regarding its development can advance a growing field devoted to this goal.

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