Compassion-Focused Therapy approach for hoarding disorder:
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A Compassion-Focused Therapy approach for hoarding disorder: Background, introduction, and research update

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Abstract

Hoarding Disorder (HD) was formally recognized as a mental health diagnosis in 2013. A number of therapeutic methods have been developed and tailored for HD, including Cognitive Behavioral Therapy (CBT) and Compassion Focused Therapy (CFT). The aims of this article are threefold: First, to provide a description of the rationale of developing a group CFT protocol for HD (CFT-HD); Second, to introduce the theoretical framework, treatment targets, and techniques of CFT-HD; Third and finally, to share existing empirical evidence of CFT-HD, and an ongoing study on CFT-HD conducted in a private practice setting. Implications of the development of and research findings on CFT-HD, as well as future directions, are discussed.

Keywords: hoarding, compassion-focused therapy, group therapy, therapy protocol.

Uma abordagem da terapia focada na compaixão para a perturbação de acumulação: Contexto, introdução e atualização da investigação

Resumo

A perturbação de acumulação (PA, no original em inglês, *Hoarding Disorder* [HD]) foi formalmente reconhecida como um diagnóstico de saúde mental em 2013. Vários métodos terapêuticos foram desenvolvidos e adaptados à PA, incluindo a Terapia Cognitiva Com-

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portamental (CBT) e a Terapia Centrada na Compaixão (CFT). Os objetivos deste artigo são três: primeiro, fornecer uma descrição dos fundamentos do desenvolvimento de um protocolo de CFT de grupo para a PA (CFT-HD); Segundo, introduzir o quadro teórico, objetivos de tratamento, e técnicas de CFT-HD; Em terceiro e último lugar, partilhar as provas empíricas existentes de CFT-HD, e um estudo contínuo sobre CFT-HD conduzido num ambiente de prática privada. São discutidas as implicações do desenvolvimento e dos resultados da investigação sobre a CFT-HD, bem como as orientações futuras.

Palavras-chave: acumulação, terapia centrada na compaixão, terapia de grupo, protocolo terapêutico.

INTRODUCTION

Hoarding Disorder (HD) is characterized by persistent difficulty in discarding possessions due to perceived need to save them or distress in letting them go; presence of clutter; impairments in self-care and social functioning; and significant increases in safety hazards due to cluttered homes (American Psychiatric Association, 2013). It is a chronic mental health challenge with a lifetime prevalence of 2% - 4% in the United States and Europe, and a significant concentration of first diagnoses among adults 65 years of age or older (Best-Lavigniac, 2006; Grisham et al., 2009; Kessler et al., 2005; Kim et al., 2001). Research about HD and its effective treatment remains relatively limited, although it is building quickly. This vulnerable population will benefit greatly from any findings that identify underlying processes leading to HD symptoms and/or effective interventions for managing and reducing them. Hereafter we introduce Compassion-Focused Therapy (CFT) as a treatment option for HD. First, we provide an overview of the current standard of treatment and the rationale for developing CFT as an alternative treatment option. Second, we offer a detailed introduction to the CFT approach for HD, in particular, a group therapy protocol we have developed for this purpose. Finally, we review existing evidence for CFT for HD, ongoing, and future studies, proposing both their hypotheses and implications.

RATIONALE FOR DEVELOPING COMPASSION-FOCUSED THERAPY FOR HOARDING

The first researchers to identify HD as a distinct diagnosis were cognitive-behavioral in orientation, and CBT remains the current standard of treatment for

the disorder. Descriptions of a CBT framework for HD intervention, its treatment effects and limitations are needful orientation prior to presenting a rationale for developing a CFT approach to treating HD.

The cognitive-behavioral model for HD

The Cognitive-Behavioral model for HD (Frost & Hartl, 1996) has identified four domains of HD-related dysfunctions: (a) Avoidance, characterized by postponing sorting and decision making about discarding; (b) information-processing difficulties, including decision-making, memory, organization, and categorization problems; (c) emotional attachment to possessions associated with seeing them as an extension of self, a source of safety or comfort; (d) hoarding-related beliefs, such as beliefs about one's responsibility for, need to control, and expected catastrophic consequences of losing their possessions. Based on this model, individual and group Cognitive Behavioral Therapy (I-CBT and G-CBT) have been developed (Gilliam et al., 2011; Meyer et al., 2010; Muroff et al., 2012; Pollock et al., 2014; Steketee et al., 2010). While specific protocols and packages differ, CBT interventions tend to make use of common CBT technologies, including exposure, cognitive restructuring, thought recording, and behavioral experimentation (Steketee & Frost, 2013). As the current standard of care for HD, CBT has been shown to be effective (Rodgers et al., 2021), however, with significant room for improvement: A meta-analysis including both I-CBT and G-CBT found a large effect size (Hedge's $g = 0.82$) on HD symptom severity, and that the rate of a clinically significant change in HD symptoms after CBT is between 25% and 42% (Tolin et al., 2015; N = 232). Similarly, a meta-analysis focusing on only G-CBT reported a large effect size (Hedge's $g = 0.96$) on HD symptom severity, and the rate of a clinically reliable change as between 21% and 68% (Bodryzlova et al., 2019; N = 178). These findings show that, on average, less than half of the individuals who have gone through CBT for HD have obtained clinically significant changes in their symptoms. A closer look into which mechanisms related to HD have been successfully addressed and which may have not is warranted.

To that end, a study examined the changes CBT had made to hoarding-related cognition, and whether they mediated the degree of HD symptom reduction (Levy et al., 2017). Supporting the authors' hypotheses, the study found that changes in hoarding cognition as measured by beliefs about emotional attachment to possessions, concerns of losing memory without possessions, perceived responsibility toward, and need to control possessions mediated HD symptom reduction (Steketee et al., 2003). However, the degree of change on these four types of beliefs was limited to 0.5 to 0.9 standard deviations from the average of the pre-treatment scores.

These findings suggest that, firstly, addressing hoarding-related cognition is key to treatment for HD, and, secondly, alternative ways are needed to more effectively address the problems of HD than the current form of CBT does.

The missing pieces in CBT

Taking a step back to consider what may have been missed in current CBT-based treatments for HD, we identified several areas outside the scope of the hoarding-related cognition and HD-related dysfunctions included in the CBT model proposed by Frost and Hartl (1996). These include: (a) emotion regulation challenges; (b) attachment and relationship difficulties; and (c) self-related issues, which in many cases stem from adverse or traumatic life experiences.

First, regarding emotion regulation challenges, associations between HD and different forms of emotion regulation challenges have been reported in many studies (see review by Barton et al., 2021). In a study (Tolin et al., 2018) examining emotion regulation skills and tendencies based on the model of emotion regulation by Gratz and Roemer (2004), individuals experiencing HD were found to have significantly greater difficulties in emotional clarity, impulsivity, goal-directed actions, accepting emotions, and accessing strategies for feeling better, than the control group. These difficulties were all found to significantly correlate with HD symptom severity. Similarly, several studies have examined other mechanisms related to emotion regulation, such as anxiety sensitivity and distress intolerance, defined respectively as beliefs that anxiety-related sensations are dangerous, and inability to tolerate psychological distress. These studies have shown significant contribution of anxiety sensitivity and distress intolerance to avoidance, one of the HD-related dysfunctions identified in the CBT model (Frost & Hartl, 1996), and, in turn, to HD symptom severity (Ayers et al., 2014; Shaw et al., 2015; Timpano et al., 2009; Timpano et al., 2014; Williams, 2012). The CBT approaches to address challenging emotions are primarily cognitive and behavioral skills, such as cognitive restructuring and imaginary and in vivo exposure. For example, CBT identifies hoarding-related beliefs, attempts to challenge and change them in order to help individuals address challenging emotions and avoidant behaviors, which are believed as a result of difficulty facing certain emotions. However, limited effects of CBT on HD-related cognitions and avoidance found in previous studies suggest room for improvement in CBT's approach to address emotion regulation (Chou et al., 2019; Levy et al., 2017).

Second, related to the difficulties in emotion regulation, problematic interpersonal relationships have been found among individuals experiencing HD (Grisham

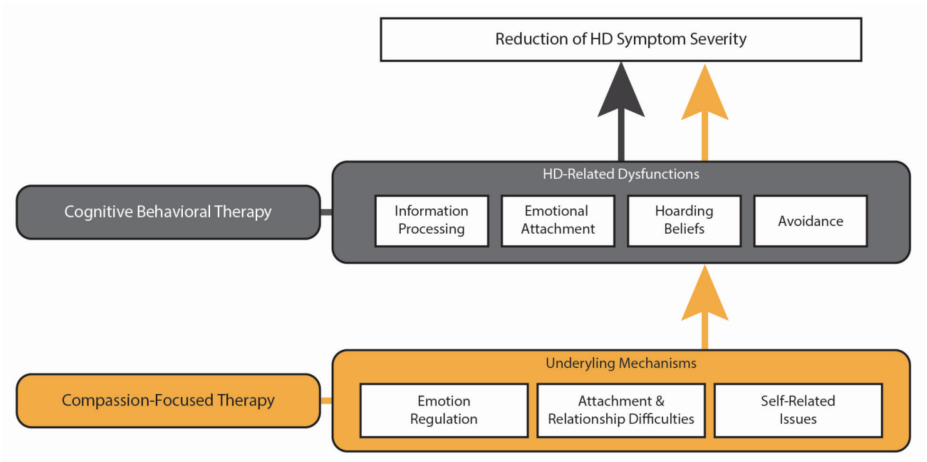
et al., 2018). Greater attachment-related anxiety and avoidance, which are suggested to be stemming from early life adversity, are associated with increased emotional attachment to material possessions (David et al., 2021; Grisham et al., 2018; Kehoe & Egan, 2019; Yap et al., 2020). Evidence supports the hypothesis that emotional attachment to possessions is a way to compensate for unmet interpersonal needs among individuals experiencing HD (David et al., 2021; Yap & Grisham, 2021). This explains, at least partially, how and why emotional attachment to possessions are distorted to a clinically significant degree among those suffering with HD, since feeling attached to possessions is not unique to HD (Grisham et al., 2009). Accordingly, in a recent review integrating attachment theory and existing findings in the HD literature, dysfunctional interpersonal attachment was identified as a missing piece in the CBT-based framework and interventions for HD (Mathes et al., 2020).

Third and finally, regarding self-related issues, a growing body of research has been focusing on examining the reliance of possessions to define oneself and seeing possessions as an extension of the self among individuals experiencing HD and how such self-concept issue may have contributed to increased attachment to objects in HD (Moulding et al., 2021; Kings et al., 2017). Echoing this line of work, studies have shown significant associations between one's ambivalence about self-worth, shame, and self-criticism on one hand and emotional attachment and sense of responsibility to possessions on the other (Chou et al., 2018; Frost et al., 2007). These self-related issues, too, are an area that is not included in the CBT-based treatments for HD.

An expanded framework for HD

Following the review above, research updates have suggested areas of study that were not included in the model (Frost & Hartl, 1996) that has informed the development of the CBT approach for HD. To facilitate future research and treatment development in the field of HD, we propose an expanded framework for HD based on the model proposed by Frost and Hartl (1996), and with additions informed by latest research findings summarized above. Specifically, as illustrated in Figure 1, we hypothesize emotion regulation challenges, attachment and relationship difficulties, and self-related issues to be underlying mechanisms that affect HD symptoms through the HD-related dysfunctions identified in Frost and Hartl's model (1996). Accordingly, we developed a CFT group therapy protocol for HD targeting these underlying psychological mechanisms with the intention to address HD symptoms from the bottom up. This protocol and how it is designed to address the underlying mechanisms illustrated in Figure 1 are introduced in detail in the following section of the article.

Figure 1
An expanded model for hoarding and treatment targets of CBT and CFT



THE CFT APPROACH FOR HD

As a therapy approach, CFT differs from CBT in its understanding of the reasons why psychological issues arise, and its focus of intervention. The first part of this section provides a general introduction to CFT. This orientation will support the following introduction of the group CFT protocol for HD (CFT-HD).

General introduction of CFT

CFT is a model of psychotherapy originally developed by Paul Gilbert and colleagues (Gilbert, 2010). Some of the impetus for the model came from Gilbert's observations while using traditional CBT techniques: He found that, while cognitive reappraisal techniques may have introduced the client to effective coping content, the emotional texture of these reappraisals can often include blame, shame, and self-criticism. Thus, while resulting in more accurate and presumably less dysfunctional thinking, these interventions may contribute to increased psychological distress (Gilbert, 2010). In formulating an alternative to these approaches, Gilbert and his colleagues have drawn from a wide range of sources, including evolutionary psychology, attachment theories, neuropsychological research, and Buddhist philosophy. According to CFT, humans, like most other mammals, rely on close

social connection for emotional support and regulation. In order to maintain and strengthen these social connections, humans have developed physiological systems that respond strongly to stimuli associated with caring, altruism, and affiliation (e.g., Klimecki et al., 2013). One of the core themes of CFT is that if, in psychotherapy, we are unable to access these basic physiological systems that evolved to help regulate threat-based processing, the effect of applying purely behavioral or cognitive interventions may be limited. By engaging in psychological and somatic practices that activate these neurophysiological systems, e.g., imagery exercises, soothing rhythm breathing, the parasympathetic nervous system may be engaged, resulting in decreases in depression, shame, and feelings of social marginalization (among other common psychological difficulties) and increases in overall wellbeing (Kirby, 2017).

Evidence has suggested significant benefits of adding CFT-based approaches to CBT for a range of psychiatric problems (Beaumont et al., 2012; Gale et al., 2014). Several studies have also shown that CFT interventions increase the ability to self-soothe, distress tolerance, reduce shame and self-criticism, enhance self-perception, and positively affect cognitive patterns associated with particular psychiatric disorders, such as eating disorders and personality disorders (Ashworth et al., 2011; Beaumont et al., 2012; Gale et al., 2014; Gilbert & Procter, 2006; Judge et al., 2012; Laithwaite et al., 2009; Lucre & Corten, 2013). Compassion training techniques applied in CFT have also demonstrated impacts in biological measures such as changes in activity in brain regions associated with emotional regulation (Begley, 2007; Davidson et al., 2003; Longe et al., 2010), heart rate variability, and cortisol levels in directions suggesting improved emotion regulation (Rockliffe et al., 2008).

Group CFT protocol for HD (CFT-HD): Overall introduction

CFT-HD weaves psychoeducation unique to the CFT model, and interventions developed to facilitate treatment goals, which includes but not limited to reducing shame, improving self-compassion and the abilities to self-soothe.

CFT psychoeducation includes: (a) the nature of the human brain as an evolutionary product; (b) the three emotion regulation systems: the drive-, threat-, and soothing-and-connection-based systems; and (c) the definition and attributes of compassion and how it can help. First, learning how the human brain works – its natural capacities and flaws – and that it is not our fault that we have a tricky brain, which we did not choose or design, serves to de-shame emotional and behavioral challenges (Gilbert, 2010). This piece of CFT psychoeducation is particularly crucial for the work with hoarding, given the stigma and shame associated with the diagnosis, as well as the role of intra-personal and self-related difficulties in

HD (see Figure 1 and summary in the above section). CFT applies evolutionary psychology to explain how our evolved brain contributes to difficult feelings and behaviors that are not of our choice. This builds a foundation to help individuals experiencing hoarding to distinguish taking responsibility vs. blame, and more compassionately address the challenges.

Next, psychoeducation on the three emotion regulation systems provides a framework for individuals to understand how emotions and their related bodily sensations and behaviors work, and how they can regulate these systems. For example, in CFT-HD, individuals are encouraged to learn to reflect and observe their emotional and physical responses when they consider the option of discarding certain possessions. They are guided to identify emotional, sensational, and cognitive responses associated with each of the emotion regulation systems: threat, drive, and soothing systems, and are introduced to the importance of balancing them. In the skills training part of the treatment, they will then be guided in different exercises and skills training that help to develop self-soothing capacities. These are the methods in CFT-HD to address emotion regulation challenges described in the previous section and in Figure 1.

Finally, defining compassion as the sensitivity to suffering and commitment to relieve and prevent it, and identifying the attributes of compassion including wisdom, strength and courage, commitment, and warmth set up the understanding that to address hoarding and its related challenges requires turning toward difficulties and cultivating specific skills to face and resolve them (Gilbert, 2010). This part of the psychoeducation distinguishes compassion from "enabling", and highlights one of the cores of CFT-HD, which is about confronting hoarding and its associated behaviors, feelings and emotions, personal history, and practical difficulties, with compassion, and not turning away (i.e., avoid) from them.

Besides, a range of experiential exercises are introduced and practiced to help participants absorb contents of the psychoeducation described above and achieve several treatment goals. These include guided meditation to develop somatic awareness, breathing practices, imagery exercises to develop internal supportive resources such as an imagined compassionate-being, and exposure-based interventions incorporating some of the soothing techniques exemplified above. More detailed description of the specific practices included in the CFT-HD protocol are described in the paragraphs below and in Table 1. In CFT-HD, time and space are allocated for the review of emotional responses to these exercises and to relate those responses to the experience of HD. Cognitions (i.e., HD-related beliefs) are not directly targeted in CFT-HD. Instead, the philosophy of the approach is that beliefs change as one moves from one state of mind to another, and as the balance of their three systems (i.e., threat, drive, soothing and connection) changes.

CFT-HD: Treatment structure and content of modules

CFT-HD treatment groups are scheduled for 20 weekly sessions that meet for two hours each. In our work to date with this protocol, groups have been facilitated by a single clinician, a licensed psychologist with specialized training and expertise in CFT and HD. Sessions have often been observed by a clinician in training for evaluation and technical or administrative support purposes, but the observers did not help direct the group. While participants commit to attending all the sessions, they are allowed to miss two of the sessions without being charged or facing drop-out. The participants and therapists may agree to break on some weeks due to holidays and schedule conflicts, although these skipped sessions are not included in the session total. Groups are expected to have six to ten, and no more than 12 participants.

Table 1 provides a general overview of the eight modules that make up the CFT-HD intervention. The first session is outside the module structure. It includes a general introduction of the therapy, facilitator and members introduction, a review of the previously signed informed consent materials, and a discussion of confidentiality expectations for group members. Sessions 2 – 19 follow the module outline presented in Table 1. Module content is progressive, with later modules building on concepts and skills from earlier modules, so the order of the modules should likely not be changed. In general, two to three sessions are spent on each of the eight modules, although this schedule need not be followed too rigidly and can be slowed or sped up to accommodate the needs of the group. Each session begins with a two-to-three-minute check-in about the week from each participant, followed by learning of the modules through reading as well as experiential exercises. These contents are best introduced in interactive styles and in a pace that facilitates reflection.

Modules 1 and 2 introduce the participants to the important concepts of CFT, such as the working definitions of "compassion", and the evolved human brain. These concepts are particularly important in the context of hoarding, for the former sets the tone of the treatment about learning skills to face discomfort and suffering rather than running away from it; and the latter helps to address shame and self-blame that often occur among those who experience HD. Awareness of physical and emotional states, as well as the nature of human emotions and emotional learning are the focuses of Module 3. Group participants get opportunities to practice becoming aware of the internal experiences that will be the focus of the treatment going forward and cultivate a compassionate understanding of their emotions. Module 4 introduces the three-circle model and guides participants to looking at emotions and their related bodily and behavioral responses in terms

of their drive-, threat-, and soothing-and-connection-based systems. Participants are encouraged to practice framing their own behavior in three-circle terms and use this framework as a roadmap to help them understand their state of being and ways to become more balanced.

The proportion of experiential exercises and deeper processes increase starting Module 5. About ten to 12 sessions into the treatment, participants have been taught several somatic and imagery exercises and given a chance to practice these with feedback in session. These skills are now applied to help them in imaginary or in vivo exposure to hoarding-related topics, such as confronting a pile of personal possessions and considering the option of discarding. For example, in Module 5, the group is guided to develop an imaginary compassionate figure, which will serve to activate their soothing system and support them in exposure-based interventions. Besides, self-compassion is contrasted with self-criticism, and participants are guided through role-plays to highlight the different effects of the two.

Building the compassionate-self is the focus of Module 6, while Module 7 extends on it to cultivate the three flows of compassion: compassion flowing out, compassion flowing in from others, and compassion from one part of the self to another. These flows of compassion set up the foundation for the compassionate-buddy system and chair work. As described in the previous section and Figure 1, both interpersonal and intrapersonal difficulties are roots of hoarding challenges. Interpersonal difficulties are given opportunities to reveal themselves and be addressed within the safe container of the group through the compassionate-buddy system. In this system, the therapist pairs up group members into duals or trios. They are given a structured protocol that instructs members to check-in with one another by audio or video calls between sessions on how they are doing in their effort to create more physical space at home. They are given example questions and scripts to remind one another to draw support and wisdom from their compassionate figure or compassionate-self. This system is designed not only to facilitate peer support, but also to create a safe and structured container for the group to learn several interpersonal skills, including boundary communication, equal give and take, the ability to interact with others while experiencing fears of connection and abandonment. On the other hand, intrapersonal difficulties are addressed in chair work, where members are guided to recognize and take turns to embody each different part of themselves in the context of a hoarding-related situation (e.g., fear of letting go, sadness, and the compassionate-self). The goals of this technique include improving emotional awareness, clarity, and acceptance, and accessing the compassionate wisdom and strength in the process of emotion regulation and problem resolution.

Finally, in Module 8, the process of facing the ending of the group is facilitated in ways that support the 'saying goodbye' processes in other contexts of life.

Members are encouraged to stay open and express their feelings about the ending, and appreciations for one another. They are also guided to review their gains and consider further supportive resources. Of note, although grief processing or identification of blocked grieving processes is not made an explicit component of the protocol, it runs through and is emphasized in almost all the modules. For example, when introducing what the soothing system is, grief may arise when participants connect with a lack of soothing experiences in their lives to date. Similarly, grieving processes may arise while addressing fear of compassion, and building a compassionate-being or self. Grief can also arise in chair work, for example, when processing different feelings around making the decision to let a possession to. When grief occurs in the process of the treatment, it is of significance and is important to address because, in our experience, unresolved grief often emerges as a factor associated with HD presentations (Chou, 2021).

Table 1
Compassion-Focused Therapy for Hoarding Disorder (CFT-HD) protocol: modules, topics, goals and descriptions

Module	***Topics***	***Descriptions and goals***
1. What is compassion? (Session 2)	Definition of "compassion"	Establish working definitions of compassion and clarify common misunderstanding about it.
	Leaning towards suffering	Discuss behavioral and emotional avoidance, and its consequences; Emphasize facing discomfort and suffering is key of CFT-HD.
	Experiential exercise: How was my morning?	Practice noticing bodily and emotional discomfort.
2. It is not your fault (Sessions 3 and 4)	The evolved human brain	Introduce the old brain and new brain, their focuses, functions, and characteristics.
		Explain how this evolved human brain can be tricky and related to our suffering.
	Life circumstances are not of our choosing	Identify other factors in life that are beyond one's control or choice.
		Facilitate the understanding that hoarding, and many other psychological challenges are not one's fault but one's responsibility to make better.
	Experiential exercise: Soothing rhythms breathing	Introduce soothing rhythms breathing as a somatic emotion regulation tool and encourage the group to practice regularly throughout the course of the treatment.

Table 1 (continued)
Compassion-Focused Therapy for Hoarding Disorder (CFT-HD) protocol: modules, topics, goals and descriptions

3. Nature of our emotions (Sessions 5 and 6)	Emotional awareness and vocabulary	Cultivate emotional awareness by practicing noticing somatic responses associated with different emotions, and expanding emotional vocabulary.
	Acceptance of emotions	Practice emotion regulation skills to hold space for or contain challenging emotions, and extend the "not your fault" lens to facilitate acceptance of emotions.
	Emotional learning and body memories	Introduce the concepts of emotional learning and body memories, and explain the ways in which bodily states can elicit emotional memory.
	Safety strategies and their consequences	Provide guidance to reflect on certain behavioral patterns acquired at some point in one's life for important functions, and whether these patterns still serve the individual well.
4. The three-circle model (Sessions 7, 8, and 9)	The three emotion regulation systems: threat system, drive system, and soothing system	Introduce each of the three emotion regulation systems: the evolutionary functions, characteristics, feelings and emotions, bodily responses, and behaviors associated with each one of them.
		Discuss personal emotional, somatic, and behavioral indicators of the activation of each system.
		Introduce the importance of balancing the three systems and help group members to develop a map of emotion regulation based on the three-circle model.
5. Orienting toward compassion (Sessions 10, 11, and 12)	Main attributes of compassion	Introduce main attributes of compassion: wisdom, strength, commitment, and warmth.
		Discussion guided to facilitate a felt-sense understanding of the compassionate attributes.
	Experiential exercise: a compassionate figure	An imagery exercise to guide the envisioning of a compassionate figure, and receiving compassion from him/her/them/it.
	Experiential exercise: home tour with the compassionate figure	An exercise aiming to utilize the compassionate figure as an emotion regulation resource in the imaginary exposure of walking through and looking at different parts of the cluttered home.
	Fears of compassion	Address and normalize the difficulties in relating to the concept or experience of compassion.

Table 1 (continued)
Compassion-Focused Therapy for Hoarding Disorder (CFT-HD) protocol: modules, topics, goals and descriptions

	Self-compassion vs. self-criticism	Describe the contrast between self-compassion vs. self-criticism, and facilitate a discussion on the fear of the former, and unwanted consequences of the latter.
6. Compassion and the self (Sessions 13 and 14)	Multiple selves	Help group members reflect on the idea that there are different parts of oneself, and facilitate the loosening of a fixed self-identity and fixed state of being.
	Building the compassionate-self	Guide members to recognize and strengthen their existing compassionate-self, or to develop one by cultivating and embodying the attributes of compassion.
	Experiential exercise: Compassionate-self acting out	An experiential exercise to integrate the somatic and psychological states associated with the compassionate-self.
7. Compassion and others (Sessions 15, 16, 17, and 18)	Three flows of compassion	Introduce the three flows of compassion: compassion flowing out, compassion flowing in from others, compassion flowing from one part to another part of the self - as exercises to strengthen the "muscles of compassion".
	Experiential exercise: Giving and receiving compassion	An experiential exercise followed by a discussion about the experiences and difficulties doing it.
	Compassionate-buddy system	Therapist assigns buddies (duals or trios) within group
		A concrete and structured buddy homework protocol is introduced for group members to learn to support each other in a 30-minute weekly phone call.
		Discuss challenges occurred in the buddy work (e.g., boundary communication, commitment, fear of rejection) and frame them as opportunities for personal and relationship growth.
	Experiential exercise: Chair work	Facilitate an exercise integrating different skills learned thus far: identifying and holding space for emotions, understanding of the multiple-selves, giving and receiving compassion from one part of the self to the other.
		Help group members learn to work with conflicting emotions compassionately and skillfully.

Table 1 (continued)
Compassion-Focused Therapy for Hoarding Disorder (CFT-HD) protocol: modules, topics, goals and descriptions

8. Preparation for ending (Sessions 19 and 20)	Preparing to say goodbye	This part should gradually begin toward the last third of the treatment. This may look like acknowledging, e.g., there are six more sessions left, including feelings about group ending as a prompt for topics to check-in, and allowing sufficient time in multiple sessions for the group to talk about ending.
	Reflection and feedback	Help group members identify and describe changes that have taken place during the group, and concrete ways for maintaining them moving forward.
		Make it an opportunity for group members to practice giving and receiving compassion by providing each other feedback on their progress and change.
	Future resources	Encourage members to consider their next steps and help connect them with resources if needed

EXISTING EMPIRICAL EVIDENCE AND ONGOING RESEARCH

As a newly developed intervention for HD, the CFT for Hoarding approach has been adopted in a slightly shorter format (16 two-hour sessions as opposed to 20) and examined as a follow-up treatment for individuals who had completed CBT but still significantly symptomatic (Chou et al., 2019). This study showed satisfactory feasibility and satisfaction of CFT as a treatment method for HD. Positive effects of the treatment was also supported by the findings that: 1) 77% of the CFT completers had post-treatment severity scores below the cut-off for clinically significant HD; 2) the mean post-treatment severity levels for all symptom domains dropped to near or just above the clinically significant cut-offs after completing CFT; and 3) 62% of the sample achieved a clinically significant reduction in HD symptom severity. Moreover, CFT was found to significantly improve hoarding-related dysfunctions identified in the CBT model (Frost & Hartl, 1996), such as information processing (especially decision making) and avoidance (i.e., self-distraction, behavioral disengagement, and denial). Additionally, evidence also supported the effects of CFT on distress tolerance, self-criticism and shame, and increased capacity to reassure oneself in difficult situations, and reduction of

self-ambivalence (uncertainty about self-worth). It was suggested that CFT may have relieved HD symptoms and achieved the aforementioned treatment efficacy in decision making and avoidance through addressing these emotion regulation and self-related mechanisms (Chou et al., 2019).

Study protocol of an ongoing pilot trial

Following the promising findings on CFT as a follow-up treatment for HD (Chou et al., 2019), one of the next logical steps to take is to examine CFT as a standalone treatment for HD. A pilot trial aiming to investigate the acceptability, feasibility, and effects of CFT-HD as a primary treatment in comparison to CBT is thus planned (see below).

Group treatments and recruitment

Based on the information in the preceding sections, treatment groups using CFT and CBT approaches have been running consecutively and alternately via a HIPAA-compliant online platform since April 2020 in a private practice in California. Participants and the therapists shared both audio and video signals, and attempts were made to ensure that participants' faces could be clearly seen by the therapist and other participants.

The CFT treatment group followed the protocol set forth in the earlier sections of this paper and was, as indicated, facilitated by a licensed psychologist. The CBT group followed a protocol set forth referencing the workbook and therapist guide of Treatment for Hoarding Disorder (Steketee & Frost, 2013). The CBT groups run so far were facilitated by a licensed marriage and family therapist with specialized training and experiences working with HD using CBT. Apart from the session content, the CFT and CBT groups followed similar schedules for an equal number and length of sessions.

Participants are assigned to either group based on the alternating sequence. In our work so far, assignment to treatment conditions has been of convenience, with participants' preferences taken into account: Most participants are open to either treatment option. If a participant prefers to be in one of the treatments, they are asked to wait until their treatment group of choice is ready to begin. Randomization to condition would, of course, be optimal, but it is likely that recruiting issues will make this difficult in private-practice settings.

Participants for the groups are recruited mainly by referral from local clinicians and networks, fliers and social media ads. Individuals who express interest and

provide verbal informed consent are screened by phone to confirm that they are 18 or older, based in the state of California, experiencing hoarding, and without imminent suicide risk. Those passing the screening procedure are scheduled for a formal intake assessment with a trained pre-licensed clinician to verify that the participant meets inclusion criteria for the group: (a) no high or imminent suicide risk within the past six months; (b) no other current severe mental or physical illness (e.g., active symptoms of Substance Use Disorders, severe brain injury or degenerative diseases) that would significantly impair group participation; and (c) a positive diagnosis for HD. Besides the intake, pre- and post-treatment assessment on HD symptom severity and other related measures were collected for program-evaluation purposes (details in the paragraphs below).

Written informed-consent was obtained prior to commencing the intake assessment. As part of the consent process, participants were informed of future intent to use their data for research and were asked separately if they were willing to give consent for us to use these data. They were informed that consent to use their de-identified data for research was totally voluntary and separate from consent for treatment. It would not affect their participation in treatment in any way, and could be revoked at any time before, during, or after the group treatment. To date, every participant has given such consent, and no participants have revoked consent after giving it. However, we have refrained from data analysis in anticipation of IRB guidance about doing so.

Intake, pre- and post-treatment assessment methods

Scheduled for two hours, the intake assessment includes an informed-consent procedure, a clinical interview, and a battery of questionnaire assessments. The clinical interview portion of the intake assessment includes administration of the Mini International Neuropsychiatric Interview (MINI; Sheehan et al., 1998) to assess for psychopathology other than HD and the Structured Interview for Hoarding Disorder (SIHD; Nordsletten et al., 2013) to assist in confirming the HD diagnosis. If the MINI suggests no current serious mental illness and the SIHD suggests a positive diagnosis for HD, the participant is directed to the pre-treatment assessment battery.

The pre-treatment assessment is conducted in a Qualtrics instance that includes nine questionnaires: Two of the instruments focus on hoard symptoms (i.e., saving and acquisition of possessions, clutter, difficulty discarding), and other behaviors and cognitions associated with HD, the Saving-Inventory - Revised (Frost et al., 2004) and the Saving Cognitions Inventory (Steketee et al., 2003). The Beck Depression Inventory – II (Beck & Steer, 1984) and Beck Anxiety Inventory (Fydrich et al.,

1992) collect information about participants' state depression and anxiety. Following the framework illustrated in Figure 1, participants complete the assessments on emotion regulation and related measures: Difficulties in Emotion Regulation Scale - 18 (Victor & Klonsky, 2016) and Distress Tolerance Scale (Simons & Gaher, 2005). They also complete the Relationship Quality Scale (Fraley et al., 2011) to estimate the extent of and problems with maintaining close, supportive relationships. Another series of assessments looks at factors associated with self-identity and intra-personal relationship: the Experience of Shame Scale (Andrews et al., 2002); the Forms of Self-Criticizing/Attacking & Self-Reassuring Scale (Baião et al., 2015); and the Self-Ambivalence Scale (Bhar, 2005). Finally, participants complete three subscales related to avoidance (i.e., Behavioral Disengagement, Denial, Self-distraction) of the Brief COPE (Carver, 1997), and Frost Indecisiveness Scale (Frost & Shows, 1993) to assess these two difficulties, not included in symptom measures, but commonly found among people experiencing hoarding.

Concurrent with the last week of the group, participants were redirected to the assessment battery. All measures referenced above were readministered to help the participants and the clinical team evaluate effects of the treatments. Additionally, a questionnaire about treatment acceptability was also included. This questionnaire asks questions, such as how helpful the treatments were, how applicable the knowledge and skills trained are, and so on, rated using a Likert scale, as well as an open-ended question for free-form feedback about the treatments. To explore whether the treatments help participants become open to support, participants were also asked if they have engaged in other HD treatment or peer-support activities during the course of the treatment.

Hypotheses, implications, and future research directions

As described above, the aim of this pilot trial is to examine the feasibility, acceptability, and effects of CFT-HD. Our primary hypotheses are that: 1) CFT-HD will be feasible and acceptable by (a) having at least 70% of the participants attending 18 sessions out of 20 sessions (feasibility), and (b) 80% of participants evaluating treatment as "extremely positive" or "positive" (4 or 3 on a 4-point scale; acceptability); 2) CFT will show promising treatment effects by (a) helping at least 45% (average in the meta-analysis by Bodryzlova et al., 2019) of the participants achieve clinically significant reduction in HD symptom severity. It is not the aim of this pilot trial to compare CFT-HD with CBT for HD. However it is our goal to collect pilot data of the treatment effects of CFT-HD, relative to CBT, on reducing HD symptom severity, as well as the HD-related dysfunctions and underlying mechanisms included in Figure 1.

If CFT-HD shows promising results by meeting the targets listed in the primary study hypotheses, a larger one-arm study examining the path through which CFT-HD affects HD symptomatology (i.e., testing the hypothesized model proposed in Figure 1) would further inform the development and refinement of the approach. Moreover, if CFT-HD is found to be acceptable, feasible, and effective as a standalone treatment for HD, a RCT comparing this approach with CBT would be warranted. Effect sizes estimated in this study will inform design of future studies. If CFT fails to meet the performance targets, the data, such as feedback and evaluation from participants, will inform a major revision of the CFT protocol.

To conclude, we dedicate our effort in developing the CFT-HD approach with the hope that it has been and will continue to help people to move closer to a life that is richer and freer from suffering than the one they are currently living. We propose this different approach to the current treatment-as-usual, open to the possibility that it may be more effective for some clients. As scientists, however, we necessarily remain open to corrigibility, to the possibility that the hypothesized underlying processes and the treatment approach presented above may, on more thorough empirical investigation, be found to duplicate or yield limited additional effects compared to the existing interventions. We encourage further studies as we hold the CFT-HD approach lightly. What we are very confident of now, though, is the impact that HD has on the lives of those who experience it as well as the people who love and care about them. It is ultimately for their sakes that work to improve treatment for HD like this should continue.

REFERENCES

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (5th Ed).* American Psychiatric Press. https://doi.org/10.1176/appi.books.9780890425596

Andrews, B., Qian, M., & Valentine, J. D. (2002). Predicting depressive symptoms with a new measure of shame: The Experience of Shame Scale. *British Journal of Clinical Psychology*, *41*(1), 29-42. https://doi.org/10.1348/014466502163778

Ashworth, F., Gracey, F., & Gilbert, P. (2011). Compassion focused therapy after traumatic brain injury: Theoretical foundations and a case illustration. *Brain Impairment*, *12*(2), 128-139. https://doi.org/10.1375/brim.12.2.128

Ayers, C. R., Castriotta, N., Dozier, M. E., Espejo, E. P., & Porter, B. (2014). Behavioral and experiential avoidance in patients with hoarding disorder. *Journal of Behavior Therapy and Experimental Psychiatry*, *45*(3), 408-414. https://doi.org/10.1016/j.jbtep.2014.04.005

Baião, R., Gilbert, P., McEwan, L., & Carvalho, S. (2018). Forms of self-criticising/attacking & self--reassuring scale: psychometric properties and normative study, *Psychology and Psychotherapy: Theory, Research and Practice, 88*(4), 438-52. https://doi.org/10.1111/papt.12049

Barton, J. A. L., Johns, L., & Salkovskis, P. (2021). Are self-reported difficulties in emotional regulation associated with hoarding? A systematic review. *Journal of Obsessive-Compulsive and Related Disorders*, *30*, 100660. https://doi.org/10.1016/j.jocrd.2021.100660

Beaumont, E., Galpin, A., & Jenkins, P. (2012). Being kinder to myself: A prospective comparative study, exploring post-trauma therapy outcome measures, for two groups of clients, receiving either Cognitive Behaviour Therapy or Cognitive Behaviour Therapy and Compassionate Mind Training. *Counselling Psychology Review, 27*(1), 31–43.

Beck, A. T., & Steer, R. A. (1984). Internal consistencies of the original and revised Beck Depression Inventory. *Journal of Clinical Psychology*, *40*(6), 1365-1367.

Begley, S. (2007). *Train your mind, change your brain: How a new science reveals our extraordinary potential to transform ourselves*. Ballantine Books.

Best-Lavigniac, J. (2006). Hoarding as an adult: Overview and implications for practice. *Journal of Psychosocial Nursing & Mental Health Services*, *44*(1), 48. https://doi.org/10.3928/02793695-20060101-10

Bhar, S. S. (2005). *Self-ambivalence in obsessive-compulsive disorder* [Unpublished doctoral dissertation]. University of Melbourne.

Bodryzlova, Y., Audet, J.-S., Bergeron, K., & O'Connor, K. (2019). Group cognitive-behavioural therapy for hoarding disorder: Systematic review and meta-analysis. *Health & Social Care in the Community*, *27*(3), 517-530. https://doi.org/10.1111/hsc.12598

Carver, C. S. (1997). You want to measure coping but your protocol' too long: Consider the brief cope. *International Journal of Behavioral Medicine*, *4*(1), 92. https://doi.org/10.1207/s15327558ijbm0401_6

Chou, C.-Y. (2021). Understanding and healing hoarding as a resistance to grief. In compassion--based approach to loss and grief (Harris, D., & Ho, A. H. Y.) [Manuscript submitted for publication]. Routledge.

Chou, C.-Y., Tsoh, J. Y., Shumway, M., Smith, L. C., Chan, J., Delucchi, K., Tirch, D., Gilbert, P., & Mathews, C. A. (2019). Treating hoarding disorder with compassion-focused therapy: A pilot study examining treatment feasibility, acceptability, and exploring treatment effects. *The British Journal of Clinical Psychology*, *59*(1), 1-21. https://doi.org/10.1111/bjc.12228

Chou, C.-Y., Tsoh, J., Vigil, O., Bain, D., Uhm, S. Y., Howell, G., Chan, J., Eckfield, M., Plumadore, J., Chan, E., Komaiko, K., Smith, L., Franklin, J., Vega, E., Delucchi, K., & Mathews, C. A. (2018). Contributions of self-criticism and shame to hoarding. *Psychiatry Research*, *262*, 488-493. https://doi.org/10.1016/j.psychres.2017.09.030

David, J., Aluh, D. O., Blonner, M., & Norberg, M. M. (2021). Excessive object attachment in hoarding disorder: Examining the role of interpersonal functioning. *Behavior Therapy*, *52*(5), 1226-1236. https://doi.org/10.1016/j.beth.2021.02.003

Davidson, R. J., Kabat-Zinn, J., Schumacher, J., Rosenkranz, M., Muller, D., Santorelli, S. F., Urbanowski, F., Harrington, A., Bonus, K., & Sheridan, J. F. (2003). Alterations in brain and immune function produced by mindfulness meditation. *Psychosomatic Medicine*, *65*(4), 564-570. https://doi.org/10.1097/01.PSY.0000077505.67574.E3

Fraley, R. C., Heffernan, M. E., Vicary, A. M., & Brumbaugh, C. C. (2011). The experiences in close relationships—Relationship Structures Questionnaire: A method for assessing attachment orientations across relationships. *Psychological Assessment*, *23*(3), 615-625. https://doi.org/10.1037/a0022898

Frost, R. O., & Hartl, T. L. (1996). A cognitive-behavioral model of compulsive hoarding. *Behaviour Research and Therapy*, *34*(4), 341-350. https://doi.org/10.1016/0005-7967(95)00071-2

Frost, R. O., Kyrios, M., McCarthy, K. D., & Matthews, Y. (2007). Self-ambivalence and attachment to possessions. *Journal of Cognitive Psychotherapy*, *21*(3), 232-242. https://doi.org/10.1891/088983907781494582

Frost, R. O., & Shows, D. L. (1993). The nature and measurement of compulsive indecisiveness. *Behaviour Research and Therapy*, *31*(7), 683-IN2. https://doi.org/10.1016/0005-7967(93)90121-A

Frost, R. O., Steketee, G., & Grisham, J. (2004). Measurement of compulsive hoarding: Saving inventory-revised. *Behaviour Research and Therapy*, *42*(10), 1163-1182. https://doi.org/10.1016/j.brat.2003.07.006

Fydrich, T., Dowdall, D., & Chambless, D. L. (1992). Reliability and validity of the beck anxiety inventory. *Journal of Anxiety Disorders*, *6*(1), 55-61. https://doi.org/10.1016/0887-6185(92)90026-4

Gale, C., Gilbert, P., Read, N., & Goss, K. (2014). An evaluation of the impact of introducing compassion focused therapy to a standard treatment programme for people with eating disorders. *Clinical Psychology & Psychotherapy*, *21*(1), 1-12. https://doi.org/10.1002/cpp.1806

Gilbert, P. (2010). *Compassion focused therapy: Distinctive features*. Routledge.

Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism: Overview and pilot study of a group therapy approach. *Clinical Psychology & Psychotherapy: An International Journal of Theory & Practice*, *13*(6), 353-379. https://doi.org/10.1002/cpp.507

Gilliam, C. M., Norberg, M. M., Villavicencio, A., Morrison, S., Hannan, S. E., &Tolin, D. F. (2011). Group cognitive-behavioral therapy for hoarding disorder: An open trial. *Behaviour Research and Therapy*, *49*(11), 802-807. https://doi.org/10.1016/j.brat.2011.08.008

Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment*, *26*(1), 41-54. https://doi.org/10.1023/B:JOBA.0000007455.08539.94

Grisham, J. R., Frost, R. O., Steketee, G., Kim, H.-J., Tarkoff, A., & Hood, S. (2009). Formation of attachment to possessions in compulsive hoarding. *Journal of Anxiety Disorders*, *23*(3), 357-361. https://doi.org/10.1016/j.janxdis.2008.12.006

Grisham, J. R., Martyn, C., Kerin, F., Baldwin, P. A., & Norberg, M. M. (2018). Interpersonal functioning in hoarding disorder: An examination of attachment styles and emotion regulation in response to interpersonal stress. *Journal of Obsessive-Compulsive and Related Disorders*, *16*, 43-49. https://doi.org/10.1016/j.jocrd.2017.12.001

Judge, L., Cleghorn, A., McEwan, K., & Gilbert, P. (2012). An exploration of group-based compassion focused therapy for a heterogeneous range of clients presenting to a community mental health team. *International Journal of Cognitive Therapy*, *5*(4), 420-429. https://doi.org/10.1521/ijct.2012.5.4.420

Kehoe, E., & Egan, J. (2019). Interpersonal attachment insecurity and emotional attachment to possessions partly mediate the relationship between childhood trauma and hoarding symptoms in a non-clinical sample. *Journal of Obsessive-Compulsive and Related Disorders*, *21*, 37-45. https://doi.org/10.1016/j.jocrd.2018.12.001

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, *62*(6), 593-602. https://doi.org/10.1001/archpsyc.62.6.593

Kim, H.-J., Steketee, G., & Frost, R. O. (2001). Hoarding by elderly people. *Health & Social Work*, *26*(3), 176-184. https://doi.org/10.1093/hsw/26.3.176

Kings, C. A., Moulding, R., & Knight, T. (2017). You are what you own: Reviewing the link between possessions, emotional attachment, and the self-concept in hoarding disorder. *Journal of Obsessive-Compulsive and Related Disorders*, *14*, 51-58. https://doi.org/10.1016/j.jocrd.2017.05.005

Kirby, J. N. (2017). Compassion interventions: The programmes, the evidence, and implications for research and practice. *Psychology and Psychotherapy: Theory, Research and Practice*, *90*(3), 432-455. https://doi.org/10.1111/papt.12104

Klimecki, O. M., Leiberg, S., Ricard, M., & Singer, T. (2013). Differential pattern of functional brain plasticity after compassion and empathy training. *Social Cognitive and Affective Neuroscience*, *9*(6), 873-879. https://doi.org/10.1093/scan/nst060

Laithwaite, H., O'Hanlon, M., Collins, P., Doyle, P., Abraham, L., Porter, S., & Gumley, A. (2009). Recovery after psychosis (RAP): A compassion focused programme for individuals residing in high security settings. *Behavioural and Cognitive Psychotherapy*, *37*(5), 511-526. https://doi.org/10.1017/S1352465809990233

Levy, H. C., Worden, B. L., Gilliam, C. M., D'Urso, C., Steketee, G., Frost, R. O., & Tolin, D. F. (2017). Changes in saving cognitions mediate hoarding symptom change in cognitive-behavioral therapy for hoarding disorder. *Journal of Obsessive-Compulsive and Related Disorders*, *14*, 112-118. https://doi.org/10.1016/j.jocrd.2017.06.008

Longe, O., Maratos, F. A., Gilbert, P., Evans, G., Volker, F., Rockliff, H., & Rippon, G. (2010). Having a word with yourself: Neural correlates of self-criticism and self-reassurance. *NeuroImage*, *49*(2), 1849-1856. https://doi.org/10.1016/j.neuroimage.2009.09.019

Lucre, K. M., & Corten, N. (2013). An exploration of group compassion-focused therapy for personality disorder. *Psychology and Psychotherapy: Theory, Research and Practice*, *86*(4), 387-400. https://doi.org/10.1111/j.2044-8341.2012.02068.x

Mathes, B. M., Timpano, K. R., Raines, A. M., & Schmidt, N. B. (2020). Attachment theory and hoarding disorder: A review and theoretical integration. *Behaviour Research and Therapy*, *125*, 103549. https://doi.org/10.1016/j.brat.2019.103549

Meyer, E., Shavitt, R. G., Leukefeld, C., Heldt, E., Souza, F. P., Knapp, P., & Cordioli, A. V. (2010). Adding motivational interviewing and thought mapping to cognitive-behavioral group therapy: Results from a randomized clinical trial. *Brazilian Journal of Psychiatry*, *32*, 20-29. https://doi.org/10.1590/S1516-44462010000100006

Moulding, R., Kings, C., & Knight, T. (2021). The things that make us: Self and object attachment in hoarding and compulsive buying-shopping disorder. *Current Opinion in Psychology*, *39*, 100-104. https://doi.org/10.1016/j.copsyc.2020.08.016

Muroff, J., Steketee, G., Bratiotis, C., & Ross, A. (2012). Group cognitive and behavioral therapy and bibliotherapy for hoarding: A pilot trial. *Depression and Anxiety*, *29*(7), 597-604. https://doi.org/10.1002/da.21923

Nordsletten, A. E., Fernández de la Cruz, L., Pertusa, A., Reichenberg, A., Hatch, S. L., & Mataix-Cols, D. (2013). The Structured Interview for Hoarding Disorder (SIHD): Development, usage and further validation. *Journal of Obsessive-Compulsive and Related Disorders*, *2*(3), 346-350. https://doi.org/10.1016/j.jocrd.2013.06.003

Pollock, L., Kellett, S., & Totterdell, P. (2014). An intensive time-series evaluation of the effectiveness of cognitive behaviour therapy for hoarding disorder: A 2-year prospective study. *Psychotherapy Research*, *24*(4), 485-495. https://doi.org/10.1080/10503307.2013.843802

Rockliff, H., Gilbert, P., McEwan, K., Lightman, S., & Glover, D. (2008). *A pilot exploration of heart rate variability and salivary cortisol responses to compassion-focused imagery.* https://derby.openrepository.com/handle/10545/622861

Rodgers, N., McDonald, S., & Wootton, B. M. (2021). Cognitive behavioral therapy for hoarding disorder: An updated meta-analysis. *Journal of Affective Disorders*, *290*, 128-135. https://doi.org/10.1016/j.jad.2021.04.067

Shaw, A. M., Llabre, M. M., & Timpano, K. R. (2015). Affect intolerance and hoarding symptoms: A structural equation modeling approach. *International Journal of Cognitive Therapy*, *8*(3), 222-238. https://doi.org/10.1521/ijct_2015_8_05

Sheehan, D. V., Lecrubier, Y., Sheehan, K. H., Amorim, P., Janavs, J., Weiller, E., Hergueta, T., Baker, R., & Dunbar, G. C. (1998). The Mini-International Neuropsychiatric Interview (M.I.N.I): The development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *The Journal of Clinical Psychiatry*, *59*(Suppl 20), 22-33. https://doi.org/10.1016/S0924-9338(97)83296-8

Simons, J. S., & Gaher, R. M. (2005). The Distress Tolerance Scale: Development and validation of a self-report measure. *Motivation and Emotion*, *29*(2), 83-102. https://doi.org/10.1007/s11031-005-7955-3

Steketee, G., & Frost, R. O. (2013). *Treatment for hoarding disorder.* Oxford University Press.

Steketee, G., Frost, R. O., & Kyrios, M. (2003). Cognitive aspects of compulsive hoarding. *Cognitive Therapy and Research*, *27*(4), 463-479. https://doi.org/10.1023/A:1025428631552

Steketee, G., Frost, R. O., Tolin, D. F., Rasmussen, J., & Brown, T. A. (2010). Waitlist-controlled trial of cognitive behavior therapy for hoarding disorder. *Depression and Anxiety*, *27*(5), 476-484. https://doi.org/10.1002/da.20673

Timpano, K. R., Buckner, J. D., Richey, J. A., Murphy, D. L., & Schmidt, N. B. (2009). Exploration of anxiety sensitivity and distress tolerance as vulnerability factors for hoarding behaviors. *Depression and Anxiety*, *26*(4), 343-353. https://doi.org/10.1002/da.20469

Timpano, K. R., Shaw, A. M., Cougle, J. R., & Fitch, K. E. (2014). A multifaceted assessment of emotional tolerance and intensity in hoarding. *Behavior Therapy*, *45*(5), 690-699. https://doi.org/10.1016/j.beth.2014.04.002

Tolin, D. F., Frost, R. O., Steketee, G., &Muroff, J. (2015). Cognitive behavioral therapy for hoarding disorder: A meta-analysis. *Depression and Anxiety*, *32*(3), 158-166. https://doi.org/10.1002/da.22327

Victor, S. E., & Klonsky, E. D. (2016). Validation of a brief version of the Difficulties in Emotion Regulation Scale (DERS-18) in five samples. *Journal of Psychopathology and Behavioral Assessment*, *38*(4), 582-589. https://doi.org/10.1007/s10862-016-9547-9

Williams, A. D. (2012). Distress tolerance and experiential avoidance in compulsive acquisition behaviours. *Australian Journal of Psychology*, *64*(4), 217-224. https://doi.org/10.1111/j.1742-9536.2012.00055.x

Yap, K., Eppingstall, J., Brennan, C., Le, B., & Grisham, J. R. (2020). Emotional attachment to objects mediates the relationship between loneliness and hoarding symptoms. *Journal of Obsessive-Compulsive and Related Disorders*, *24*, 100487. https://doi.org/10.1016/j.jocrd.2019.100487

Yap, K., & Grisham, J. R. (2021). Object attachment in hoarding disorder and its role in a compensatory process. *Current Opinion in Psychology*, *39*, 76-81. https://doi.org/10.1016/j.copsyc.2020.07.022