

Compulsive hoarding

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Compulsive hoarding is a chronic and debilitating condition that represents a significant public health concern. Hoarding is characterized by four key elements: difficulty discarding, excessive acquiring, clutter, and distress and impairment due to hoarding. This article reviews the current literature on compulsive hoarding, including its course and features, comorbidity, nosology, clinical presentation, and treatment response. The authors describe the cognitive-behavioral therapy model and treatment of hoarding, including a case presentation of a cognitive behavioral group treatment of compulsive hoarding. (Bulletin of the Menninger Clinic, 74[2], 93-121)

Compulsive hoarding is a common and chronic disorder associated with significant individual, family, and social impact. With an estimated prevalence of 5% (Samuels et al., 2008), compulsive hoarding may be twice as common as obsessive-compulsive disorder (OCD). Nevertheless, our understanding of compulsive hoarding, including epidemiology, nosology, etiological and maintaining mechanisms, and treatment is much more limited than for OCD. This article provides an overview of the currently available literature on these aspects of compulsive hoarding, with an emphasis on cognitive-behavioral treatment (CBT) and unique challenges that are often met when treating this disorder. A case presentation illustrates CBT for compulsive hoarding as well ways to address these unique challenges.

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Definition of Compulsive Hoarding

The basic definition of compulsive hoarding, including its diagnostic criteria, has yet to be clearly established. Although compulsive hoarding has historically been considered a subtype of OCD, research suggests that it may represent a distinct syndrome that is more often associated with mental health conditions other than OCD. Currently, there is no *DSM-IV* diagnosis of compulsive hoarding, although hoarding is one of the eight diagnostic criteria for obsessive-compulsive personality disorder (American Psychiatric Association, 2000). Current conceptualizations (Frost & Gross, 1993; Frost & Tolin, 2008; Steketee & Frost, 2003) suggest that compulsive hoarding is characterized by the following four key elements:

1. *Excessive acquiring*: Accumulation or collecting of objects through compulsive buying, compulsive acquiring of free things, or (more rarely) stealing. Many patients spend inordinate amounts of time looking for and retrieving objects to take home, with behaviors that have included excessive spending or rummaging through trash bins. Approximately 85% of individuals with self-reported hoarding symptoms report excessive acquisition; family informants report that nearly 95% exhibit excessive acquisition (Frost, Tolin, Steketee, Fitch, & Selbo-Bruns, 2009). In some cases, excessive acquiring may be impulsive (positively reinforced appetitive behavior). Many patients with hoarding symptoms describe acquiring objects as “thrilling” or “exciting” and report enjoying “feeling thrifty” or “enjoying the hunt.” Alternatively, acquisition behaviors can appear compulsive (negatively reinforced strategies for regulating unpleasant emotion). Many patients describe feelings of fear or discomfort when attempting to refrain from acquiring; others report fears that not acquiring will lead to a “missed opportunity” and subsequent feelings of regret.

2. *Failure to discard possessions*. Individuals with compulsive hoarding are typically characterized by an inability or reluctance to discard objects, including those that others would perceive as “trash” or “junk.” Although the reasons for saving or failing to discard objects are similar to those of individuals who do not hoard (e.g., sentimental value, belief that the object may be useful

or needed in the future, beliefs about wastefulness), these beliefs are applied to a greater number of possessions. Attempts to discard items cause substantial emotional distress, and therefore are avoided.

3. *Clutter that precludes activities for which living spaces were designed.* Acquisition and failure to discard are not typically considered pathological unless they are accompanied by significant clutter. In most cases, extreme clutter is the most visible and striking aspect of hoarding problems. Reports of inability to sleep in beds, sit in chairs, or eat at tables are common among those with hoarding. Severity of clutter may get to the point that movement through the home is possible only through small passageways through clutter stacked to the ceiling. The clutter is also generally characterized by a random collection of items. For example, important documents may be mixed together with clothing on a dining room table.

4. *Significant distress or impairment in functioning caused by the hoarding.* Clutter's interference with basic functions such as cooking, cleaning, moving through the house, and even sleeping can make hoarding a dangerous problem, putting people at risk for fire, falling, poor sanitation, and health risks (Steketee, Frost, & Kim, 2001). The clutter and associated safety hazards may sometimes lead to threats of eviction, or removal of children or elderly from the home by government agencies (Tolin, Frost, Steketee, & Fitch, 2008). People with hoarding problems often report distress at the sight of their clutter. Embarrassed by their clutter, these individuals may avoid inviting friends, family, or repair workers to their homes, leading to social isolation, family conflict, and poor housing conditions. Indeed, a recent large-scale survey of participants who reported hoarding symptoms found a high level of family conflict and distress (Tolin, Frost, Steketee, & Fitch, 2008). Finally, hoarding symptoms have also been associated with significant work impairment exceeding that found in most anxiety or depressive disorders, and comparable to that reported by individuals with psychotic disorders (Tolin, Frost, Steketee, & Fitch, 2008).

Course and Features of Compulsive Hoarding

Compulsive hoarding appears to be a chronic and relatively stable problem with a high prevalence of coexistent mental health and medical conditions. Hoarding symptoms typically develop in childhood or early adolescence (Grisham, Frost, Steketee, Kim, & Hood, 2006; Meunier, Tolin, Frost, & Steketee, 2007; Samuels et al., 2002; Seedat & Stein, 2002). In a recent study of hoarding, 60% of participants reported an onset of hoarding symptoms by age 12 and 80% by age 18 (Grisham et al., 2006). Those who reported a later age of onset were more likely to report a stressful life event at the time of hoarding onset than those who reported an earlier age of onset. In general, participants with hoarding reported a greater number of traumatic life events than did nonhoarding participants. Once present, hoarding appears to follow a chronic course, with only a minority reporting remission of symptoms (Grisham et al., 2006; Pinto et al., 2007) and most describing a worsening of symptoms across the lifespan (Grisham et al., 2006; Samuels et al., 2008).

There is evidence to suggest a strong familial component to hoarding symptoms. For example, 84%-85% of hoarding patients described a first-degree relative as a "packrat," compared to 37%-54% of OCD patients without hoarding symptoms (Frost & Gross, 1993; Winsberg, Cassic, & Koran, 1999). OCD patients with hoarding have more first-degree relatives with hoarding (12%) or some hoarding symptoms (49%) than do OCD patients without hoarding (3%; 33%). High correlations of hoarding symptoms have been found among siblings with OCD (Hasler et al., 2007). Relatives of patients who hoard have more hoarding symptoms than relatives of OCD patients without any hoarding symptoms (Samuels, Bienvenu, et al., 2007). Several studies support a genetic factor in hoarding (Lochner et al., 2005; Samuels, Shugart, et al., 2007; Zhang et al., 2002).

Some evidence suggests a relationship between hoarding and OCD symptoms (Frost & Gross, 1993; Frost et al., 1998; Frost, Krause, & Steketee, 1996). Among patients presenting to OCD clinics for treatment, rates of compulsive hoarding range from 18% to 33% (Frost et al., 1996; Rasmussen & Eisen, 1989; Samu-

els et al., 2002; Sobin et al., 2000), with 11% identifying hoarding as the primary symptom (Saxena et al., 2002). Difficulty discarding and excessive acquiring (although not clutter) correlate with non-hoarding OCD symptom severity, and the doubting, checking, and reassurance seeking that occur when attempting to discard objects have been compared to similar obsessions and compulsions among those with OCD (Rasmussen & Eisen, 1992).

On the other hand, accumulating data suggest that hoarding may not be a subtype of OCD. The prevalence of hoarding is estimated to be twice that of OCD (Samuels et al., 2008), which argues against the conceptualization of compulsive hoarding as a *subtype* of OCD. In some studies, hoarding was more prevalent among those with other psychiatric disorders than in those with OCD (Foa et al., 2002; Meunier, Tolin, Frost, Steketee, & Brady, 2006; Wu & Watson, 2005). For example, hoarding occurs frequently in combination with depression, social anxiety, and generalized anxiety (Frost, Steketee, Tolin, & Brown, 2006; Meunier, Tolin, Frost, Steketee, & Brady, 2006). Overall, compulsive hoarding is associated with high Axis I and Axis II comorbidity, with as many as 92% of individuals with hoarding being diagnosed with other psychiatric disorders (Frost et al., 2006). This is a significantly higher comorbidity rate than is seen in OCD, suggesting again the presence of a distinct syndrome. Hoarding has consistently emerged as a discrete symptom from other OCD symptoms (e.g., checking, washing) in factor analytic studies (Calamari, Wiegartz, & Janeck, 1999; Calamari et al., 2004; Leckman et al., 1997; Summerfeldt, Richter, Antony, & Swinson, 1999). In neuroimaging studies, hoarding patients exhibit different patterns of neural activity than do OCD patients (Mataix-Cols et al., 2004; Saxena et al., 2004; Tolin, Kiehl, Worhunsky, Book, & Maltby, 2008).

One of the most striking differences between compulsive hoarding and OCD is the apparently “ego-syntonic” nature of hoarding symptoms. This differs from the traditionally “ego-dystonic” quality of obsessions and compulsions; most individuals with OCD recognize that their obsessions and compulsions are illogical and are distressed by them. Many individuals with compulsive hoarding, however, report little distress or recognition of their hoarding problem (Steketee & Frost, 2003) and may not consider their

hoarding behaviors to be unreasonable (Frost & Gross, 1993; Frost, Steketee, & Williams, 2000). When insight has been directly assessed, compulsive hoarders have poorer insight than individuals with OCD (Frost et al., 1996; Samuels, Bienvenu, et al., 2007). In a large survey (Tolin, Fitch, Frost, & Steketee, 2010), family and friends of individuals with hoarding problems described the person with hoarding as having fair to poor insight; 19% were described as “lack[ing] insight or delusional.” Descriptions of hoarders’ insight by family and friends in this study were significantly worse than those of OCD patients rated by interviewers using the same measure (Foa et al., 1995).

Perhaps the most clinically relevant difference between OCD and compulsive hoarding is the difference in response to treatment. Compared to treatment outcome research on OCD such research on compulsive hoarding has been mixed, with some indication that both pharmacological and psychosocial interventions are less effective than for OCD. Pharmacological trials of OCD with SRIs generally find that those with hoarding symptoms show a poorer prognosis than patients without hoarding symptoms (Black et al., 1998; Mataix-Cols, Rauch, Manzo, Jenike, & Baer, 1999; Stein, Andersen, & Overo, 2007). In one pharmacological study, hoarding and nonhoarding OCD patients fared equally well (Saxena, Brody, Maidment, & Baxter, 2007), although neither group showed a particularly favorable response. Exposure and response prevention (ERP), considered the gold standard nonpharmacological treatment of OCD, consists of repetitive exposures of discarding as many items as possible, as quickly as possible, while refraining from perfectionistic inspection of these objects (Foa & Kozak, 1997). Although ERP is highly effective for nonhoarding OCD, however, symptoms of compulsive hoarding are associated with premature termination, poor treatment compliance, and poor treatment response (Abramowitz, Franklin, Schwartz, & Furr, 2003; Mataix-Cols, Marks, Greist, Kobak, & Baer, 2002; Rufer, Fricke, Moritz, Kloss, & Hand, 2006). In one study of ERP for both hoarding and nonhoarding OCD, only 31% of participants with hoarding symptoms met criteria for clinically significant change (Jacobson & Truax, 1991), compared to 59% of OCD patients without hoarding symptoms (Abramowitz et al., 2003).

Cognitive-Behavioral Model of Compulsive Hoarding

In recent years, a cognitive-behavioral model of compulsive hoarding has been developed that emphasizes mechanisms of maintenance, including information-processing deficits and maladaptive beliefs about possessions, which in turn result in emotional distress and avoidance behaviors.

Information-Processing Deficits

Deficits in attention, categorization, decision-making, and memory are thought to play a key role in hoarding symptoms. Individuals with hoarding symptoms report greater symptoms of attentional problems in comparison to community (Hartl, Duffany, Allen, Steketee, & Frost, 2005) and nonhoarding psychiatric controls (Grisham, Brown, Savage, Steketee, & Barlow, 2007; Meunier, Tolin, Frost, Steketee, Brady, et al., 2006). Neuropsychological testing has revealed that hoarding individuals exhibit impaired ability to sustain attention (Grisham et al., 2007; Koby et al., 2008), with greater variability in reaction time, greater impulsivity, and poorer ability to detect target stimuli. At least two studies have examined memory functioning associated with primary compulsive hoarding, both finding some evidence of impairment on certain verbal and nonverbal memory tasks, as well as organization and planning (Grisham et al., 2007; Hartl et al., 2004).

Decision-making capacity also may be altered in compulsive hoarding; research using the Iowa Gambling Task (Bechara, Damasio, Damasio, & Anderson, 1994) has found that patients with hoarding show diminished capacity to learn an adaptive decision-making style compared to OCD patients without hoarding and healthy controls (Lawrence et al., 2006). Patients who hoard also take significantly longer than healthy controls to decide whether or not to discard personal possessions (Tolin, Kiehl, et al., 2008), although no difference was seen in time to discard nonpersonal possessions.

Anecdotally, in many patients we have observed an apparent attentional bias in which excessive attention is allocated to details of an object that are often unimportant (Frost & Tolin, 2008). This attentional bias increases the perceived importance of these

nonessential details and makes decision-making more difficult because the individual can no longer tell which details are important and which are unimportant. Making decisions about whether or not to save or discard an item, therefore, is often extremely time-consuming and agonizing.

The ability to categorize possessions, a key skill in maintaining organization, also appears to be compromised in hoarding. Hoarding individuals tend to have an underinclusive cognitive style when it comes to categorizing their possessions: When asked to categorize personal possessions, patients with hoarding symptoms took longer and created more categories than did healthy controls or OCD patients (Wincze, Steketee, & Frost, 2007). This difference was not evident when sorting nonpersonal household items, although another study of subclinical “packrats” using a similar methodology did show diminished categorization ability for non-owned items (Luchian, McNally, & Hooley, 2007). The impression from these studies is that individuals who hoard perceive each item as so unique that it cannot be grouped together with similar items.

Patients who hoard also frequently report using a memory-based approach to finding items, rather than a category-based approach. In other words, individuals with compulsive hoarding attempt to place and find items based on visual spatial recall (remembering where an item was last seen) instead of a categorical recall (remembering where a certain category of item is usually placed). This may be particularly problematic for individuals with hoarding, given the apparent weaknesses in spatial ability and attention (Grisham et al., 2007).

Maladaptive Beliefs and Attachment to Possessions

Compulsive hoarding may also be maintained by certain beliefs about, and attachments to, possessions. Combined with the apparent decision-making deficits described above, these often strongly held beliefs lead individuals to experience significant distress when faced with making decisions about possessions (i.e., whether to keep or discard), followed by avoidance of decision-making and discarding. Beliefs about possessions fall into four main categories: emotional attachment to possessions, memory-related concerns,

responsibility for possessions, and desire for control over possessions (Steketee, Frost, & Kyrios, 2003). Emotional attachments include an overappreciation for the aesthetics or sentimental value of objects. Individuals with compulsive hoarding often comment that objects represent a beloved person, memory, or part of their identity. Discarding possessions, therefore, is often equated with losing a loved one, an important memory, or part of their own identity (and therefore discarding is avoided). Patients who hoard often describe relying on their possessions to define their identity or character (“I’m a craftsperson because of all of the craft supplies I own”) rather than the actual activity (“I’m a craftsperson because I make crafts”). Responsibility beliefs include an exaggerated belief in the utility of objects and the avoidance of waste. For many, simply imagining a use for a specific possession implies that it must be saved for that purpose, even if its use is unlikely. Attempts to discard items that someone else “may find useful” often lead to intense feelings of guilt. Being “wasteful” is equated by many with severe, global, negative, personal qualities (“being wasteful makes me a bad person”). Memory concerns contribute to avoidance of discarding as well as disorganization, although these concerns are not fully accounted for by actual memory deficits (Hartl et al., 2004). Patients who hoard often explain their need to keep certain possessions due to fears that they will forget relevant information or lose an important memory if they discard an object. They state that they prefer to leave objects out in the open (e.g., piling important papers on the table) rather than putting them away (e.g., a file cabinet) due to fear that they will forget where they placed the item or that they possess that item. Finally, individuals who hoard frequently display an exaggerated sensitivity to others touching their possessions. This need to control access to their possessions intrudes into treatment as they resist therapeutic efforts to reduce their clutter.

As might be expected, these maladaptive beliefs about, and attachment to, possessions exert a strong influence on emotional and behavioral responses to organizing and discarding tasks. Attachment to possessions, as well as positive beliefs about acquiring or saving objects, leads to positive emotions when engaging in these behaviors, thereby reinforcing the behaviors. These same beliefs elicit strong negative emotions when the hoarding individual at-

tempts to discard or considers discarding an object. As is the case with anxiety disorders, avoidance of the trigger stimuli (e.g., discarding) plays an important role in the development and maintenance of hoarding. Even when an individual with a hoarding problem acknowledges that sorting/discarding of possessions is necessary, actually engaging in this activity is often avoided at all costs. As the avoidance continues and the clutter increases, the task of decluttering becomes even more overwhelming, which often results in further avoidance of discarding.

Cognitive-Behavioral Treatment of Compulsive Hoarding

Because the best-known treatments for OCD have shown limited efficacy for compulsive hoarding, a specific cognitive-behavioral treatment (CBT) for compulsive hoarding has been developed (Frost & Hartl, 1996; Frost & Tolin, 2008; Steketee & Frost, 2003, 2007a), with promising results. Based on the model described above, CBT for compulsive hoarding utilizes various cognitive-behavioral strategies to address the motivational concerns, information-processing deficits, beliefs about and attachment to possessions, and behavioral avoidance thought to maintain hoarding symptoms. For greater detail of this treatment, the reader is referred to a published therapist manual (Steketee & Frost, 2007a) and accompanying client workbook (Steketee & Frost, 2007b).

Enhancing motivation

Limited motivation or ambivalence about changing hoarding behavior has been identified as a common feature and barrier to successful treatment. Although most individuals who present for treatment at least have some recognition that they have a hoarding problem, they may be reluctant to make the necessary changes to result in any significant improvement. Case reports and treatment studies of compulsive hoarding often mention problems with motivation in treatment (Christensen & Greist, 2001; Shafran & Tallis, 1996), even among those who were considered to have been successfully treated (Hartl & Frost, 1999). Poor motivation has been manifested as high rates of premature termination (Mataix-Cols et al., 2002; Tolin, Frost, & Steketee, 2007), inconsistent attendance

(Tolin et al., 2007), and poor compliance with treatment, particularly homework compliance (Christensen & Greist, 2001; Hartl & Frost, 1999; Steketee, Frost, Wincze, Greene, & Douglass, 2000; Tolin et al., 2007). This is particularly troublesome given that successful treatment of compulsive hoarding requires that the majority of the decluttering occur in between sessions, at the patient's home. Indeed, in an open trial of CBT for hoarding, therapists rated patients as having completed, on average, less than half of the assigned homework at each session (Tolin, Frost, et al., 2007). Therapist-rated homework compliance in this same study correlated highly with all treatment outcome measures, suggesting that homework compliance is a crucial factor in successful treatment.

Motivational interviewing strategies originally designed to address substance abuse (Miller & Rollnick, 2002) have been extended to enhance motivation for behavior change across other psychiatric disorders, including compulsive hoarding. The incorporation of motivational interviewing strategies appears to be a promising addition to the treatment of compulsive hoarding: In two successive CBT studies by the same investigative team, the rate of premature termination decreased from 29% in the first study (Tolin et al., 2007) to 9% in the second study (Frost, Steketee, et al., 2007) after motivational enhancement strategies were emphasized in the protocol. Motivation is assessed and addressed throughout treatment, given its tendency to wax and wane over the course of treatment. Adequate attention to goal-setting at the onset of treatment is essential. As with substance abusers who enter treatment at the request or demand of others, patients with compulsive hoarding often require the therapist's assistance to identify personally relevant reasons to alter their behaviors. Due to frequently limited insight, the patient may not be aware of all the negative consequences of his or her hoarding. Thus most patients' initial sessions identify the pros and cons of changing hoarding behaviors. Motivational enhancement strategies are revisited when any signs of ambivalence appear, such as canceled or missed sessions or poor homework compliance. It is also imperative that the therapist does not take a confrontational role, as this only serves to increase resistance to change. Most hoarding individuals have already experienced family members, friends, and perhaps even professionals

attempting to convince or coerce them into discarding their possessions. Although this coercion may temporarily reduce clutter, it rarely leads to any long-term improvements in behavior. Instead, the goal of treatment is for patients to develop the ability to make more adaptive decisions about their possessions.

Reducing acquiring

Although difficulty discarding may be the most prominent feature for many, the majority of individuals with hoarding also exhibit some degree of excessive acquiring that contributes to clutter, financial distress, or other impairment (Frost, Tolin, Steketee, Fitch & Selbo-Bruns, 2009). The degree of emphasis on reducing acquiring in treatment, as well as the timing of these interventions, will depend upon the role that acquiring plays in the distress and interference of each patient. For some, acquiring may be the most debilitating symptom that needs to be addressed immediately. For others, addressing acquiring may be delayed until later in treatment. Regardless, almost all patients with compulsive hoarding will need to decrease their acquiring at some point in order to reduce the clutter in the home.

The initial strategy for reducing acquiring is stimulus control. Just as an individual with alcohol dependence may be instructed (initially) to avoid triggers for drinking (e.g., bar, liquor store), the hoarding patient can reduce acquiring initially by avoiding the situations that elicit excessive acquiring. This may include avoiding certain stores, canceling catalog subscriptions, refraining from watching home shopping networks, or reducing driving on weekend mornings to avoid garage sales. For many, however, triggers for acquiring are often internal, with acquiring behaviors positively reinforced (e.g., the “thrill of the hunt”) or negatively reinforced (e.g., management of unpleasant emotions). In such cases, successful reduction of acquiring requires replacement with an alternative activity to fulfill the emotional needs met by acquiring. For example, if acquiring at garage sales is a main leisure activity, a successful strategy must include not only a plan to avoid garage sales, but also an alternative leisure activity in which the patient can engage during the usual time that he or she attends garage sales. Cognitive strategies are utilized to help the patient make adaptive decisions

about acquiring (thereby reducing acquiring), such as establishing rules for acquiring, weighing the advantages and disadvantages of acquiring, learning how to differentiate between what is “needed” versus “wanted,” and cognitive restructuring of acquisition-related beliefs (Steketee & Frost, 2007a, 2007b).

Avoidance of external triggers for acquiring (e.g., stores, garage sales), while useful in the short term, is not a practical long-term solution. At some point, exposure to the triggering situations is generally recommended. Nonacquiring exposures are employed to develop tolerance to the discomfort experienced when confronting situations that trigger urges to acquire. An exposure hierarchy is created, followed by repeated exposures in a gradual fashion. For example, one patient’s exposure may begin with driving by a favorite store, progressing to entering the store but not touching anything, and eventually to handling typically acquired merchandise in the store; in each case, the patient practices resisting impulses to acquire. A combination of therapist-directed exposure in session and self-directed exposure homework is recommended for most patients.

Sorting/Discarding

Sorting and discarding are often the main components of hoarding treatment. Many sessions are dedicated to these activities in the therapist’s office or the patient’s home (in our current protocol, approximately every fourth session takes place in the home). Unlike ERP, in which the goal is to discard as many items as possible, as quickly as possible, while refraining from perfectionistic inspection of these objects (Foa & Kozak, 1997), the goals of sorting/discarding in CBT for compulsive hoarding include identifying and challenging maladaptive beliefs about possessions and practicing adaptive and efficient decision-making using cognitive strategies. Thus, the sorting/discarding session is viewed as an opportunity to practice decision-making strategies with the assistance of the therapist, rather than a time for the therapist to pressure the patient to discard a certain number of possessions.

During sorting/discarding tasks, as well as during nonacquisition exercises, the therapist uses cognitive restructuring strategies to identify and challenge maladaptive beliefs about and attachment

to possessions. The *downward arrow* technique (Beck, 1995), in which the therapist poses a series of progressive questions based on hypothetical negative outcomes, is used to identify underlying beliefs about the feared consequences and significance of discarding or refraining from acquiring. For example:

(Therapist): "What is the worst that could happen if you discarded this newspaper?"

(Patient): I would lose the information that's in there.

T: And if you did lose that information, what would be bad about that?

P: Then I would be uninformed about current events.

T: What would that mean about you?

P: It would mean that I'm stupid because I don't even know what's going on.

T: So, to discard this newspaper would mean that you are stupid?

Challenging or Socratic questions are then used to evaluate critically the validity of these beliefs. For example:

T: Let's consider this idea that you are stupid for a moment. I'd like to see if we can challenge it a bit, and to see whether this belief is helping you or hurting you. Can you think of any evidence that tells you that you are stupid?

P: Well, I feel stupid a lot of the time.

T: OK, but beyond the way you feel, can you think of any hard evidence to back it up?

P: Not really. I guess I forget things sometimes, but that's not really the same as being stupid.

T: You're right about that. Memory and intelligence aren't the same thing. Can you think of any evidence on the other side of the argument—that you are not stupid?

P: Well, I did graduate from college, and my grades were OK. I guess a really stupid person couldn't have done that.

T: Right. Anything else?

P: I learned how to use a computer, and I can balance my check-book, and I usually know the right answers when I watch Jeopardy.

T: *So what do you think about this idea that you are stupid? How true does it seem?*

P: *Not very. I guess I was blowing it out of proportion."*

During sorting/discarding and nonacquiring exercises, the therapist helps facilitate adaptive decision-making by asking the patient *challenging questions*, such as: "Do you need this, or just want it?" "Do you already have enough?" "If you let go of this and then later on find out you needed it, could you get another one?" "Is this really valuable and important, or does it just feel that way because we're looking at it?" "Will saving/acquiring this ultimately help or hurt your quality of life?" Through repeated practice, the patient is encouraged to ask these questions to himself or herself, eventually incorporating them into his or her decision-making strategies. In a similar fashion, patients are taught to use simple *rules of thumb* for deciding to keep or acquire items, for example, "In order to acquire/keep this, I need to have (a) enough time to deal with it, (b) enough money to afford it, (c) a specific plan to use it, and (d) adequate space for it." *Behavioral experiments* are frequently used to test maladaptive predictions. For example, one patient stated that if she were to discard an object in her home, she would experience debilitating anxiety that would go on forever. The therapist suggested testing this hypothesis by removing the item from the home (it was placed in the trunk of the therapist's car) and then assessing the patient's anxiety 5 minutes later. The patient reported feeling anxious, but not nearly to the extent she had predicted. When the therapist telephoned the patient the following day (with the item still in the therapist's trunk), the patient reported that she had forgotten all about it. This report then served as the basis for challenging the patient's tendency to overpredict extreme, negative emotional outcomes. Cognitive interventions are also used to address treatment-interfering behaviors, such as avoidance of sorting/discarding. In addition to the motivational interviewing strategies described above, we frequently find it helpful to identify and gently challenge patients' beliefs about treatment (e.g., "My therapist just wants me to get rid of all my stuff"; "If I discard all of my clutter, I won't have any identity left"). When therapy-interfering behaviors arise, it is often essential to delay work on other treatment goals

and redirect the treatment toward management of these behaviors (Pollard, 2007).

Problem-Solving/Organizing

As described previously, preliminary evidence suggests that compulsive hoarding may be associated with poor problem-solving and organizational skills, which in turn make it difficult to reduce clutter. Information-processing deficits are often displayed in treatment as difficulty focusing during sessions and homework assignments, identifying goals, following through with behaviors needed to accomplish goals, and making decisions about possessions (e.g., discard, how to discard, where to place if keeping). Poor problem-solving and organizational skills often lead to increased distress, which likely contributes to behavioral avoidance. Patients often report difficulty initiating or completing tasks of sorting/discarding due to various causes, such as feeling overwhelmed, being distracted, experiencing medical problems, or not having enough time. Problem-solving skills (e.g., Nezu, 1986) are used to address these barriers to treatment. Patients are taught to identify the target problem clearly and to brainstorm and then select specific and reasonable goals, followed by a series of small, concrete steps that can be taken to achieve this goal. Barriers to engaging in the desired behaviors and solutions to these barriers are identified. Patients are also taught to take an evaluative approach by assessing whether the identified strategies are helping them to achieve their goals and modifying their approach as needed.

Problems with categorization, one of the information-processing deficits believed to play a key role in hoarding, are also addressed in treatment. Given the tendency for patients who hoard to create too many categories and to have difficulty grouping items with one another (Luchian et al., 2007; Wincze et al., 2007), patients are taught to generate fewer categories, grouping together similar items. They are also taught a systematic method of making decisions about what to do with their possessions (keep/discard, how to discard, where to store). Organization of paper items is particularly challenging for most compulsive hoarders. Therefore, specific attention is paid to generating an organizational plan for paper items. We frequently find it helpful to follow recommenda-

tions commonly used by professional organizers for this purpose (e.g., Kolberg, 2006). For example, patients are often assisted with creating a filing system, as well as being provided with concrete guidelines about types of paper items to be saved, and for what period of time.

Efficacy of CBT for Compulsive Hoarding

In contrast to the results obtained using traditional ERP and medications, CBT that specifically targets hoarding symptoms appears effective in preliminary research. Initial case studies (Cermele, Melendez-Pallitto, & Pandina, 2001; Hartl & Frost, 1999) and uncontrolled clinical trials (Saxena et al., 2002; Steketee, Chambless, & Tran, 2001) yielded promising results, with significant improvement in the core features of hoarding (clutter, difficulty discarding, acquisition). In the first open trial of the full CBT protocol described above (Tolin et al., 2007), 14 patients (10 treatment completers) received 26 individual sessions of CBT, including frequent home visits, over a 7-12 month period. Significant decreases from pretreatment to posttreatment were noted on the Saving Inventory-Revised (SI-R; Frost, Steketee, & Grisham, 2004) and Clutter Image Rating (CIR; Frost, Steketee, Tolin, & Renaud, 2008) but not the severity rating of the Clinician's Global Impressions (CGI; Guy, 1976). CGI Improvement ratings indicated that at posttreatment, 50% of treatment completers were rated "much improved" or "very much improved." Adherence to homework assignments was strongly related to symptom improvement: At posttreatment, 4 of 5 patients (80%) rated at or above the median on homework completion were judged to be "much improved" or "very much improved" on the CGI, whereas only 1 patient (20%) rated below the median on homework completion received this rating.

This open trial was followed by a small randomized controlled trial of CBT versus a wait-list control (Frost, Steketee, et al., 2007). Given the apparent importance of motivation and treatment compliance in the open trial, motivational interviewing strategies were emphasized to a greater extent in the controlled trial. At posttreatment (26 sessions), 80% of participants rated themselves as "much improved" on a self-rated CGI; 69% received this rating from their

clinicians. Sixty percent of participants met criteria for clinically significant change (Jacobson & Truax, 1991) on the SI-R. Of note, the proportion of treatment completers meeting clinically significant change in this study is much higher than following that of ERP for hoarding, which has been estimated at 31% (Abramowitz et al., 2003). Thus, CBT for compulsive hoarding appears promising, although larger scale randomized controlled trials are needed to establish the efficacy of this treatment, as well as to continue developing the treatment protocol.

Case Example

Gina participated in 20 weeks of group CBT for compulsive hoarding. The group treatment protocol was adapted from the individual protocol described previously (Steketee & Frost, 2007a). Group members received a workbook (Steketee & Frost, 2007b) with readings and worksheets to supplement the sessions. Stringent rules were set forth about consistent attendance, punctuality, and homework compliance. For example, if a group member missed four sessions or had poor homework compliance on more than two occasions, he or she was required to meet with a psychologist other than one of the two group leaders to employ additional motivational interviewing strategies and to determine whether the member should continue with the group. Four out of an initial 11 group members withdrew from the group due to inability to meet one or more of these requirements. Gina was one of the remaining 7 group members who completed the group in its entirety. The general structure of each session consisted of reviewing the previous week's homework, introduction of a new skill, application of this new skill (usually through a group exercise), and explanation of the homework assignment for the next session. Starting with session 2, group members were asked to discard (and document) a certain number of items 6 days per week. Beginning with the fifth session, group members monitored their acquiring and were assigned non-acquisition homework exercises. Other worksheets and readings were assigned to reinforce material learned in each session.

In many ways, Gina represented a typical hoarding patient who presents for treatment. A Caucasian female in her mid 50s, Gina

described a long history of hoarding behaviors. Hoarding symptoms began in her late adolescence, with a gradual worsening of symptoms, especially clutter, over the years. By the time Gina presented at our clinic, she described the majority of her living spaces as being significantly cluttered, including the living room, kitchen, dining room, bedrooms, basement, and garage. The clutter interfered with her ability to cook, sit in chairs/couches, walk around her home, or find objects when needed. Gina reported being unable to invite friends to her home due to embarrassment from the clutter. The clutter was also a major source of marital conflict. Initially, Gina denied any excessive acquiring. As treatment progressed, however, she began to realize that although she had significantly reduced her acquiring over the years, she continued to purchase items in excess, particularly food items. Sales, coupons, and rebates were still difficult to resist.

Gina's family and medical history were also similar to other patients with compulsive hoarding. She reported a family history of serious mental illness, including hoarding behaviors in one of her parents and some other relatives. She recalled her parents emphasizing the importance of saving and instilling strong negative beliefs about wastefulness. In fact, her family continued to contribute to Gina's struggles by giving her gifts and "leftover freebies" that they collected. Like many patients who hoard (Tolin, Frost, Steketee, Gray, & Fitch, 2008), Gina was overweight and had some of the associated medical conditions (e.g., high cholesterol). She was not diagnosed with any other mental health conditions except obsessive-compulsive personality traits.

Like many patients who hoard, Gina expressed strong beliefs about the wastefulness of discarding items that may later be useful to someone. If she saw an item that she thought was a "good deal," she had strong urges to acquire this item. Refraining from doing so often brought feelings of guilt because she believed that she "should" acquire such an item for others, even if she saw no use of it for herself. Paper items were also difficult to discard, because Gina believed that she "should" read all materials prior to discarding them. She elaborated that if she discarded an item prior to reading it, she might lose the opportunity to gain that information forever, which was not acceptable. Even after reading some materials, she was reluctant to discard them due to concerns that

she might forget the information and might need to read it again later. These beliefs posed a significant challenge to clearing much of her clutter, which included old newspapers, magazines, and books. Gina also had difficulty discarding sentimental objects. She was appalled when she heard about others discarding objects of sentimental value.

Overall, Gina had a style of thinking that placed a strong value on perfectionism. Her perfectionism applied to behaviors outside of saving/acquiring that were closely related to her hoarding. For example, Gina struggled with getting help from others due to concerns that she would not find someone who would do it “perfectly.” She found it difficult to initiate sorting/discarding, because she had beliefs that she should not bother to begin unless she was going to be able to devote the proper amount of time and do it perfectly. Her most common coping strategy was to avoid making decisions or engaging in activities that caused distress, including sorting and discarding.

Initially, Gina appeared skeptical of the various strategies introduced in the group. She had some difficulty grasping the skills related to enhancing motivation and cognitive restructuring. After several sessions, however, she began to demonstrate an ability to utilize these skills to challenge some of her long-held beliefs about possessions. Through use of the downward arrow, Gina was able to identify underlying beliefs about losing her identity if she discarded sentimental objects and beliefs that she would be a “bad person” if she did anything wasteful. Toward the end of treatment, she was able to acknowledge that perfectionism and moral reasoning played an important role in her hoarding, although she did not always recognize when she was engaging in this thinking style.

Gina identified the use of thought records and behavioral experiments as most helpful for her. She used behavioral experiments to test out some feared consequences to discarding and refraining from acquiring, as well as to take the chance that she or others might not do something perfectly. Gina, like other group members, struggled with working on sorting/discarding. Barriers included fatigue, limited time, and desire to avoid negative affect. Problem-solving skills were utilized to address the issue of fatigue associated with Gina’s medical conditions. Motivational interviewing was in-

corporated throughout treatment to increase consistent work on hoarding. Gina had a tendency to set unrealistic goals (i.e., clear out the entire living room, spend 5 hours per day sorting/discarding). These goals only contributed to her difficulty with sorting/discarding by making the already distressing tasks even more overwhelming. Although Gina was not fond of the time management strategies introduced in the group (e.g., keeping a calendar, using a timer), she began to understand the benefits of setting small, realistic goals and ensuring that she spend some time sorting/discarding on a nearly daily basis.

The group format appeared to have some benefits for Gina. She had a tendency to underemphasize her accomplishments, frequently making statements such as, "I accomplished X but didn't do Y like I planned." The group frequently reminded her to take credit for her accomplishments and to deemphasize what she had not yet accomplished. Other group members became adept at identifying Gina's primary problematic thinking style of moral reasoning and perfectionism and calling her attention to this with humor. Gina, like other members in the group, also reported that knowing that her homework compliance was being monitored, as well as having to update the group on her progress each week, increased her motivation to work on her hoarding. Gina reported seeing both similarities and differences between herself and other group members that may have aided in her progress. She shared similar beliefs and behaviors with other members, which she stated "helped me realize that I was not the only one with this problem." When she witnessed others holding on to beliefs consistent with saving and acquiring that she did not share, it helped her to recognize the irrationality of some of her own beliefs related to hoarding.

At the same time, participating in group CBT for hoarding posed some unique challenges to Gina's progress. At times, other group members contributed to reinforcing, rather than challenging, some of Gina's hoarding behaviors and beliefs because they shared these very same beliefs and behaviors. There were also occasions when group members shifted focus from the relevant aspects of a cognitive restructuring task. For example, when attempting to challenge the belief that Gina must read the newspaper prior to discarding it, the group became focused on a discussion of whether one could

gain access to all of the newspaper, including the advertisements, online. Although the group was attempting to assist Gina by reassuring her that she could discard the newspaper because it could be recovered, if necessary, through the Internet, Gina may have missed the most important concept that overcoming hoarding means taking a risk that she might lose something that she could not recover later. Finally, the group format may have increased some of the challenges with information-processing deficits in the treatment of hoarding. Gina, like many with hoarding, had difficulty focusing during sessions, often getting off topic and including nonessential details. Because other group members also displayed similar difficulties, maintaining focus in the group was often a challenge, limiting some of the time spent on learning and practicing skills. At the same time, greater structure was utilized than in individual CBT for hoarding. This may have had a greater effect on maintaining focus in some ways than in individual treatment for hoarding.

Overall, Gina had good attendance and adequate homework compliance. She reported high satisfaction with the group and denied any changes to treatment she was receiving outside of the group. A review of her self-report measures from pretreatment and posttreatment suggests some improvement in her hoarding symptoms. Her CGI severity rating (self-report) decreased from 5 (markedly ill) to 4 (moderately ill), and she rated her improvement on the CGI as 5 (much improved). There was a 38% reduction in her total SI-R score, from 56 (moderate hoarding) to 35 (within normal range). Ratings on the Sheehan Disability Scale (Leon, Olfson, Portera, Farber, & Sheehan, 1997) were reduced from an average of 6 (moderate impairment) to 3 (mild impairment). Gina reported satisfaction with having cleared the majority of clutter out of one of the main rooms in her home and a storage unit, as well as increased ability to find items in her home. She also appeared to have reduced excessive acquiring and started to accept others' help with decluttering and improving her home, including hiring professionals for home repairs. Despite her improvement, both Gina and her group leaders agreed that much work still remained. She therefore elected to continue receiving follow-up treatment on a less frequent basis.

Summary

Compulsive hoarding is a chronic and debilitating syndrome that is relatively common, affecting as many as 5% of the population (Samuels et al., 2008). Current conceptualization defines compulsive hoarding as consisting of four main elements: difficulty discarding, excessive acquiring, presence of significant clutter, and distress and impairment associated with hoarding. For most, hoarding symptoms appear to begin early in life, following a slow and steady course, with few experiencing spontaneous remission. There appears to be a strong familial component to hoarding, with some evidence of genetic predisposition. Hoarding is often associated with high rates of psychiatric and medical comorbidity and high levels of functional impairment, including work, social, and family functioning. The rates of comorbidity, overall psychopathology, and functional impairment generally are higher compared to OCD. The clinical and neurobiological profiles of persons who hoard also appear to be distinct from OCD, with hoarding patients showing less insight and different patterns of neural activity than OCD patients. Although the diagnostic placement of compulsive hoarding remains unclear, empirical evidence suggests that hoarding does not fit as a subtype of OCD. Instead, it represents a related but distinct syndrome, much like the relationship between anxiety and depression.

Overall, hoarding has been associated with low rates of treatment response to pharmacological and behavioral treatments that are effective for OCD, such as ERP and SRIs. Treatment based on the cognitive-behavioral conceptualization of hoarding set forth by Frost and colleagues, however, shows promise in improving treatment outcomes for hoarding. CBT for compulsive hoarding addresses the specific information-processing deficits, attachment and beliefs about possessions, and the behavioral avoidance associated with hoarding. Using traditional cognitive-behavioral interventions (e.g., *downward arrow*, *behavioral experiments*, and *problem-solving skills*) that specifically target hoarding behaviors and beliefs, CBT for compulsive hoarding has produced better outcomes than ERP applied to hoarding. Addition of motivational interviewing strategies appears to enhance the effectiveness of

treatment by addressing the ambivalent motivation often seen in patients with hoarding.

Although our understanding of hoarding has grown considerably over the past two decades, many questions remain unanswered. Epidemiological research is needed to understand the prevalence and demographic correlates of hoarding. Genetic, neurobiological, and laboratory studies are also needed to clarify the etiology and maintenance mechanisms of hoarding. Much of the research on hoarding has examined hoarding in the context of OCD; given that hoarding is just as likely to be present with and without OCD, hoarding research among OCD patients may be misleading. Finally, greater efforts are needed to provide effective treatments for hoarding. This includes conducting large-scale randomized controlled trials to evaluate the efficacy of CBT and pharmacotherapy for hoarding, as well as continued improvement of the CBT treatment protocol and investigation of novel pharmacological treatments.

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