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## Motives for Acquiring and Saving in Hoarding Disorder, OCD, and Community Controls

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### Abstract

Hoarding Disorder (HD) was classified as a separate disorder in DSM-5 (APA, 2013). However, only recently has research on hoarding begun in earnest, and as of yet, very little research exists on the motivation to acquire and save the excessive volume of possessions seen in patients with this disorder. This investigation examined the frequency of four motives for acquiring and saving possessions that are often reported anecdotally by people with HD (information, emotional reasons, avoid waste, and aesthetic reasons). Comparisons in a sample of 443 participants indicated that those with HD reported higher frequencies of each of these four motives for acquiring and saving compared to OCD participants and community controls. The intention to avoid waste emerged as the most prominent motive in people with HD. Understanding waste avoidance may be key to better understanding and treating HD.

### Keywords

hoarding disorder; motives for hoarding

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Hoarding disorder (HD) is characterized by acquiring and failing to discard a large number of objects along with difficulty keeping them organized. The resulting clutter inhibits the use of living spaces and leads to significant distress and/or impairment in day-to-day functioning (Frost & Hartl, 1996). The prevalence of hoarding has been estimated at 2-5% (Iervolino et al., 2009; Mueller, Mitchell, Crosby, Glaesmer, & de Zwaan, 2009; Samuels et al., 2008). Hoarding is associated with considerable economic and social difficulties (Tolin, Frost, Steketee, Gray, & Fitch, 2008), as well as dysfunction among families (Frost, Steketee, Williams, & Warren, 2000; Tolin, Frost, Steketee, & Fitch, 2008). It also causes a significant threat to the health and safety of the sufferer (Frost, Steketee, & Williams, 2000).

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Although once considered a subtype of OCD, HD is now a separate disorder in DSM-5 (APA, 2013).

To date, few studies have examined motives for collecting and saving objects among people who hoard. Frost et al. (1998) found that people with hoarding problems produced more reasons to save items than did non-hoarding subjects, but did not differ in the number of reasons for discarding. Furthermore, reasons to save items were significantly and positively correlated with the perceived value of objects, and negatively correlated with the intent to get rid of belongings. Certain motives for acquiring and saving surface repeatedly among people with hoarding disorder. Emotional attachment to the object is among the most frequently reported. Multiple studies have shown that emotional attachment to possessions motivates excessive acquiring and saving behavior (Frost & Gross, 1993; Frost, Hartl, Christian, & Williams, 1995; Frost & Hartl, 1996; Kellett & Knight, 2003; Steketee, Frost, & Kyrios, 2003). Among people who hoard, possessions can serve as a source of comfort and security, extensions of the self, and sentimental reminders of important life events (Frost et al., 1995; Frost & Hartl, 1996; Furby, 1978; Hartl et al., 2005). Some people who hoard report extreme emotional reactions like “wanting to die” when they discard sentimental items (Frost & Hartl, 1996, p. 348), and some have likened getting rid of belongings to “losing a part of oneself” (Shafran & Tallis, 1996, p. 212). Emotional attachment to possessions is reflected in one widely used self-report questionnaire, the Saving Cognitions Inventory. No interview-based measures of emotional attachments have been reported.

In addition to being emotionally attached to objects, people who hoard have been hypothesized to feel responsible for safeguarding them from harm and caring for them (Frost & Hartl, 1996; Frost et al., 1995; Furby, 1978). Many people with HD report feeling responsible for not wasting objects, not because they need or want them, but because they consider discarding them to be wasteful (Frost & Steketee, 2010, Shafran & Tallis, 1996; Steketee et al., 2003). Comments about being “responsible for saving” or “wasting a valuable opportunity” are reported more often by people who hoard than by OCD and control participants (Steketee et al., 2003). In a related vein, people with HD seem to be more willing to recycle possessions than to throw them away (Frost & Gross, 1993; Shafran & Tallis, 1996). Also in an early investigation, Frost et al. (1995) found that people who self-identified as having hoarding problems scored significantly higher on a measure of environmental consciousness than did non-hoarding controls, reflecting a greater concern over waste. Among a nonclinical sample, Haws, Naylor, Coulter, and Bearden (2012) reported an association between hoarding behavior and avoidance of waste as well. The Responsibility subscale of the Saving Cognitions Inventory (SCI) measures a somewhat broader version of this motive.

A third motive for saving involves the informational content of objects. People who hoard fear that they will lose or forget important material if an item is discarded (Frost & Hartl, 1996; Steketee et al., 2003). For instance, in response to why she felt unable to discard a five-year-old newspaper, one hoarding participant stated, “That information will be lost. I’ll never be able to retrieve it” (Frost & Hartl, 1996, p. 344). Accordingly, people who hoard endorse saving objects to retain and remember information more frequently than do OCD participants and community controls (Steketee et al., 2003). Some people report hoarding

unread written material (e.g., books and newspapers) because they might contain valuable information for a future need (Frost & Hartl, 1996; Hartl & Frost, 1999). The SCI Memory subscale captures the importance of saving things that facilitate memory, but not specifically the fear of losing information.

Anecdotal reports suggest that aesthetic appeal also motivates people with HD to acquire and save excessively. Frost and Steketee (2010) encountered this rationale as one patient excitedly described her collection of bottle caps: “Look at these bottle caps— aren't they beautiful? Look at the shape and the color!” (p. 66). In another interview, the child of a parent with HD explained, “[My mother] sees more [detail] than anyone I know, and attaches more meaning to each piece of it” (Frost & Steketee, 2010, p. 221). These comments suggest that some people who hoard consider ordinary items like bottle caps to be treasures with unique aesthetic qualities that should not be discarded. No questions on the SCI capture this motive. To date, no studies have examined aesthetic appeal as an acquisition or saving motive.

The present investigation examined the extent to which four motives for both acquiring and saving (information retention, emotional attachment, fear of waste, and aesthetic value) contribute to excessive acquiring and difficulty discarding. These motives were chosen because of the frequency with which they are reported anecdotally by people with HD. They overlap somewhat with the Saving Cognitions Inventory subscales, but were derived through interview assessment in the present study instead of self-report. While it was expected that people with HD would endorse each of these motives for saving and/or acquiring more strongly than would patients with OCD or non-psychiatric community controls, a central focus of the study was to determine whether the relative importance of these motives varied by group. That is, are the most and least frequent main motives for acquiring and saving the same for HD participants as they are for individuals who do not have HD? For this reason, motives were compared within each participant group. This study also examined the relative contributions of each motive in predicting overall hoarding symptoms.

## Method

### Participants

Adult participants (age 18+) recruited between 2005 and 2008 included 217 with clinical levels of hoarding (HD), 96 with obsessive-compulsive disorder and no hoarding (OCD), and 130 community controls (CC). Demographic information for participants is presented in Table 1. All three groups had similar age ranges, but the OCD group had a significantly lower mean age ( $F(2, 438) = 84.7, p < .001$ ) than the hoarding and community control groups. Gender distribution also varied significantly across groups ( $\chi^2 = 24.9, p < .001$ ); hoarding and community control participants included more women, whereas men and women were almost equally distributed in the OCD sample. The three groups did not differ in education, employment, marital status, or race/ethnicity. However, HD participants were more likely to live alone than OCD or community controls.

## Procedures

Hoarding participants were recruited through news media, clinics and mental health settings, and via word-of-mouth. Participants with OCD were recruited from mental health and anxiety clinic settings, as well as media and advertisements. CC participants were recruited through media advertisements and word-of-mouth; they were not permitted to meet criteria for any mental health disorder, except specific phobia. Criteria for inclusion and group membership were determined by trained diagnostic interviewers using the Anxiety Disorders Interview Schedule (ADIS-IV-Lifetime; Brown, DiNardo, & Barlow, 1994). Consistent with current DSM-5 criteria for hoarding (APA, 2013), inclusion in the HD group required interviewer ratings of moderate or greater clutter, difficulty discarding, and distress/impairment (either or both) from hoarding according to the Hoarding Rating Scale-Interview (HRS-I, Tolin, Frost, & Steketee, 2010). In addition, the clutter and difficulty discarding could not be attributed to another OCD symptom (e.g., contamination, checking) or other mental or medical disorder. HD was not required to be the primary diagnosis, and non-hoarding OCD symptoms were permitted; 178 had HD without OCD (82%) and 39 (18%) had co-morbid OCD. OCD participants met criteria for a DSM-IV diagnosis of OCD (non-hoarding) as their primary (most severe) problem according to the ADIS-IV-L; any hoarding symptoms had to be below moderate levels (not qualify for HD group) based on the HRS-I. Criteria for exclusion were suicidal ideation or other risk factors requiring immediate attention, current psychotic symptoms, substance abuse or dependence within the past 3 months, and significant cognitive impairment such as mental retardation or dementia that could compromise informed consent or assessments.

Clinical interviews and self-report inventories were all collected in a clinic setting over the course of one or two visits.

## Measures

The Hoarding Rating Scale Interview (HRS-I; Tolin, Frost, & Steketee, 2007), a five-question Likert-type interview measure assessing hoarding severity, was used to diagnose HD, along with questions to insure that hoarding was not secondary to OCD or other disorders.

Participants also completed the Saving Inventory-Revised (SI-R; Frost, Steketee, & Grisham, 2004), a 23-item measure assessing symptoms of compulsive hoarding on a scale from 0 to 4. Internal consistencies for the present study were high for total score ( $\alpha = .91$ ), Clutter ( $\alpha = .90$ ), Difficulty Discarding ( $\alpha = .83$ ), and Acquisition ( $\alpha = .84$ ).

Motives for acquiring and saving items were assessed using the Hoarding Interview, a structured interview developed for this study. An interviewer rated participants' responses to questions about the frequency that they *acquire* and *save* items for specific reasons. The questions and initial prompts regarding saving motives are given below; questions for acquiring motives were identical or very similar:

- (1) Are you afraid of losing important information when you try to throw something out? That is, you are afraid you will mistakenly throw out information that you will need someday.

- (2) Do you save things because they are sentimental or emotionally significant to you? That is, you are so emotionally attached that you do not want to part with them.
- (3) Are you afraid of wasting a potentially useful object when you try to discard something? That is, you are concerned about being wasteful because the object could eventually be put to good use.
- (4) How often do you save things because the object is beautiful or aesthetically pleasing regardless of its monetary or sentimental value?

Interviewer ratings were made on a scale from 0 to 8 with anchors of 0 = never, 2 = rarely, 4 = occasionally, 6 = frequently, and 8 = nearly always. These ratings permitted calculation of frequencies for each of four motives for saving and acquiring, 1) objects contain important information, 2) items are emotionally significant, 3) objects would go to waste, and 4) items are beautiful or aesthetically pleasing. The Hoarding Interview was administered to all participants.

## Data Analysis

Between/within analyses of variance were conducted separately for acquiring and saving motives. These were followed by multiple comparisons within each group (e.g., HD, OCD, CC). Within group comparisons were done to identify differences in the relative importance of motives and how this varied by group. Subsequent analyses included correlations among motives and between motives and the SI-R Acquisition and Difficulty Discarding subscales. Correlations were done using both the entire sample as well as the HD only group. To clarify the relative contribution of the four motives to hoarding behavior, we conducted linear multiple regression analyses to determine which motives predicted SI-R Acquisition and Difficulty Discarding subscales. The four motives were entered together in each analysis. Separate analyses were done using the full sample and the HD only group. To examine whether some people with HD endorse primarily one type of motive, we identified participants who acquired or saved for a single motive at the “frequently” or greater (> 5) level, while other motives were rated lower than “occasionally” (< 4).

## Results

### Group Comparisons

For acquisition motives, as expected, significant main effects were observed for group (HD, OCD, Community Controls),  $F(2, 429) = 146.8, p < .001$  and type of motive (information, emotional attachment, waste avoidance, aesthetics),  $F(3, 1287) = 36.2, p < .001$ . A significant interaction between group and type of motive was also observed,  $F(6, 1287) = 5.9, p < .001$ . HD participants reported significantly higher frequencies of acquiring objects for each of the four acquiring motives than did OCD patients and community controls. As evident from Table 2, acquiring for information was endorsed significantly more frequently among HD participants than the other motives. Acquiring to avoid waste and acquiring for aesthetic reasons were both more frequent than acquiring for emotional motives and did not differ from one another. Among both the OCD and community control samples, acquiring for information and for aesthetic reasons were significantly more frequent than

acquiring to avoid waste, whereas acquiring to avoid waste and for emotional reasons did not differ from each other.

For saving motives, again as expected, significant main effects were observed for both group,  $F(2, 426) = 234.3, p < .001$  and type of motive,  $F(3, 1278) = 21.3, p < .001$ , and a significant interaction between group and motive was also observed,  $F(6, 1278) = 21.2, p < .001$ . As evident in Table 2, like the acquisition motives, HD participants reported significantly higher frequencies of saving objects for each of the four saving motives than did OCD patients and community controls. For the HD participants waste avoidance was significantly more frequent than saving for emotional reasons or aesthetics, but it did not differ from saving for information. Saving for aesthetic reasons was significantly less frequent than each of the other motives, while saving for emotional reasons and for information did not differ from each other. There were fewer differences for the OCD and community controls. Saving for emotional reasons was significantly more frequent for OCD participants than the other three motives, which did not differ from each other. For community controls, saving for emotional and for aesthetic reasons were the more frequent than waste avoidance and saving for information, which did not differ from each other.

### Age and Gender Differences among HD participants

Among HD participants, none of the acquiring or saving motives were correlated with age ( $r$ 's from  $-.08$  to  $.04$ ). An analysis of gender by type of motive among HD participants failed to reveal any main effects for gender ( $F$ 's =  $1.01$  and  $0.02$ ), but did reveal significant interactions between gender and type of motive for both acquiring motives ( $F [3, 618] = 3.22, p < .05$ ) and saving motives ( $F [3, 62] = 3.00, p < .05$ ). See table 3. Comparisons of men and women for each motive indicated only a significant difference for acquiring to avoid waste. Men rated acquiring to avoid waste significantly more frequently than women,  $t (207) = 2.44, p < .05$ . There were no significant differences between men and women for any saving motives, although there was a trend for men to rate saving to avoid waste more frequently than women,  $t (207) = 1.83, p < .07$ . No other gender differences approached significance.

### Correlations among Motives

Among the HD participants, the motives for acquiring and saving revealed significant but mostly small correlations with each other (see Table 4). Correlations among the acquiring motives ranged from  $.14$  to  $.48$ , while for saving motives, they ranged from  $-.08$  to  $.28$ . These correlations may be depressed by restriction in the ranges of SI-R scores. Correlations using the full sample of participants were considerably higher, ranging from  $.32$  to  $.67$ , and all were significant.

### Relationship of Motives to Difficulty Discarding and Excessive Acquisition Symptoms

Using the full sample of participants, all of the correlations between acquiring motives and SI-R-Acquisition were significant and ranged from  $.44$  to  $.63$ . For HD participants, the correlations were considerably smaller ( $.14$  to  $.48$ ), possibly due to the restriction of range for the SI-R. The correlation between acquiring for information and SI-R Acquisition was not significant. A similar pattern of correlations occurred for saving motives. All of the

correlations between motives and SI-R Difficulty Discarding using the full sample were significant and large (.46 to .75), while those using the HD group were considerably smaller (.13 to .36). The correlation between acquiring for aesthetics and SI-R Difficulty Discarding was not significant.

To clarify the relative contribution of the four motives to hoarding behaviors, we conducted linear multiple regression analyses to determine which motives would predict SI-R acquiring and difficulty discarding subscales (Table 5). The four motives were entered together in each analysis. Separate analyses were done for the HD group alone and for the full sample. Findings for both the HD sample and the full sample indicated that waste avoidance and aesthetic motives significantly and independently predicted SI-R Acquisition. For the HD sample, neither acquiring for information nor for emotional reasons contributed significantly to the prediction of SI-R Acquisition. For the full sample, however, acquiring for information also significantly predicted acquisition, but acquiring for emotional reasons did not.

Saving to avoid waste, for information, and for emotional reasons all significantly and independently predicted SI-R Difficulty Discarding in the HD sample, while saving for aesthetics did not. For the full sample, all four motives, including saving for aesthetics, accounted for significant variance in SI-R Difficulty Discarding.

### Single Motive Tendencies among HD Participants

Very few HD participants indicated that they relied primarily on one type of motive for acquiring or saving. No more than one case met criteria (one frequent motive and three infrequent ones) for single motive saving for any of the four saving motives. With regard to single motives for acquiring, 11 cases (5%) acquired chiefly for information. No more than one case met criteria for any other single acquiring motive.

## Discussion

The findings from this study revealed that HD participants as a group endorsed all four motivations for acquiring and saving – information, emotional reasons, avoiding waste, aesthetic reasons – at moderately high rates. They reported these reasons at a somewhat higher rate for saving behaviors (average scores indicating “occasionally” to “frequently”) compared to acquiring behaviors (average scores representing “rarely” to “occasionally”), perhaps indicating that there are other compelling reasons for acquiring not captured in these four motives. Comparisons among samples with HD, OCD and community controls indicated somewhat different motivational patterns for acquisition and saving. As anticipated, those with HD reported each acquisition and saving motive significantly more frequently than did the two comparison groups who reported generally similar low rates of endorsement in the “rarely” range. Acquiring for information was the strongest motive for acquisition among all three groups, but while it was significantly more frequent than the other motives for the HD group, it did not differ from acquiring for emotional or aesthetic reasons for the OCD group or from acquiring for aesthetics for the CC group. Beyond this, the pattern of acquiring motives differed across groups. Avoiding waste was a moderately strong motivator for HD participants, but not for OCD and community controls who rarely



endorsed this motive. All groups reported some aesthetic motivation to acquire, but interestingly, emotional interest was significantly less frequent than the other motives among HD participants and was also not a frequent motive for the other two groups.

With regard to saving possessions, avoiding waste and saving for information were the most frequently reported motives by HD participants who also endorsed the other two motives as moderately frequent (though still significantly more than the OCD and CC groups). In contrast, among OCD and community controls, saving for emotional reasons was the most frequent motive whereas saving to avoid waste was significantly less frequent. Saving for aesthetic reasons was the least frequent motive among HD participants, while it was significantly more frequent than saving for information or to avoid waste among CC participants.

While there were significant interactions between gender and motives among HD participants, there were few significant differences when each motive was examined separately. Avoidance of waste was a more frequent motive for acquiring for men than for women, and there was a similar, albeit nonsignificant, trend for saving motives.

Within the HD sample, across all four motives for acquiring and saving possessions, avoiding waste emerged as the strongest and most consistent predictor of hoarding symptoms. This was also true to some extent for the full sample. Unfortunately, little is known about beliefs regarding waste among people with HD. Responsibility for safeguarding possessions has been reported among people who hoard (Shafran & Tallis, 1996; Steketee et al., 2003), as well as higher levels of environmental consciousness (Frost et al., 1995). Avoidance of waste also appears to be correlated with hoarding symptoms in nonclinical populations (Haws et al., 2012). Perhaps concerns about wasting objects reflect self-worth for people with HD. This is consistent with anecdotal reports connecting concerns about wasting things to feelings of guilt and irresponsibility (Frost & Steketee, 2010). People with HD may experience excessive guilt about wasting items when they can imagine a potential use for them. Saving objects may be a way to preserve self-esteem, akin to the notion that objects represent personal identity (Furby, 1978; Frost, Kyrios, McCarthy, & Mathews, 2007; Frost & Steketee, 2010; Steketee et al., 2003). More detailed study of waste avoidance and its association with guilt and beliefs about responsibility may help to elucidate the role these factors play in hoarding. If this connection is confirmed, specific cognitive strategies may help reduce urges to acquire and difficulty discarding due to concerns about waste.

Anecdotal reports have considered aesthetic appeal one of the motives for hoarding (Frost & Steketee, 2010). The mean differences between groups suggest that the aesthetic appeal of objects is an important motive for both acquiring and saving. Moreover, when all motives were included in regression analyses, acquiring for aesthetic reasons significantly and independently predicted SI-R Acquisition in both the HD and full samples. Saving possessions because of their aesthetic appeal was not a significant predictor of difficulty discarding independent of the other motives for HD participants, although it was for the full sample. The relatively smaller standardized beta in the full sample suggests that it may be less important than the other motives for saving. It may be that people with HD base their

acquiring on strong attractions to objects they consider pretty or pleasing, but this may not be as strong a stumbling block when it comes to discarding behavior.

Although acquiring to obtain information was the most frequently cited motive among HD participants, it did not contribute to the prediction of acquisition when the other motives were controlled. This may have been due in part to the restricted range of SI-R scores since it did predict acquiring in the full sample. However, even in the full sample, the standardized beta for acquiring for information (.177) was substantially smaller than acquiring to avoid waste (.451). In contrast, saving for informational value significantly and independently predicted difficulty discarding in both samples. Saving possessions for their information content may be related to the lack of confidence people with HD have in their memory (Frost & Hartl, 2006; Hartl et al., 2004; Steketee et al., 2003). These findings suggest that certain motives may be quite important for one symptom of hoarding (e.g., difficulty discarding), but less important for another (i.e., acquiring).

Emotional attachments to possessions have been observed to be strong motives for hoarding (Frost & Hartl, 1996). Accordingly, it was surprising that acquiring or saving for emotional reasons did not figure more prominently in the prediction of hoarding behaviors in either the HD or full sample when the influence of the other motives was controlled. Emotional motives took a back seat to avoiding waste, which appeared to be primary driver of HD symptoms. This finding calls for more investigation of the role of emotions and emotionality as a factor in the development of what has been described as unusually strong “attachment” to objects (e.g., Frost & Hartl, 1996; Kellett, 2007; Frost, Kyrios et al., 2007), but this may in fact be driven by other factors.

While there were trends for certain motives to be more influential than others, there was little evidence that people with HD rely on only one of these motives either for acquiring or discarding. This raises questions about how and why these motives come to be important. It suggests that some more fundamental processes or experiences lead to a general overvaluation of possessions that broadly influence thinking about them.

Overall, findings from this study suggest that among the four motives studied here, there is variability in factors that motivate acquiring versus saving, and that certain motives may apply more to acquisition than saving and visa versa. Concerns about waste appear to drive both sets of hoarding symptoms and hold more sway than other reasons such as emotional attachment and aesthetic appreciation. For acquisition, apart from concerns about not wasting things, aesthetic reasoning appear to play a role. For saving, motives about retaining important information and emotional attachment to objects play important roles. The variability across these HD symptoms implies that treatment may require somewhat different emphasis, depending on whether the focus is on reducing acquisition or fostering discarding, although both will require attention to concerns about waste. It should be noted, however, that all four motives for acquiring and saving were endorsed more frequently by HD participants than by other groups, suggesting that all may require attention in treatment.

With regard to motives examined in this study, there are cultural considerations that apply especially to concerns about reducing waste and retaining information. This study was

conducted in a developed country with substantial media focus on environmental responsibility, as well as important shifts in the quantity of information that can be overwhelming, despite the availability of search engines that can locate almost any information desired. The extent to which such cultural and historical factors influence the motives for acquiring and saving has not been studied. Other limitations of the present study include the large number of women in the HD sample, the absence of diversity in the racial and ethnic composition of the groups, and the study of only four reasons for saving which may have omitted other important motivating factors.

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### Highlights

We examined the frequency of four motives for acquiring and saving among hoarding disorder, OCD, and community control participants.

Each of four motives (information value, emotional reasons, avoiding waste, and aesthetic reasons) was more frequent among HD participants than OCD or community controls.

The intention to avoid waste emerged as the most prominent motive in people with HD.

**Table 1**

## Sample Demographics

Descriptive Statistics	Hoarding group (N=217)	OCD group (N=94)	Community Controls (N=130)
Age			
- Range	19-78	18-74	21-83
- Mean (SD)	52.63 <sup>a</sup> (10.26)	34.54 <sup>b</sup> (13.73)	52.63 <sup>a</sup> (13.48)
Gender			
- Male	23.0%	52.1%	30%
- Female	77.0%	47.9%	70%
Ethnicity			
- White	88.3%	85.6%	88.3%
- African American	8.8%	5.6%	6.3%
- Asian American	1.4%	5.6%	3.1%
- Native American	.5%	2.2%	1.6%
- Hispanic	2.0%	3.3%	5.6%
- Other	.9%	1.1%	.8%
Mean Education (SD)	16 (2)	15 (2)	16 (3)
% Working FT or PT	53%	56%	54%
Married/Partnered	36%	45%	40%
Living situation			
lives alone	53.0% <sup>a</sup>	30.2% <sup>b</sup>	36.9% <sup>b</sup>
with partner/roommate	35.0%	43.8%	50.0%
with child(ren)	26.3%	16.7%	30.8%
with parent(s)	4.1% <sup>a</sup>	25.0% <sup>b</sup>	4.6% <sup>a</sup>
Number of children	1.1 ((1.3) <sup>a</sup> )	0.6 (1.1) <sup>b</sup>	1.7 (1.7) <sup>c</sup>

Note. HD=hoarding disorder; OCD=obsessive compulsive disorder; CC=community controls

Means with different superscripts are significantly different from each other at  $p < 0.001$  (Least Significant Difference [LSD])

**Table 2**

Group means (standard deviations) for acquiring and saving motives with comparisons within participant groups.

	<b>HD (n=208)</b>	<b>OCD (n=95)</b>	<b>Community Controls (n=129)</b>
Acquiring Motives			
Acquire for Information	4.64 (2.25) <sup>a</sup>	1.77 (2.27) <sup>a</sup>	2.39 (2.16) <sup>a</sup>
Acquire for Emotional Reasons	2.96 (2.48) <sup>c</sup>	1.09 (1.87) <sup>ab</sup>	1.16 (1.62) <sup>b</sup>
Acquire to Avoid Waste	3.86 (2.62) <sup>b</sup>	.79 (1.64) <sup>b</sup>	.79 (1.44) <sup>b</sup>
Acquire for Aesthetics	3.76 (2.36) <sup>b</sup>	1.62 (1.89) <sup>a</sup>	2.05 (1.88) <sup>a</sup>
Saving Motives:			
Saving for Information	5.50 (2.04) <sup>ab</sup>	2.06 (2.06) <sup>a</sup>	1.57 (1.95) <sup>a</sup>
Saving for Emotional Reasons	5.15 (1.98) <sup>b</sup>	3.66 (2.20) <sup>b</sup>	3.07 (1.96) <sup>b</sup>
Saving to Avoid Waste	5.89 (1.96) <sup>a</sup>	2.10 (2.21) <sup>a</sup>	2.02 (2.31) <sup>a</sup>
Saving for Aesthetics	4.50 (2.23) <sup>c</sup>	2.12 (1.89) <sup>a</sup>	2.67 (2.01) <sup>b</sup>

*Note.* Different superscripts within each column indicate significant differences among acquiring and saving motives within each subject group (Bonferroni).

**Table 3**

Group means (standard deviations) for acquiring and saving motives of men and women (HD only).

	<b>Men (n=45)</b>	<b>Women (n=164)</b>
Acquire for Information	4.89 (2.21)	4.58 (2.26)
Acquire for Emotional Reasons	3.11 (2.35)	2.91 (2.52)
Acquire to Avoid Waste	4.69 (2.13) <sup>a</sup>	3.63 (2.70) <sup>b</sup>
Acquire for Aesthetics	3.38 (2.16)	3.87 (2.41)
Saving for Information	5.80 (1.70)	5.42 (2.12)
Saving for Emotional Reasons	4.84 (1.91)	5.23 (1.99)
Saving to Avoid Waste	6.36 (1.63)	5.76 (2.03)
Saving for Aesthetics	4.13 (2.28)	4.61 (2.22)

*Note.* Different superscripts within rows indicate significant differences.



**Table 4**

Correlations among acquiring motives and with SI-R Acquisition and saving motives with SI-R Difficulty Discarding for HD participants and full sample (in parentheses).

Acquiring Motives:	Acquire for Information	Acquire for Emotion	Acquire to Avoid Waste	Acquire for Aesthetics
Acquire for Emotion	.258 <sup>**</sup> (.405 <sup>**</sup> )			
Acquire to Avoid Waste	.240 <sup>**</sup> (.465 <sup>**</sup> )	.220 <sup>**</sup> (.413 <sup>**</sup> )		
Acquire for Aesthetics	.139 <sup>*</sup> (.329 <sup>**</sup> )	.482 <sup>**</sup> (.521 <sup>**</sup> )	.136 <sup>*</sup> (.331 <sup>**</sup> )	
SI-R Acquisition	.136 (.491 <sup>**</sup> )	.259 <sup>**</sup> (.437 <sup>**</sup> )	.340 <sup>**</sup> (.631 <sup>**</sup> )	.315 <sup>**</sup> (.549 <sup>**</sup> )
Saving Motives:	Save for Information	Save for Emotion	Save to Avoid Waste	Save for Aesthetics
Save for Emotion	.282 <sup>**</sup> (.456 <sup>**</sup> )			
Save to Avoid Waste	.236 <sup>**</sup> (.669 <sup>**</sup> )	.264 <sup>**</sup> (.465 <sup>**</sup> )		
Save for Aesthetics	-.083 (.315 <sup>**</sup> )	.268 <sup>**</sup> (.413 <sup>**</sup> )	.152 (.471 <sup>**</sup> )	
SI-R Difficulty Discarding	.292 <sup>**</sup> (.741 <sup>**</sup> )	.317 <sup>**</sup> (.492 <sup>**</sup> )	.356 <sup>**</sup> (.748 <sup>**</sup> )	.129 (.461 <sup>**</sup> )

Note.

\*  
p < .05

\*\*  
p < .01.

**Table 5**

Predicting Hoarding Symptoms from acquiring and saving motives among HD participants (n=202) and the full sample (in parentheses)

Dependent Variable	Motive	Beta	F or t
SI-R Acquisition			F(4,196)=11.9, $p < .001$ (F[4,415] = 103.6, $p < .001$ )
	Acquire for Information	.003 (.177)	$t = 0.05$ ( $t = 4.30^{**}$ )
	Acquire for Emotion	.073 (.062)	$t = 0.96$ ( $t = 1.41$ )
	Acquire to Avoid Waste	.295 (.451)	$t = 4.40^{**}$ ( $t = 10.99^{**}$ )
	Acquire for Aesthetics	.240 (.221)	$t = 3.22^{**}$ ( $t = 5.28^{**}$ )
SI-R Diff Discard			F(4,197)=13.1, $p < .001$ (F[4,415] = 221.4, $p < .001$ )
	Save for Information	.187 (.407)	$t = 2.73^{**}$ ( $t = 10.6^{**}$ )
	Save for Emotion	.180 (.079)	$t = 2.54^*$ ( $t = 2.38^*$ )
	Save to Avoid Waste	.254 (.385)	$t = 3.77^{**}$ ( $t = 9.44^{**}$ )
	Save for Aesthetics	.058 (.115)	$t = 0.85$ ( $t = 3.53^{**}$ )

Note.

\*  $p < .05$

\*\*  $p < .01$