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Background

- Hoarding disorder (HD) is characterized by significant clutter due to an inability to discard possessions.¹
- The distress associated with discarding items is frequently accompanied by excessive acquisition of new objects.¹
- HD can lead to a hazardous environment with increased risks for physical injuries² and health complications.³
- Reports of frequent boredom have been associated with more severe hoarding symptoms in older adults.⁴ However, this study relied exclusively on self-report measures and did not include a control group.

Purpose & Hypotheses

Purpose

- Address limitations of previous research on boredom and hoarding.
- Examine two distinct aspects of boredom: boredom-proneness, the propensity to become bored,⁵ and the affective experience of boredom (state boredom).⁶
- Examine whether boredom is a cause or consequence of hoarding symptoms.

Hypotheses

Study 1

- Individuals with hoarding symptoms (**Hoarding Group; HG**) would report higher levels of boredom-proneness and recent state boredom than a non-clinical **Control Group (CG)**.
- Boredom-proneness and recent/frequent state boredom would correlate positively with the number of items acquired and negatively with the number of items discarded on a validated performance-based measure of hoarding.⁷

Study 2

- Participants induced into a state of boredom (**Boredom Induction Condition; BIC**) would take more and leave fewer items on the behavioral Acquiring Task than participants assigned to a **Control Condition (CC)**.

Participants

Table 1. Demographics Means, Standard Deviation and Frequencies

| Variable | Study 1 | | Study 2 | |
|-----------------|----------------------|-----------------------|-----------------------|----------------------|
| | HG (n = 56) N(%) | CG (n = 61) N(%) | BIC (n = 20) N(%) | CC (n = 28) N(%) |
| Age | M = 33.7 SD = 8.4 | M = 43.7 SD = 11.3 | M = 37.3 SD = 12.5 | M = 37.1 SD = 8.3 |
| Gender | | | | |
| Female | 29(51.8) | 33(54.1) | 4(20) | 11(39) |
| Male | 27(48.2) | 28(45.9) | 16(80) | 17(61) |
| Race | | | | |
| White | 35(62.5) | 49(80.3) | 14(70) | 23(82) |
| Latinx/Hispanic | 6(10.7) | 1(1.6) | 2(10) | - |
| Asian | 2(3.6) | 4(6.6) | 2(10) | 1(4) |
| Black | 7(12.5) | 5(8.2) | 1(5) | 1(4) |
| Native American | 4(7.1) | - | 1(5) | 3(11) |
| Bi-Racial | 2(3.6) | 2(3.3) | - | - |

Study 1:

- HG recruited from online HD Support group
- CG recruited from Amazon's M Turk

Study 2:

- All groups recruited from M Turk

Methods

Measures

- Saving Inventory - Revised (SI-R)⁸
- Short Boredom Proneness Scale (SBPS)⁹
- State Boredom Measure (SBM)¹⁰

Acquiring Task⁷

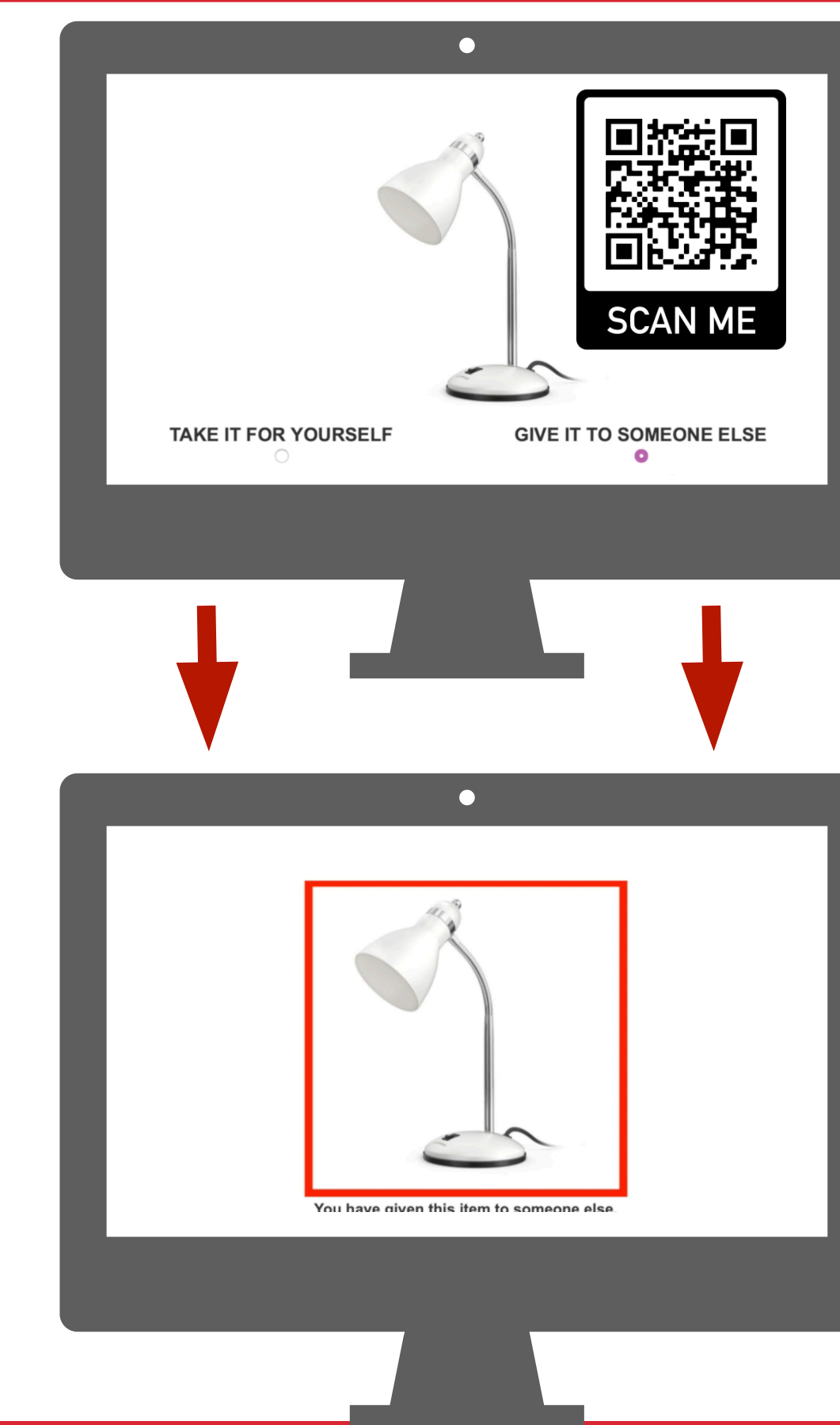
- Instructed to imagine they can keep any items for free
- Presented with series of 25 items one at a time
- Must decide whether to take/leave each item

Discarding Task⁷

- Instructed to imagine they own all items already
- Presented with series of 25 items one at a time
- Includes the items taken in Acquiring Task + novel items
- Must decide whether to keep/discard each item

Procedure

- Study 1:** Completed self-report measures then Acquiring & Discarding Tasks
- Study 2:** Randomly assigned to BIC or CC
- Completed self-report measures and Acquiring Task



Study 1 Results

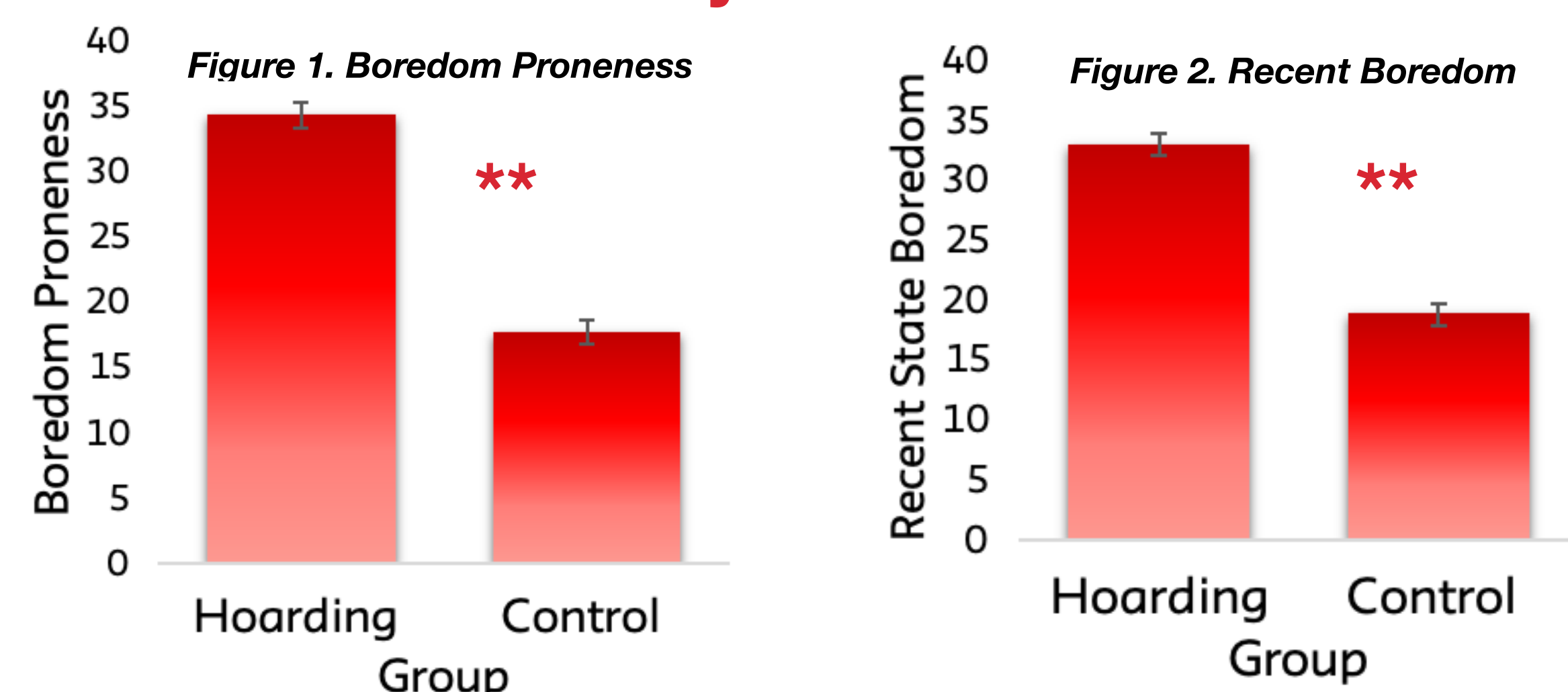


Table 2. Between Group Differences in Boredom Proneness and Recent State Boredom

| | t | df | p | M _{diff} | SE | 95% CI |
|-------------------|-------|---------|-------|-------------------|------|-------------|
| State Boredom | 10.92 | 115 | <.001 | 14.14 | 1.30 | 11.57 16.7 |
| Boredom Proneness | 12.26 | 114.983 | <.001 | 16.6 | 1.36 | 13.92 19.29 |

Individuals with hoarding symptoms reported more boredom-proneness and recent boredom. (Table 2; Figures 1 & 2).

Participants who were higher in boredom-proneness and reported more recent boredom acquired more and discarded fewer items on the performance-based tasks (Tables 3 & 4).

Boredom proneness and recent boredom were positively associated with self-reported Acquiring ($r = .78$; $r = .69$), Discarding ($r = .70$; $r = .70$), and Clutter ($r = .82$; $r = .69$; all p 's < .001).

Table 3. Acquiring Task Correlations

| | 1 | 2 |
|----------------------|--------|--------|
| 1. State Boredom | 1 | |
| 2. Boredom Proneness | .76** | 1 |
| 3. Items Taken | .50** | .59** |
| 4. Items Left | -.52** | -.60** |
| 5. Reaction Time | .12 | .09 |
| 6. Task Rating | .70** | .67** |

Note. ** $p < .001$

Table 4. Discarding Task Correlations

| | 1 | 2 |
|----------------------|--------|--------|
| 1. State Boredom | 1 | |
| 2. Boredom Proneness | .76** | 1 |
| 3. Items Discarded | -.42** | -.48** |
| 4. Items Kept | .42** | .48** |
| 5. Reaction Time | .06 | .08 |
| 6. Task Rating | .66** | .66** |

Note. ** $p < .001$

Study 2 Results

Table 5. Acquiring Task Correlations

| | 1 | 2 |
|----------------------|--------|-------|
| 1. State Boredom | 1 | |
| 2. Boredom Proneness | .82** | 1 |
| 3. Items Acquired | .37* | .35* |
| 4. Items Left | -.49** | -.44* |
| 5. Reaction Time | .25 | .14 |
| 6. Task Rating | .76** | .73** |

Note. ** $p < .001$; * $p < .05$

Table 6. Self-Reported Symptoms

| | 1 | 2 |
|----------------------|-------|-------|
| 1. State Boredom | 1 | |
| 2. Boredom Proneness | .82** | 1 |
| 3. SI-R Acquire | .64** | .62** |
| 4. SI-R Discard | .70** | .70** |
| 5. SI-R Clutter | .75** | .77** |
| 6. SI-R Sum | .71** | .71** |

Note. ** $p < .001$; * $p < .05$

Participants who were higher in boredom-proneness and reported more recent state boredom took more items on the Acquiring Task and reported more severe hoarding symptoms (Tables 5 & 6).

There were no significant differences between Boredom and Control Conditions on boredom ratings or Acquiring Task performance, but all means were in expected directions (Table 7).

Participants endorsing no-to-mild boredom ($n = 18$) left more items on the Acquiring Task than those endorsing moderate-to-high boredom ($n = 30$; Table 8; Figure 3).

Figure 3. Current Boredom Ratings

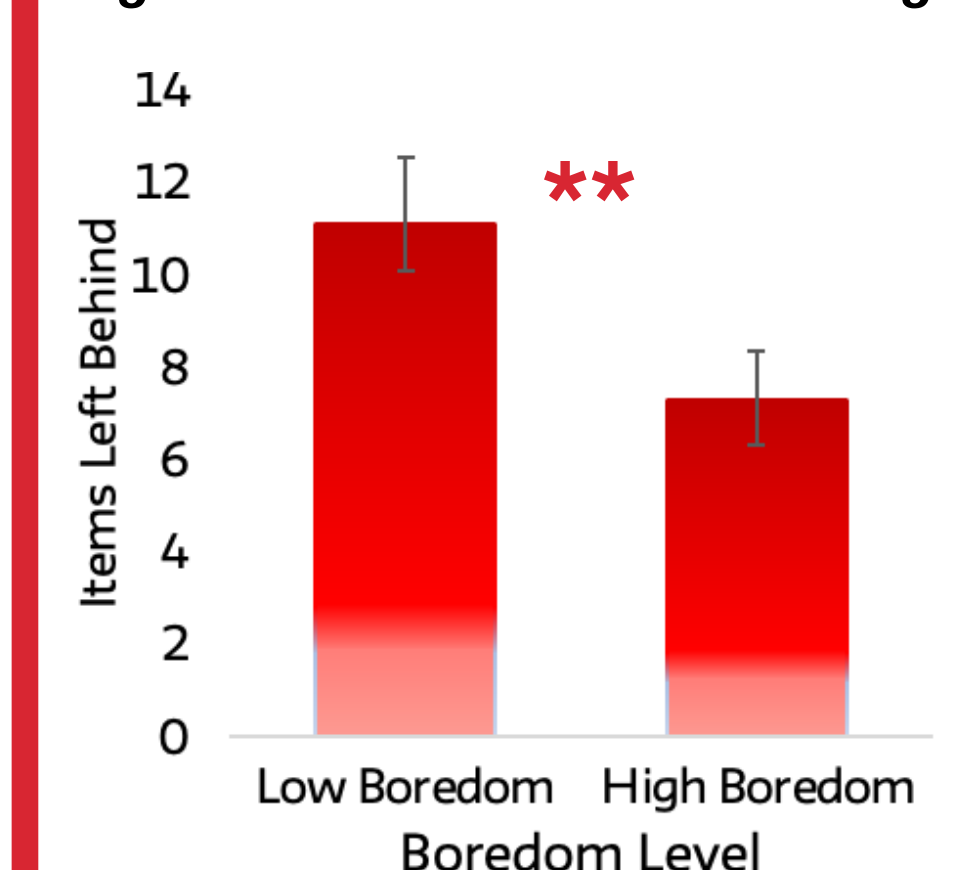


Table 7. Experimental Task by Condition

| | t | df | p | M _{diff} | SE | 95% CI |
|-------------|-------|----|------|-------------------|------|-------------|
| Boredom | 2.01 | 46 | .050 | 0.78 | 0.38 | -0.001 1.54 |
| Items Taken | 1.19 | 46 | .240 | 2.12 | 1.78 | -1.47 5.71 |
| Items Left | -0.83 | 46 | .412 | -1.51 | 1.82 | -5.17 2.16 |

Table 8. Experimental Task by Subjective Boredom Rating

| | t | df | p | M _{diff} | SE | 95% CI |
|-------------|-------|----|------|-------------------|------|------------|
| Items Taken | -1.46 | 46 | .151 | -2.63 | 1.80 | -6.26 0.99 |
| Items Left | 2.14 | 46 | .038 | 3.81 | 1.78 | 0.23 7.39 |

Discussion

Study 1

- Boredom-proneness and recent boredom were associated with more items acquired and fewer items left on the Acquiring Task.
- Recent boredom and boredom-proneness were also associated with more items kept and fewer items discarded on the Discarding Task.
- Individuals with hoarding symptoms endorsed higher boredom-proneness and more frequent boredom than the comparison group.

Study 2

- The boredom induction did not reliably induce feelings of boredom. The conditions did not differ in Acquiring Task performance.
- However, all means were in the expected directions. Thus, the study may have been insufficiently powered to detect statistical significance.
- Moreover, those reporting higher rates of in-vivo boredom left fewer items on the Acquiring Task.
- Those with higher in-vivo boredom did not take significantly more items on the Acquiring Task.

Conclusion & Future Directions

- In-vivo boredom may lead to difficulties leaving things behind but may not be as strongly associated with acquiring new objects.
- Conversely, boredom-proneness and frequent/recent boredom may act as vulnerability factors for both excessive acquisition and difficulties discarding.
- Future studies should examine experimentally induced boredom using a larger sample and a formal measure of Discarding.

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