Challenges in Treating Hoarding in Midlife and Older Adults

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Manifestations of Hoarding

- Acquisition
- Saving
- Disorganization

CLUTTER
Persistent difficulty discarding or parting with possessions, regardless of their actual value.

This difficulty is due to a perceived need to save the items and distress associated with discarding them.

The symptoms result in the accumulation of possessions that clutter active living areas and substantially compromise their intended use. If living areas are uncluttered, it is only because of the interventions of third parties (e.g., family members, cleaners, authorities).
Hoarding Disorder Criteria

- D. The hoarding causes clinically significant distress or impairment in social, occupational, or other important areas of functioning (including maintaining a safe environment for self and others).
- E. The hoarding is not attributable to another medical condition (e.g., brain injury, cerebrovascular disease, Prader-Willi Syndrome).
- F. The hoarding is not better accounted for by the symptoms of another disorder (e.g., obsessions in Obsessive-Compulsive Disorder, decreased energy in Major Depressive Disorder, delusions in Schizophrenia or another Psychotic Disorder, cognitive deficits in Dementia, restricted interests in Autism Spectrum Disorder).
Specify if:

- **With Excessive Acquisition**: If symptoms are accompanied by excessive collecting or buying or stealing of items that are not needed or for which there is no available space.

- **Good or fair insight**: The individual recognizes that hoarding-related beliefs and behaviors are problematic.

- **Poor insight**: The individual is mostly convinced that hoarding-related beliefs and behaviors are not problematic despite evidence to the contrary.

- **Absent insight (i.e. delusional beliefs about hoarding)**: The individual is completely convinced that hoarding-related beliefs and behaviors are not problematic despite evidence to the contrary.
Reasons for Saving

• **Sentimental** –
  “This represents my life. It’s part of me.”

• **Instrumental** –
  “I might need this. Somebody could use this.”

• **Intrinsic** –
  “This is beautiful. Think of the possibilities!”
Compulsive Acquisition

- Compulsive Buying
  - Retail/discount
  - E-bay
  - Home shopping network
- Acquisition of Free Things
  - Advertising flyers/handouts
  - Give-aways
  - Trash - dumpster diving
- Stealing/Kleptomania
Prevalence, Onset and Course

(Ayers et al., 2010; Grisham et al., 2006; Samuels et al., 2008; Tolin, Meunier, Frost & Steketee, 2010)

- Hoarding occurs in 2-5% of adults
- Hoarding onset starts early adolescence - 68% of onsets before age 20
- Course tends to be chronic with very few reports of spontaneous remission
- Late onset hoarding is rare
- Results mixed if hoarding symptoms increase with age
Percent with Moderate to Severe Hoarding Worsens over Time

Frequency of Hoarding in Older Adults

- 15% of nursing home residents and 25% of community day care elder participants hoarded small items (Marx & Cohen-Mansfield, 2003)

- Rate of hoarding among elders in private and public housing is unknown, but some frequency counts are available:
  - Elders at Risk Program, Boston: 15%
  - Visiting Nurses Association., NYC: 10-15%
  - Community Guardianship, NC: 30-35%

- Some of the worst cases are reported among elderly people
Is Hoarding a subtype of OCD? No, but...

OCD = 135
Hoarding = 217

Both = 39

OCD = 96
Hoarding = 178
Comorbidity in 217 with Hoarding

- Major Dep.
- GAD
- Social Phob
- PTSD
- Sub. Abuse
- ADD

Frost et al. (2010)  
Frost, Steketee, Tolin et al., 2011
Hoarding Consequences in Older Adults

- Chronic and age-related medical illnesses (Ayers et al., 2010; Ayers et al., in submission).
- Medication and dietary mismanagement leading to a worsening of medical conditions (Ayers, Schiehser, Liu, & Wetherell, 2012a; Diefenbach, DiMauro, Frost, Steketee, & Tolin, 2012; Kim et al., 2001).
- Significant impairment in activities of daily living (Ayers et al., 2012a; Diefenbach, et al., 2012; Steketee, Schmalisch, Dierberger, DeNobel, & Frost, 2012).
  - ability to move within the home, find important items, eat at a table, use the kitchen sink, prepare food, and sleep in a bed (Ayers et al., 2012)
- Premature relocation to senior housing or eviction (Whitfield, Daniels, Flesaker, & Simmons, 2011)
Percentage of Appliances not Useable

(N = 62 older adults, Case Worker Interview)

Stove/Oven
Fridge/Freezer
Kitchen Sink
Bathtub
Bathroom Sink
Toilet
Heat

Steketee et al., Health Soc Wk 2001; 26:176-184
Hoarding related Consequences

- Social isolation (Ayers et al., 2010; Kim et al., 2001)
- Strained relationships (Tolin et al., 2008)
  - Family, friends
  - Landlords, neighbors
- Legal and financial problems
  - Credit card debt
  - High expenses – buying, storage unit fees
  - Property damage - loss of home investment
Community Challenges

- Increased social service provider load for:
  - Public health departments
  - Housing and inspection services
  - Housing managers & landlords
  - Elder service agencies
  - Mental health department
  - Health care organizations
- The time and money required to resolve serious hoarding cases strains agency resources
Special concerns and barriers in working with late life hoarding

- Possible cognitive impairment
- Impaired activities of daily living (ADLs)
  - Activities of caring for and moving the body
  - Walking, bathing, dressing, toileting, brushing teeth, eating
- Impaired instrumental activities (IADLs)
  - Activities that support independent living
  - Cooking, cleaning, driving, communication via phone or computer, shopping, tracking finances, managing medications
Special concerns and barriers in working with late life hoarding

- Not familiar/comfortable with psychiatric treatment
- Role of family members and other social supports
- Limited/fixed income
- Multiple medications/multiple medical providers
- Possible negative life events (i.e., death of spouse)
- Risk of losing independent living status
Recommended Assessment

- Diagnostic battery
  - SCID, ADIS, MINI
- Hoarding Interview (Steketee & Frost, 2007)
- Measures of Hoarding Severity
  - HRS
  - SI-R
  - CIR
  - UHSS
Hoarding Rating Scale (HRS)

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Not at all</td>
</tr>
<tr>
<td>1</td>
<td>Mild</td>
</tr>
<tr>
<td>2</td>
<td>Moderate</td>
</tr>
<tr>
<td>3</td>
<td>Severe</td>
</tr>
<tr>
<td>4</td>
<td>Extremely Difficult</td>
</tr>
</tbody>
</table>

1. Because of the **clutter** or number of possessions, how difficult is it for you to use the rooms in your home?

2. To what extent do you have **difficulty discarding** (or recycling, selling, giving away) ordinary things that other people would get rid of?

3. Do you currently have a **problem with collecting** free things or buying more things than you need or can use or can afford?

4. To what extent do you experience **emotional distress** because of clutter, difficulty discarding or problems with buying or acquiring things?

5. To what extent do you experience **impairment** in your life (daily routine, job / school, social activities, family activities, financial difficulties) because of clutter, difficulty discarding, or problems with buying or acquiring things?

Saving Inventory – Revised (SI-R)

- 23 items; excellent reliability and validity

- 3 subscales:
  - Compulsive Acquisition
  - Difficulty Discarding
  - Clutter
Clutter Image Rating

- Select the picture that is closest to the clutter in your living room, kitchen, bedroom.
- Pictures ranked from 1-9
- Rate the following rooms:
  - Living Room
  - Kitchen
  - Bedroom
  - Dining Room
  - Hallway
  - Garage
  - Car
  - Other
**Recommended Assessment Battery**

- **ADL-Hoarding (ADL-H)**

<table>
<thead>
<tr>
<th>Activities affected by clutter or hoarding problem</th>
<th>Can do easily</th>
<th>little difficulty</th>
<th>moderate difficulty</th>
<th>great difficulty</th>
<th>Unable to do</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prepare food</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Use refrigerator</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Use stove</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Use kitchen sink</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Eat at table</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Move around in home</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Exit home quickly</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. Use toilet</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15. Find important things (bills, tax forms, etc.)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Recommended Assessment Battery

- Additional geriatric specific assessments:
  - Depression and anxiety measures normed for use with older adults
    - Geriatric Depression Scale
    - Geriatric Anxiety Scale
  - Neurocognitive measures (Montreal Cognitive Assessment, Delis-Kaplan Executive Functioning System)
  - Additional Functional Measures (Functional Disability Index)
Why do people Hoard?

- Vulnerabilities
  - Evolutionary, biological, genetic, early experiences (attachment), core beliefs
- Information processing deficits
- Meaning/value assigned to possessions
- Positive and negative emotional reactions
- Reinforcement of acquiring and saving behaviors

(Steketee & Frost, 2007)
Vulnerabilities: Genetic, Family, Early Experiences

Beliefs & Meanings: Identity, Value, Responsibility, Memory, Control

Cognitive Processes: Decision-making, Attention, Memory, Problem solving

Emotions
- Negative
- Positive

Negative Reinforcement

Saving & Acquiring

Positive Reinforcement
Emotions

- Positive Emotions
  - Pleasure
  - Excitement
  - Pride
  - Relief
  - Joy
  - Fondness
  - Satisfaction

- Negative Emotions
  - Grief/loss
  - Anxiety
  - Sadness
  - Guilt
  - Anger
  - Frustration
  - Confusion
Functional Analysis:

What actually happens in real time?
54-year-old woman

- Lives w/ husband & son, age 16
- Moderate to severe hoarding in living areas
- Hoarding began in high school & increased later
- Mild acquisition problem
- Her father collected items from others’ trash
- Her mother didn’t allow clutter in home
Acquiring and saving cosmetic samples & shampoo bottles

- **Vulnerabilities**
  - Father modeled hoarding; “Waste not, want not”
  - Perfection & completeness
  - Organization, distraction

- **Meaning of possessions**
  - Utility; frugality; waste

- **Feelings**
  - Responsibility, guilt

- **Saving items was negatively reinforced by reduction in discomfort**

- **Clutter**
Son’s toys

- Vulnerabilities, core beliefs
  - Am I a good mother?
  - Childhood deprivation
- Beliefs & meaning
  - I have to give my son what I didn’t get.
- Feelings
  - Guilt/Anxiety/Sadness
- Saving is negatively reinforced
- Clutter
Card from mother

1. I’ll waste it.
   *Guilt*

2. This card represents my mother.
   *Ambivalence/Resignation*
   *Grief (Loss of a dream)*

3. This poor card.
   *Empathy*
Functional Analysis of Compulsive Shopping: Janet

- 40 year old professional woman
- Husband & 12 year old son
- $27,000 credit card debt
- Clothes buying compulsion
- Serious hoarding problem
Compulsive Buying Episode
Specialized CBT for Hoarding

- Education and case formulation
- Determine values, set goals
- Motivational enhancement
- Skills training for organizing, problem solving, decision-making
- Practice discarding & non-acquiring
- Evaluate thoughts and beliefs
- Maintain new behaviors
Treatment Format for Adults

- 26 sessions takes about 1 yr, sometimes more in severe cases
- Individual or group
- Office and in-home sessions
- Practice in acquiring locations
- Family consultation
- Assistance from a coach if available
- Cleanouts with trained staff/coach if necessary for extensive clutter
Psychoeducation

- Education about cognitive-behavioral model of hoarding
- Discussion of treatment and its effects
- Personalized model-building
Developing a Model to Explain Client’s Hoarding Behavior

- Start with client’s explanation
- Add features based on interview and experimentation
- Identify feelings, beliefs, core beliefs
- Connect these to acquiring and saving behavior and clutter
- Link vulnerabilities to feelings, beliefs and behaviors
- Do functional analyses of individual features
Susan’s Vulnerabilities:

Susan’s Beliefs about Possessions:
- How Susan saves & acquires
- Susan’s Emotions
- Negative
- Positive
- Susan’s Cognitive Challenges
- Avoidance behaviors
- Attraction to objects
Establish Personal Goals and Values

• Values
  • What does the client care most about? - family, friends, honesty, achievement...

• Personal goals
  • What does the client most want to do in the remainder of his/her life?

• Refer to personal goals and values throughout treatment to clarify ambivalence and increase motivation
Example: Susan’s Goals

- To enjoy my instruments again
- To create breathing space, order, and beauty in my bedroom (esp. in front of the closet)
- To have a living room that a friend or family could enter
- To have a safe kitchen with working surfaces
- To take a bath
- To remove bagged items
Stages of Change

- Precontemplation
- Contemplation
- Preparation
- Action
- Maintenance
- Precontemplation
Motivating Change in Hoarding

- Recognize ambivalence
- Enhance ambivalence
- Resolve ambivalence
- Reinforce change talk and action
Rules for Clinicians and Coaches

- Ask permission before touching items
- Help clients decide on rules for acquiring, keeping and discarding
- Help clients learn to make decisions
  - Resist the urge to choose for them but do help by providing information
- Develop a plan that moves systematically by room or type of spaces and/or objects
Skills and Plan for Organizing

- Categorize and organize wanted items
  - Identify categories for types of items
  - Select locations for item categories
  - Discuss storage locations and furnishings
  - Select interim locations during sorting

- Categorize unwanted items
  - Trash, recycle, donate, sell; few undecided
  - Develop action plan for removing items
Skills to Manage Attention

- Determine usual attention span
- Help client reduce and/or delay distractibility
  - Use timer
  - Control visual field (cover distracting areas)
- Discuss ways to create structure
  - Regular appointments for sorting
  - Establish priorities
  - Divide projects into manageable steps
Treating Acquiring Problems

- Identify acquiring problems
- Develop a hierarchy from easier to harder
- Modify beliefs about acquiring
- Practice not acquiring
  - Drive-by non-shopping
  - Walk-through non-shopping
  - Browsing and picking non-shopping
- Coping with empty space
Acquiring Hierarchy

- Driving past a store 10
- Standing outside store 25
- Walking into store 35
- Seeing something you want 50
- Touching object you want 65
- Putting object back 75
- Walking away from item 80
- Walking out without the object 85
Acquiring Questions and Rules

- Do I have an immediate use for this?
- Can I get by without it?
- Do I want it taking up space in my home?
- Is this truly important or does it just seem so because I am looking at it?
- What are the advantages and disadvantages of acquiring this?
- Develop personal rules for acquiring - must have:
  - An immediate use for it
  - Time to deal with it appropriately
  - Money to afford it
  - Space to put it
Treating Difficulty Discarding

- Bring box of things from home to sort in the office
- Start with easier items
- Ask client to talk aloud about decision-making
- Gradually reduce assistance with decisions
- Practice sorting at home on most important areas and easiest items first
- Move sorted items to destination or out IMMEDIATELY – no looking back
Cognitive Restructuring

- Socratic questioning helps clinician and client understand the logic
- Identify and correct cognitive distortions
- Downward arrow” technique
- Advantages/disadvantages (pros & cons)
- Taking another perspective
- Behavioral experiments
- Value of time
Identify Beliefs

- Fears of Mistakes/Decisions
- “Need” vs. “Want”
- Responsibility (guilt) for objects and people
- Opportunity
- Memory (memory aid, poor memory)
- Identity – I am what I have
- Uniqueness / one of a kind
- Completeness and perfectionism
- Need for control – it’s mine; no one can touch
Questions to Help Think it Through

- How likely is the feared outcome?
- What evidence is there to support the belief?
- How catastrophic would this be?
- How well could you cope with not having this?
- How much distress would you feel?
- How long would the distress last?
- Can you tolerate the feeling?
- Is your thinking coming from sometime or someone in your past?
Socratic Questioning for Son’s toys

- How about getting rid of this toy from your son’s (son is now 16)?
- That would be hard.
- What is the hard part?
- I’d feel like I was getting rid of something he might want in the future. Maybe for his own kids.
- O.K. What condition is this toy in?
- Well, it’s sort of worn, probably not very good condition.
- If you tried to sell it, would someone pay money for it?
- No, I don’t think so, it’s dirty and broken.
- O.K., I agree it seems unlikely anyone would buy it. Do you think your son would want to give his kids a dirty broken toy?
- No, I guess not.
You sound unsure. Is there something else you are thinking that makes you want to keep this? Maybe some ideas in the back of your head?

Yeah, I’m feeling like I didn’t help him take care of this toy. I should have been better at protecting his things.

OK, so you are thinking you’d have been a better mother if you’d helped him take better care of his toys. Do you believe that good mothers make sure their kids keep their toys in good condition?

No, I know that isn’t true. Kids have to play with their toys and toys get worn and broken.

So actually, it’s OK that this toy is worn and broken. Is that what you believe?

Yes, I do. But somehow I still feel guilty. Maybe I’m feeling bad for the toy.
Socratic Questioning - 3

- Oh, bad for the toy. Do you think the toy has feelings? What’s it made of?
- Just plastic. I know it doesn’t make sense.
- But the idea is there, so we need to examine that belief that the toy might have feelings. What do you think?
- I know it doesn’t really have feelings.
- Are these feelings coming only from you? You said you felt guilty. What do you think the guilt is about?
- I feel that I need to provide my son with things I didn’t have as a child. My own childhood was hard and I didn’t have many toys. Throwing this out seems wasteful.
- Um hmm. Let’s take a hard look at whether it is truly wasteful. How would you decide that? When is it wasteful to get rid of something, and when is it o.k.?
- Well, it’s bad to get rid of stuff that’s still useful but o.k. to get rid of worn out things.
What about this toy? Does it meet the definition of worn out? You said you thought it was dirty and broken. Does that qualify as worn out?

Yeah, it’s really worn out. I need to get rid of this.

What about your guilt feelings?

I just need to let this go. He doesn’t want the toy, I know that. I just have to figure out why I feel so guilty.

I agree with you that it makes sense to get rid of this toy and it seems like your guilt isn’t really about the toy itself. Maybe it will become clear to you, but for now, shall we put it in the trash bin?

Yeah. I’ll get used to it.

How about I ask you in a few minutes how guilty you feel. What is it now at the start - on a 0-100 scale where 100 is the most guilty you’ve ever felt?

It’s a 60 I think.

O.k., I’ll ask again in a little while to see if you feel better.
Open Trial: Clutter Image Rating
14 entered; 10 completed

![Clutter Image](image_url)

* * *
CBT Outcomes: Waitlist Controlled Trial of Hoarding (Steketee et al., 2010)

CBT (n=23)
- 12 wks (n=19)
- 26 wks (n=19)

WL (n=23)
- 12 wks (n=21)
- 26 wks CBT (n=18)
37 Controlled Trial Completers

- 78% Women
- 89% White
- Mean age = 55 (range=42-66)
- 40% Married or living with partner
- 67% College Ed. or higher
- 32% Unemployed
- 46% MDD; 35% GAD; 24% Social Phobia

CBT > Wait List at 12 Weeks

% Reduction SI-R

- **Clutter**
- **Difficulty Discarding**
- **Acquiring**

SI-R Symptom

- CBT
- WL

CBT Improvement at Wks 12 and 26

%-Reduction

- Clutter
- Difficulty Discarding
- Acquiring

Controlled Trial Responders

Steketee et al., 2010, *Depress & Anx*, 27, 476-484
Alternative treatment methods

- Group CBT
  - With in-home case management
- Structured CBT support groups - lay facilitated
  - *Buried in Treasures* Workshops
- Professional organizers
- Assistance from coaches and/or family members
- Community task forces
  - For involuntary cases
Brookline Flexible CBT for Hoarding (modified from Steketee & Frost 2007 manual)

- Alternating home and office visits
- 1.5 – 2 hour sessions
- ~40 sessions over ~ 12 months
- Treatment team included agency clinicians and BA staff member hired and trained to provide hoarding treatment
- Flexible application of skills training, exposure practice and basic cognitive strategies

Brookline Study Recruitment

- Excluded pts. with dementia, problem personality features
- 9 began; 6 completed
- 5 women, 1 man
- Mean age = 72, range = 56 - 86 years
- Comorbidity: None = 1; depression = 5; PTSD = 1, ADHD = 1
- 5 lived alone; 1 with roommates
- Physical health comorbidity:
  - Diabetes, overweight, arthritis
  - Chronic bronchitis, glaucoma, Parkinson’s

Engagement Strategies

- Humor and inspirational quotations
- Schedule sorting times
- Listen to music while sorting
- Review progress via before and after photos
- Review life goals, esp. as priorities change with declining health
- Reward self for work done - but not with new items!
- Balance homework with leisure

## Reduction in Clutter

<table>
<thead>
<tr>
<th>Elderly Clients</th>
<th>CIR % Reduction</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>17%</td>
</tr>
<tr>
<td>2</td>
<td>20%</td>
</tr>
<tr>
<td>3</td>
<td>25%</td>
</tr>
<tr>
<td>4</td>
<td>29%</td>
</tr>
<tr>
<td>5</td>
<td>36%</td>
</tr>
<tr>
<td>6</td>
<td>46%</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td><strong>28%</strong></td>
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</table>

Successes with CBT for Elders

- High satisfaction with focused practical treatment
- Compulsive acquiring improved quickly
- Reduction in clutter took 1 year or more
- Structured assignments (esp. sorting) with daily goals and scheduling worked best
- In-home coaches were especially helpful
- Therapy provided good social support – how to promote this when therapy ends?
But Older Age Complicated Tx

- More health problems and safety risks – falling, fire
- Low insight, limited motivation and ambivalence requires strong relationship building
- A history of deprivation contributed to some clients’ worries about necessities and urges to save
- Downsizing homes provokes special challenges:
  - Who should receive cherished objects
  - How to physically remove items
- Cognitive therapy less useful for those with cognitive decline
CBT for Older Adults with Hoarding
Ayers et al. 2011; funded by IOCDF

- Open trial of 12 participants
- Mean age 73.6 (SD=6.5)
- 7 women; 5 men
- 26 sessions on individual CBT, supervised by experienced clinician (C. Bratiotis)
- included 20-25% home visits
Results

• No attrition
• Statistically significant changes in hoarding severity (~15 - 20%; ) and depression (~50%)
• But only 3 of 12 were treatment responders
• Homework compliance was related to decreases in hoarding severity
• Patient feedback – cognitive therapy techniques difficult (Ayers, Bratiotis, Saxena, Wetherell, 20011)
### A closer look at outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>SI-R N (% change)</th>
<th>UCLA Hoarding Severity Scale N (% change)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Got Worse</td>
<td>1 (2% increase)</td>
<td>2 (10% increase)</td>
</tr>
<tr>
<td>Same or slight improvement</td>
<td>8 (12% decrease)</td>
<td>7 (16% decrease)</td>
</tr>
<tr>
<td>Improved</td>
<td>3 (60% decrease)</td>
<td>3 (59% decrease)</td>
</tr>
</tbody>
</table>
Conclusions & Implications

- Standard CBT for hoarding less effective for older adults
- Older adults can tolerate 26 sessions of hoarding-focused behavioral treatment
- Homework compliance is important
- Negative impact of neurocognitive deficits on treatment?
  - (Ayers et al., 2011; Ayers et al., in press, Mackin et al., 2011)
Why poor the response?

Neurocognitive functioning is poorer in older HD versus Controls (non-anxious/depressed) covaried by age, gender, and education

<table>
<thead>
<tr>
<th>Measure</th>
<th>HD Ps (n=42)</th>
<th>Controls (n=25)</th>
<th>p</th>
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</thead>
<tbody>
<tr>
<td>WCST Total Errors</td>
<td>33.1 (20.5)</td>
<td>21.0 (10.7)</td>
<td>0.022</td>
</tr>
<tr>
<td>WCST Perseverative Errors</td>
<td>16.3 (12.8)</td>
<td>11.2 (6.1)</td>
<td>---</td>
</tr>
<tr>
<td>WCST Non-perseverative Errors</td>
<td>16.7 (11.2)</td>
<td>9.8 (5.1)</td>
<td>0.017</td>
</tr>
<tr>
<td>WCST Conceptual Level Response</td>
<td>49.2 (22.5)</td>
<td>61.0 (20.4)</td>
<td>0.009</td>
</tr>
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# Neurocognitive Skills Necessary for CBT

<table>
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<tr>
<th>Intervention</th>
<th>Sample Neurocognitive Skills Necessary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case formulation</td>
<td>Develop new set, organization of information</td>
</tr>
<tr>
<td>Skills training (organizational &amp;</td>
<td>Categorization, organization of information, problem solving, procedural learning</td>
</tr>
<tr>
<td>problem-solving)</td>
<td></td>
</tr>
<tr>
<td>Exposure</td>
<td>Inhibit response</td>
</tr>
</tbody>
</table>
# Neurocognitive Skills Necessary for CBT

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Neurocognitive Skills Necessary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Therapy</td>
<td>Largely Executive Functioning (e.g. flexibly applying concepts, abstract reasoning, hypothesis generation)</td>
</tr>
<tr>
<td>Motivational Interviewing</td>
<td>Initiation, shifting set, decision making</td>
</tr>
<tr>
<td>Relapse Prevention</td>
<td>Delayed recall, planning, problem solving</td>
</tr>
<tr>
<td>Homework</td>
<td>Initiation, organization, planning</td>
</tr>
</tbody>
</table>
How to enhance treatment for older adults with hoarding?

1. Emphasis on behavioral approach (exposure)
2. Teach skills to support/improve:
   - Cognitive functioning
     - Planning, preparation, organization, abstract reasoning, cognitive flexibility, problem solving skills
   - In-session and homework compliance
   - Prevent relapse back to old habits
<table>
<thead>
<tr>
<th>Cognitive Rehabilitation and Exposure/Sorting Therapy Session Outline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Introduction and Psychoeducation</td>
</tr>
<tr>
<td>2. Calendar Use</td>
</tr>
<tr>
<td>3. Linking Tasks, Using a &quot;to do&quot; list</td>
</tr>
<tr>
<td>4. Problem Solving</td>
</tr>
<tr>
<td>5. Thinking Flexibility and Planning</td>
</tr>
<tr>
<td>6. Discarding Preparation</td>
</tr>
<tr>
<td>7. Organizational and Exposure Preparation</td>
</tr>
<tr>
<td>8. Introduction to Exposure Therapy</td>
</tr>
<tr>
<td>9 - 20. Exposure</td>
</tr>
<tr>
<td>21. Advanced Exposure (longer home visit with team)</td>
</tr>
<tr>
<td>22. Advanced Exposure</td>
</tr>
<tr>
<td>23. Relapse prevention and maintenance</td>
</tr>
<tr>
<td>24. Relapse prevention and maintenance</td>
</tr>
</tbody>
</table>
## Comparison of Adult and Older Adult Treatments

<table>
<thead>
<tr>
<th></th>
<th>General Adult (Steketee &amp; Frost 2007)</th>
<th>Older Adult (Ayers et al., 2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment</td>
<td>2-3 sessions</td>
<td>1 session</td>
</tr>
<tr>
<td>Case Formulation</td>
<td>2 sessions</td>
<td>0</td>
</tr>
<tr>
<td>Skills Training (organizational, problem solving)</td>
<td>2-3 sessions</td>
<td>6-7 sessions*</td>
</tr>
<tr>
<td>Exposure and Cognitive Therapy</td>
<td>15-20 sessions</td>
<td>0</td>
</tr>
<tr>
<td>Exposure Therapy</td>
<td>0</td>
<td>15-16 sessions</td>
</tr>
<tr>
<td>Motivational Interviewing</td>
<td>throughout</td>
<td>throughout</td>
</tr>
<tr>
<td>Relapse Prevention</td>
<td>2 sessions</td>
<td>1-2 sessions</td>
</tr>
</tbody>
</table>

* Also includes prospective memory and cognitive flexibility rehab modules
Selected Modules from CogSmart program
Twamley et al., 2008

- Compensatory strategies target cognitive domains:
  - Prospective memory & planning (i.e., organization skills, calendar use, to-do lists, etc.)
  - Cognitive flexibility and problem solving (i.e., executive functioning)

Theoretical basis for cog. rehab (COGSMART; Twamley et al., 2008)

**Cognitive compensation**
- “Working around” deficits (e.g., using a cane to support a weak leg)
- Taking advantage of cognitive strengths
  - By using different strategies
  - By using different brain areas

**Habit learning**
- Habits –good or bad –are hard to break and are particularly resistant to forgetting
- Relies on intact neostriatal pathways rather than declarative memory systems
Prospective memory

- Strategies
  - Calendar systems and programming calendar use
  - Daily checking
  - Weekly planning
  - Entering both events and reminders prior to events
- Linking tasks (new task linked to automatic task)
Prospective Memory cont.

- Automatic places (keep items in same place)
- Using to do lists and sticky notes with calendars
  - Short-term prospective memory strategies
  - Write on hand
  - Leave self a message
  - Use visual imagery
  - “Can’t miss” reminders
Problem Solving

- Emphasis on making decisions, creating steps, finding solutions
- Follow the 6 step method:
  1. **Define** the problem
  2. **Brainstorm** solutions to the problem
  3. **Evaluate** each solution in terms of ease of implementation, costs and benefits, and likely consequences
  4. **Select** a solution to try
  5. **Try** the solution
  6. **Evaluate** the solution: Did it work? If not, go back to step 4.
- Practice in session & then give as homework
Cognitive Flexibility Cont.

- Brainstorming
- Strategy verbalization
- Hypothesis testing by looking for disconfirming evidence
- Set shifting/maintenance

Is my strategy working? Be sure to gather pro and con evidence!

- Yes
  - Keep using it
    - “Set Maintenance”
- No
  - Try a different strategy
    - “Set Shifting”
Standard Organizational Strategies
Like those in Steketee and Frost 2007

- Categories to keep & discard
- Filing system
- Places to discard & plan for discarding
  - (Amvets, Goodwill, Recycle)
- Adequate storage
- Items for sorting (containers, files, shredder, etc)
- Developing rule system – like with like
- Everything has final resting place – if none, discard
- Staging areas
- Maintenance system
- Keeping cleared areas clean
Discarding and Acquiring Practice

• Most emphasized portion of treatment
• Rationale based on process of habituation & distress tolerance
• Expose to triggers: simply making a distressing decision about an object and/or reason for saving (utility, sentimental value, fear of making wrong decision/not feeling right, loss of information)
Exposure Therapy in Session

- Discuss role of avoidance in maintaining hoarding problems
- Explain the process of habituation
- Exposure directly combats avoidance
- Develop a hierarchy
- Establish rules to use during exposure (e.g. therapist may not touch any possessions)
- Repetition of exposure treatment rationale necessary
- Use SUDS ratings
- Wrap up exposures with “lessons learned”
<table>
<thead>
<tr>
<th>Time</th>
<th>SUDS Ratings (0-10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Minutes</td>
<td></td>
</tr>
<tr>
<td>5 Minutes</td>
<td></td>
</tr>
<tr>
<td>10 Minutes</td>
<td></td>
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<tr>
<td>15 Minutes</td>
<td></td>
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<tr>
<td>20 Minutes</td>
<td></td>
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<tr>
<td>25 Minutes</td>
<td></td>
</tr>
<tr>
<td>30 Minutes</td>
<td></td>
</tr>
<tr>
<td>35 Minutes</td>
<td></td>
</tr>
</tbody>
</table>

What lessons did you learn from your exposure?

*Example:*

1. *That I can let go of items.*

2. *Keeping things does not help me with my hoarding.*

3. *I get deal with distress from discarding.*
Initial Pilot Study  

Ayers et al., in press

- N=11 (9 women, 2 men)
- Mean age 66, range =60-85
- 24 wks individual therapy by 3 licensed psychologists
- First 6 sessions on executive functioning
- Next 16 sessions on exposure for discarding and acquiring
  - Approximately 12-25% home visits
- Final 2 sessions on relapse prevention
Results

- Significant main effects of time on hoarding severity measures with large effect sizes
- Results are significant when depression or anxiety symptoms are covaried
- Clinical Global Improvement (CGI) = “much improved” to “very much improved” at post-treatment
- CGI Severity moved from “moderately ill” to “mildly ill”
Treatment responders

- 8 of 11 = treatment responders
- 3 = partial responders.

Partial responders
- narrowly missed full response criteria
- 3 had comorbid MDD; 2 had OCD.
## Hoarding Severity Changes

<table>
<thead>
<tr>
<th>Measure</th>
<th>% Change from Baseline to Post-Treatment n=11</th>
</tr>
</thead>
<tbody>
<tr>
<td>SI-R</td>
<td>38%</td>
</tr>
<tr>
<td>UHSS</td>
<td>41%</td>
</tr>
<tr>
<td>CIR</td>
<td>26%</td>
</tr>
</tbody>
</table>
Hoarding Severity Changes

- Saving Inventory - Revised
  - Pre-Treatment: M = 59.90 (10.17)
  - Mid-Treatment: M = 54.66 (12.27)
  - Post-Treatment: M = 37.50 (14.78)

- UCLA Hoarding Severity Scale
  - Pre-Treatment: M = 27.30 (5.67)
  - Mid-Treatment: M = 22.77 (7.17)
  - Post-Treatment: M = 16.60 (8.16)
Conclusions

- Cognitive rehabilitation + exposure is feasible, acceptable, and promising for geriatric HD
- Treating neurocognitive deficits in older patients with HD appears to enhance response to CBT
- CR + E doubled the improvement rates for CBT
- Patients with comorbid disorders and severe hoarding may require more intensive or longer treatment
- Limitations - small sample size, no control group, no follow-up
Case example

Eleanor responded to a flyer for hoarding treatment because she “knew she had a problem but didn’t know there was help for such a thing until now.” Over 65% of her home was cluttered with objects, making most rooms unusable. She slept in a reclining chair and showered once a week at a senior center.

Problem solving techniques targeted barriers to treatment:
1. heavy objects in the way → selected solution: 2 church volunteers to assist
2. difficulty focusing on exposure exercises → selected solution: asked former colleague to assist during homework to keep on track).
Case example

With help of therapist, she improved her discarding by linking practice to an established routine (nightly news). Through repeated practice, she learned to push through avoidance and that she could tolerate distress of letting go of possessions. At session 18, she completed an “advanced” exposure by leading a team of student volunteers in discarding exercises in her home for two 4-hour sessions. After 24 sessions, she reduced clutter in her living room by 50%, bedroom by 50%, and could complete most basic functions at home. Hoarding symptoms decreased by approximately 40% on clinician administered and self-report measures.
Future Treatment Directions For Geriatric HD Treatment

- Randomized controlled trial (coming soon!)
  - 33 (18 complete) participants enrolled
    - 22 women; 11 men
    - mean age 68; 12% ethnic minority
  - 16 assigned to TAU (case management)
    - (2 refused final assessments; 1 hospitalized for psychiatric symptoms)
  - 17 assigned to CREST condition (cog. rehab.)
    - No participants dropped out
- Real world effectiveness
Thank you!

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Resources

- Hoarding and Acquiring: Therapist Guide and Workbook (Steketee & Frost, 2007; 2014)
- Cognitive Symptom Management and Rehabilitation Therapy (CogSMART) for Traumatic Brain Injury Individual Manual (Twamley et al., 2008)
- Cognitive Rehabilitation and Exposure/Sorting Therapy for Compulsive Hoarding (Ayers et al., 2012)
- General hoarding information: http://www.ocfoundation.org/hoarding/