

# Hoarding in Late Life: Etiological Complexities and a Novel Approach to Treatment

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# Disclosures

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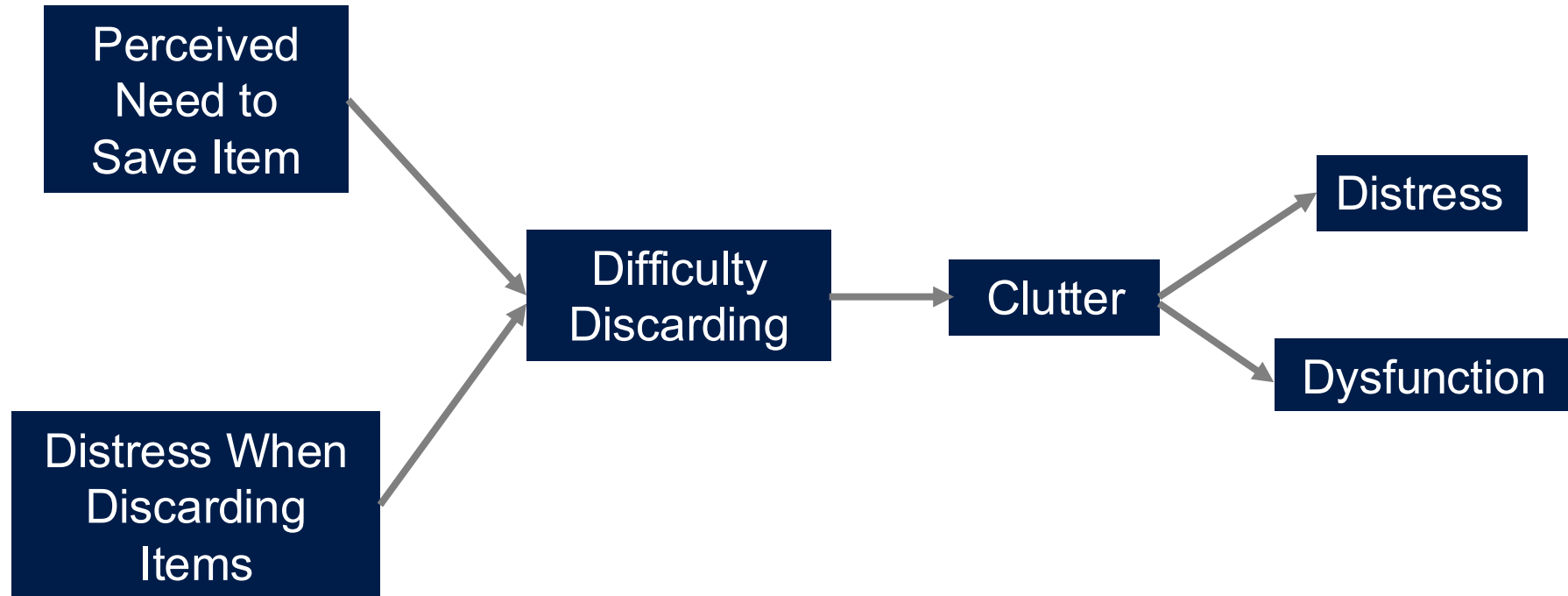
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# Diagnostic Criteria

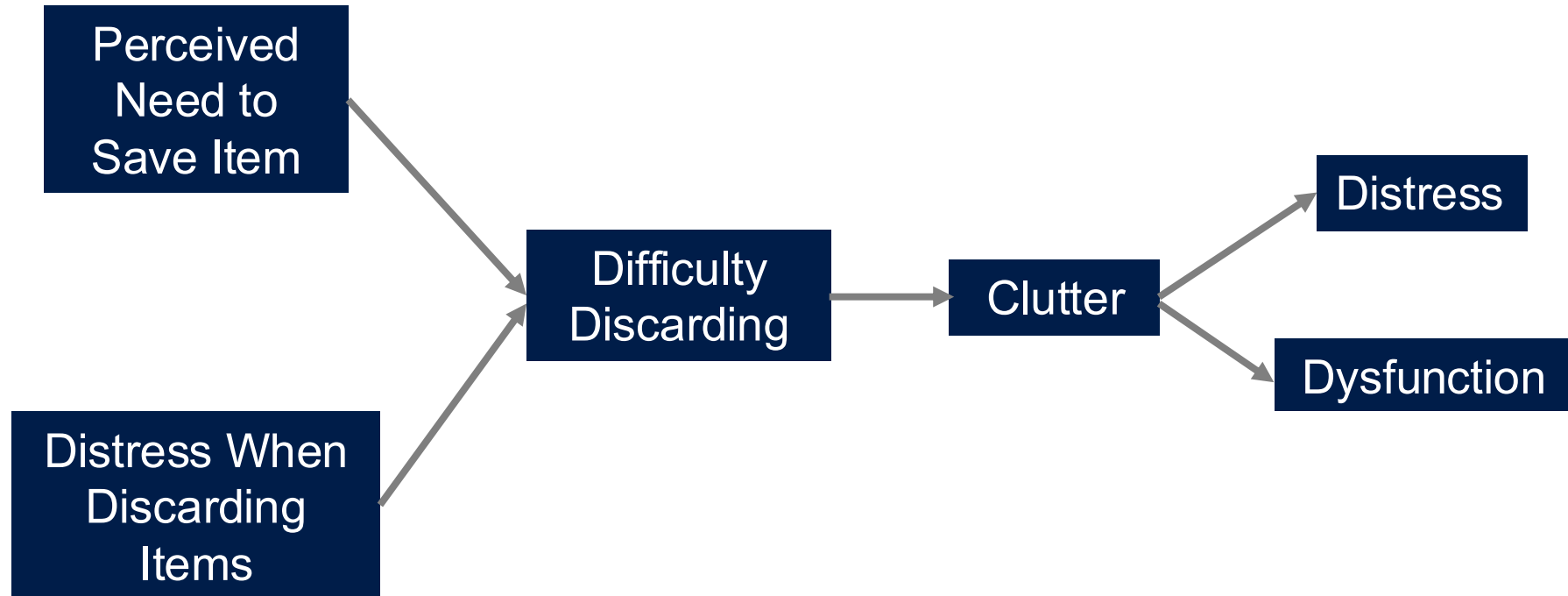
## **F42.3 Diagnostic Criteria**

- A. Persistent difficulty discarding or parting with possessions, regardless of their actual value.
- B. This difficulty is due to a perceived need to save the items and to distress associated with discarding them.
- C. The difficulty discarding possessions results in the accumulation of possessions that congest and clutter active living areas and substantially compromises their intended use. If living areas are uncluttered, it is only because of the interventions of third parties (e.g., family members, cleaners, authorities).
- 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).

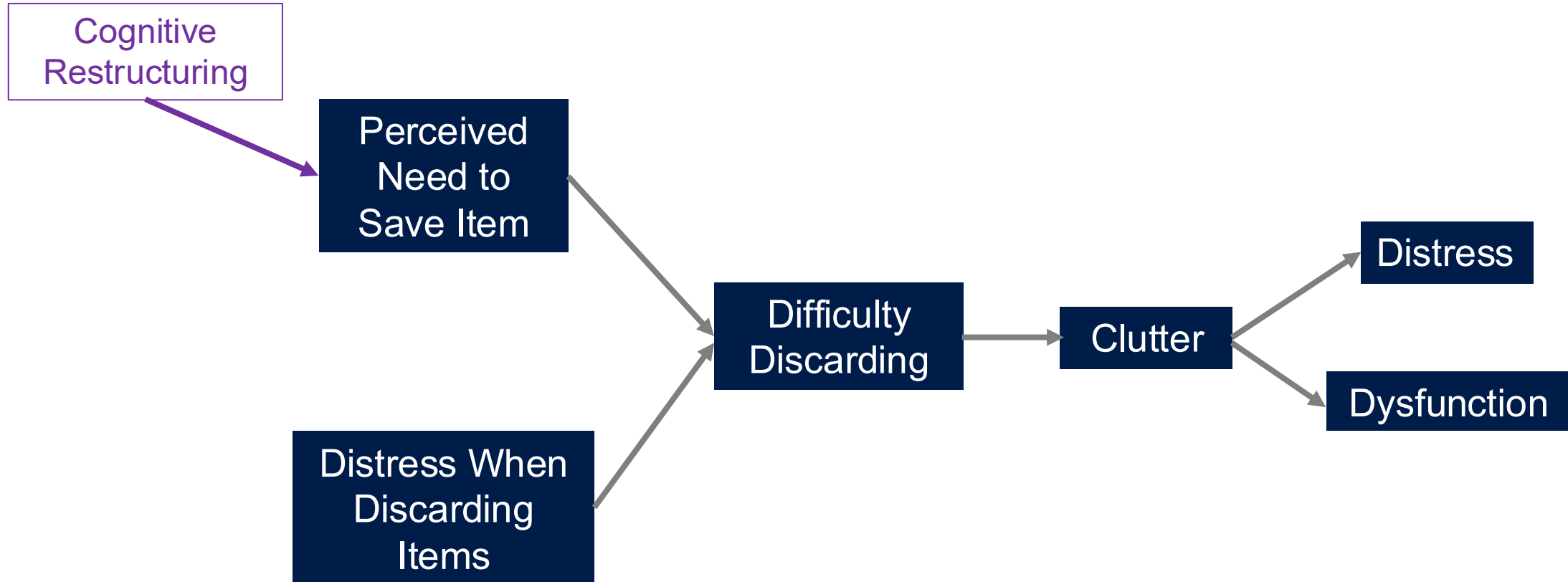
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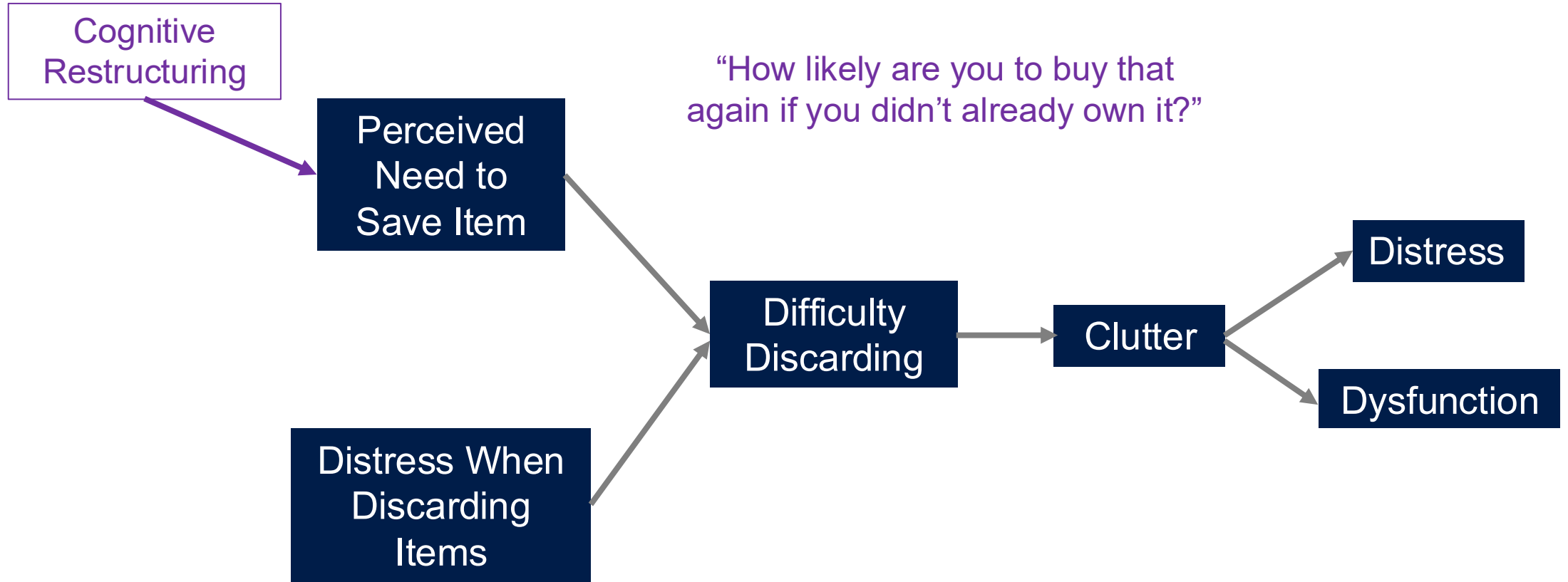
# Treatment Targets



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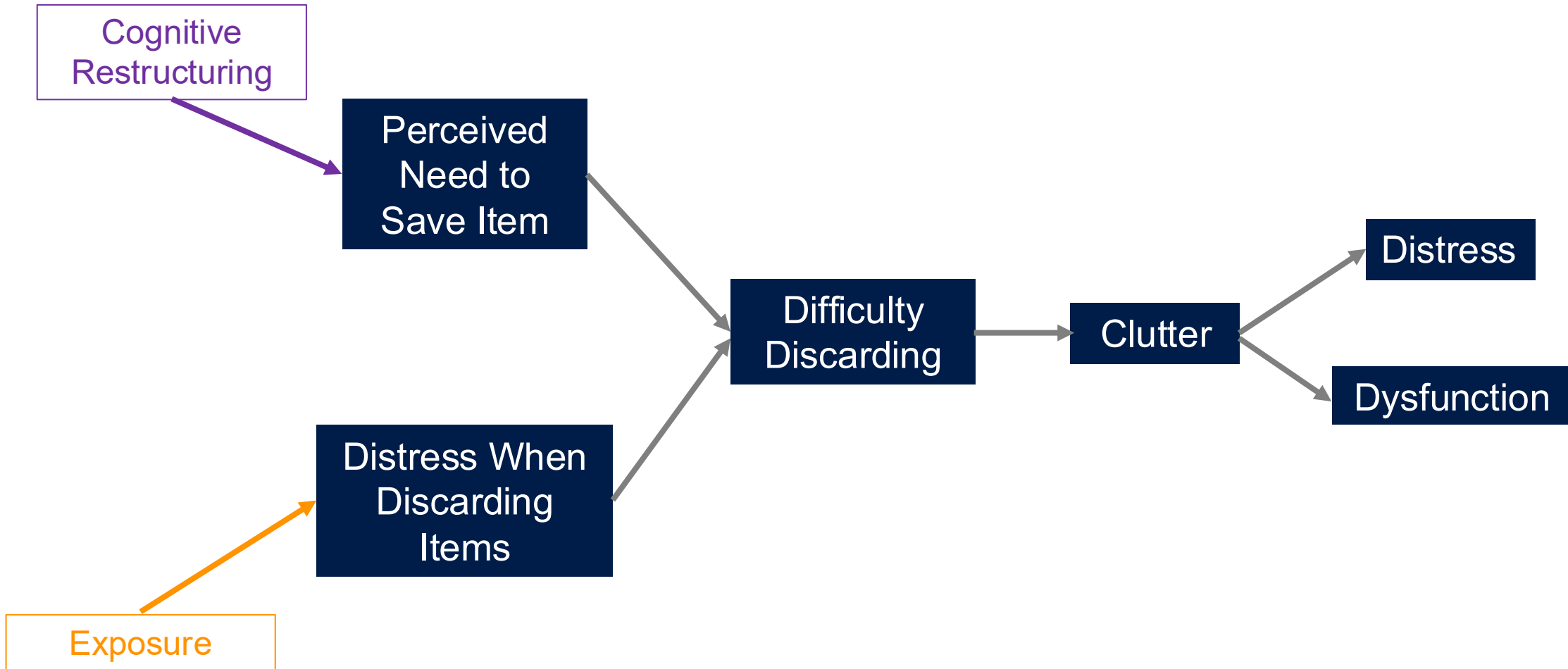


“How likely are you to buy that again if you didn’t already own it?”

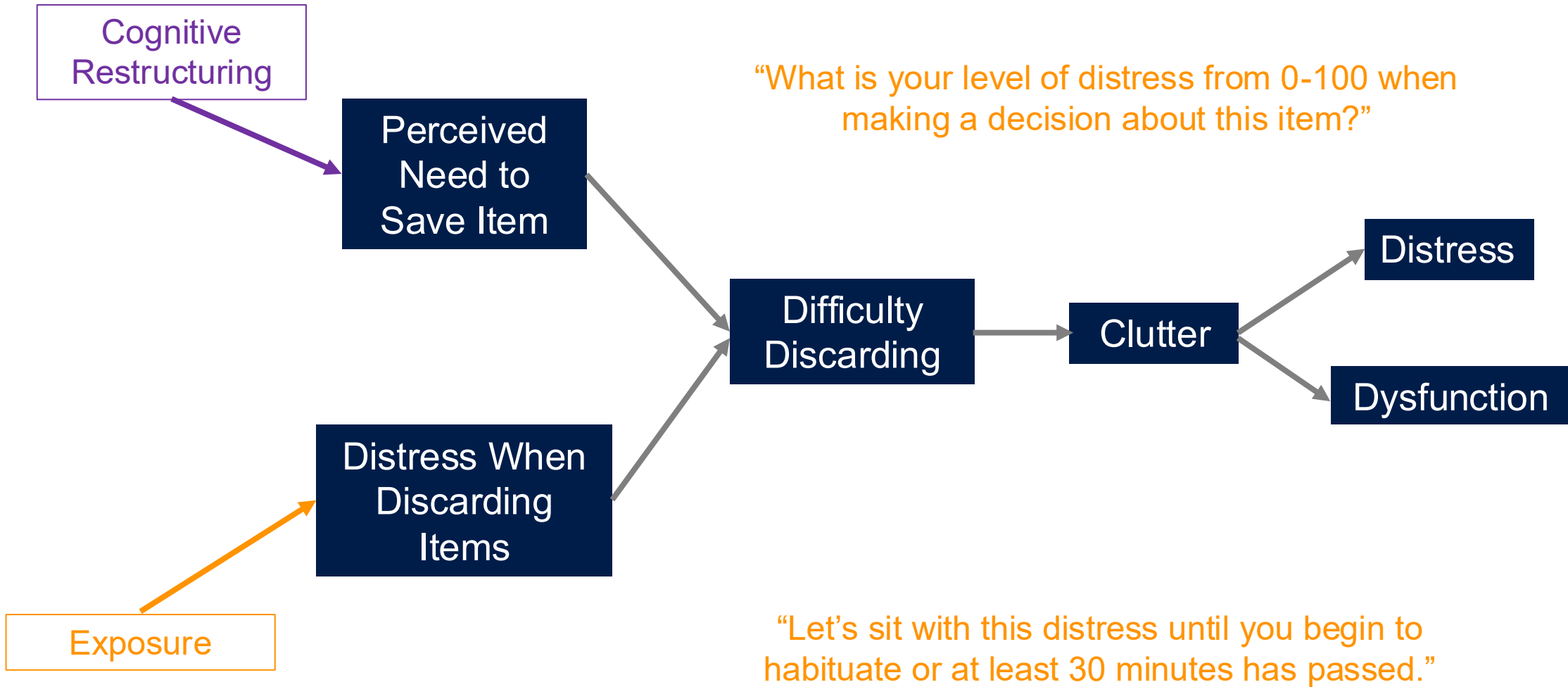
“Is this truly important or does it just seem that way because you are looking at it?”

“Do you have a specific plan and timeline for using this object?”

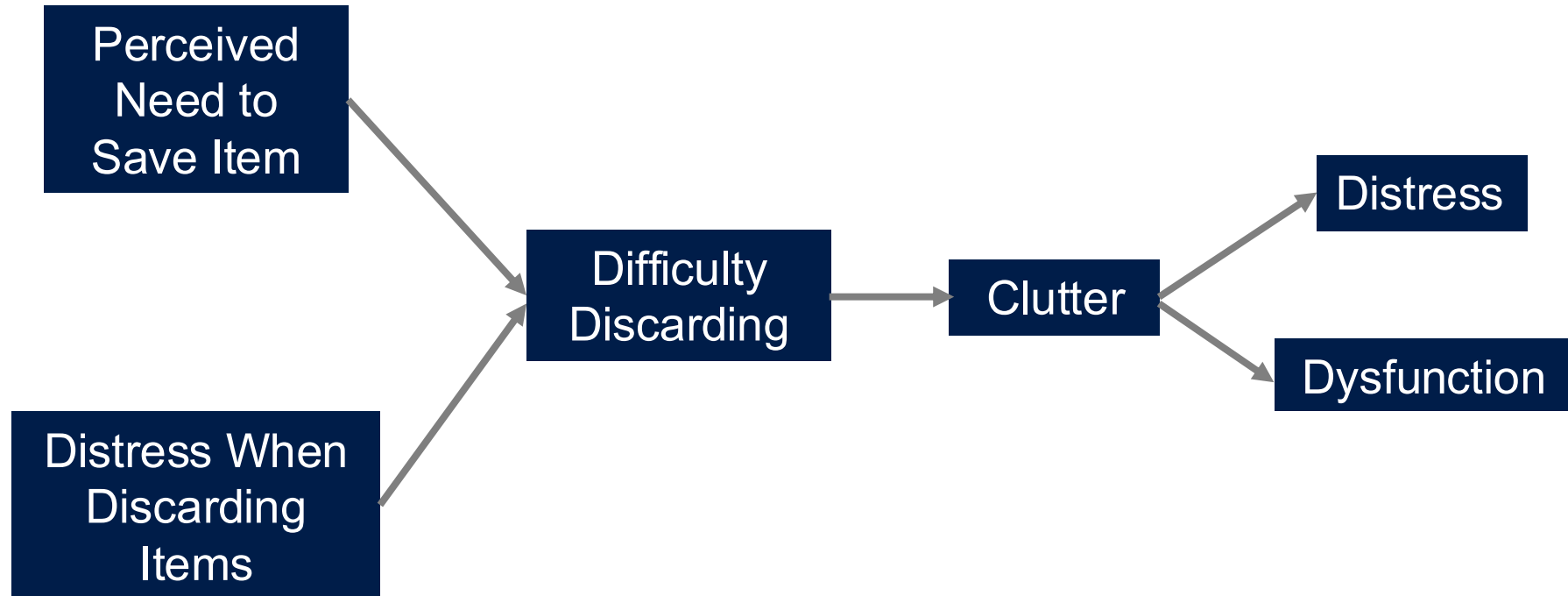
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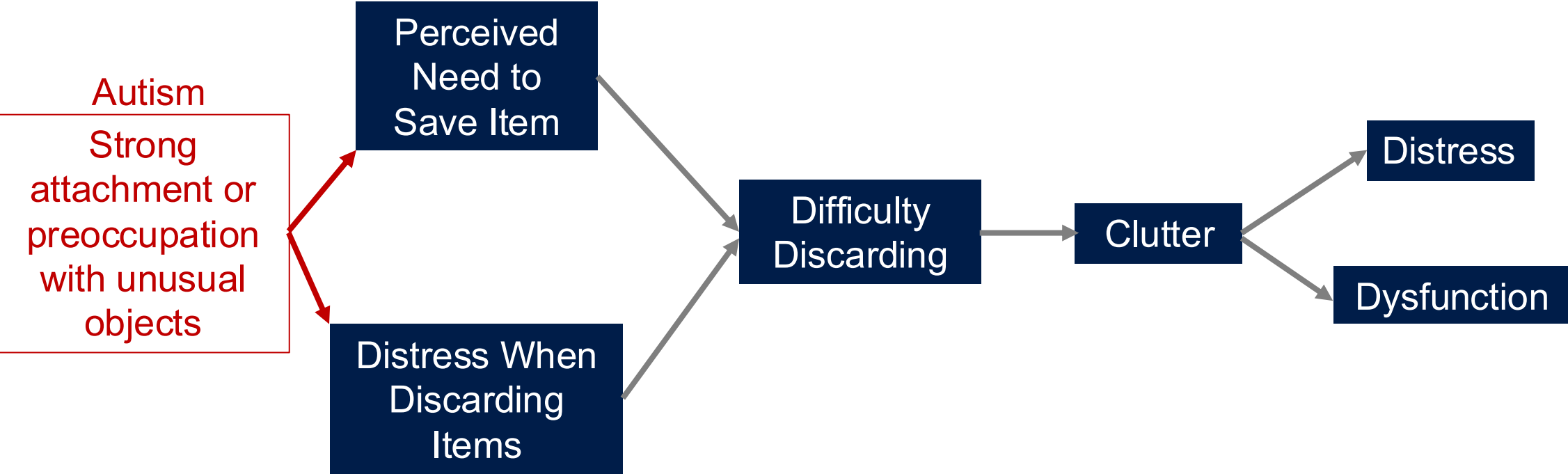


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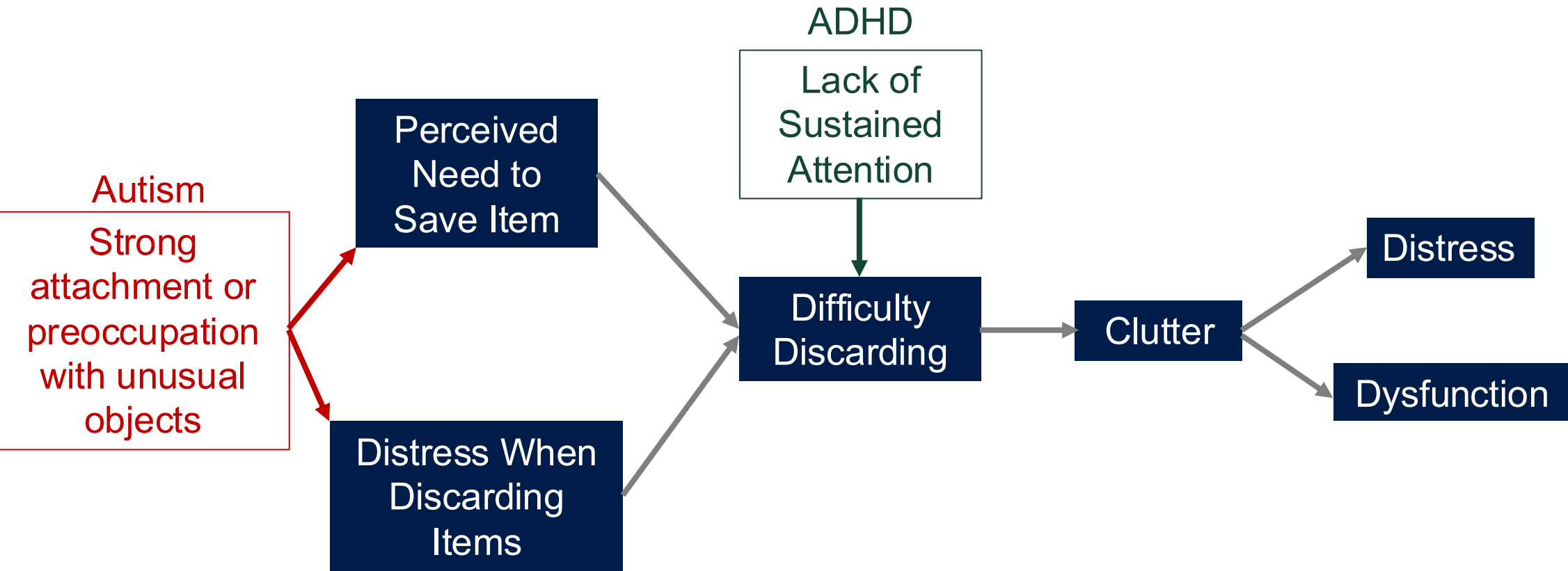


# Gap #1: Isolating Psychopathology Unique to Hoarding Disorder

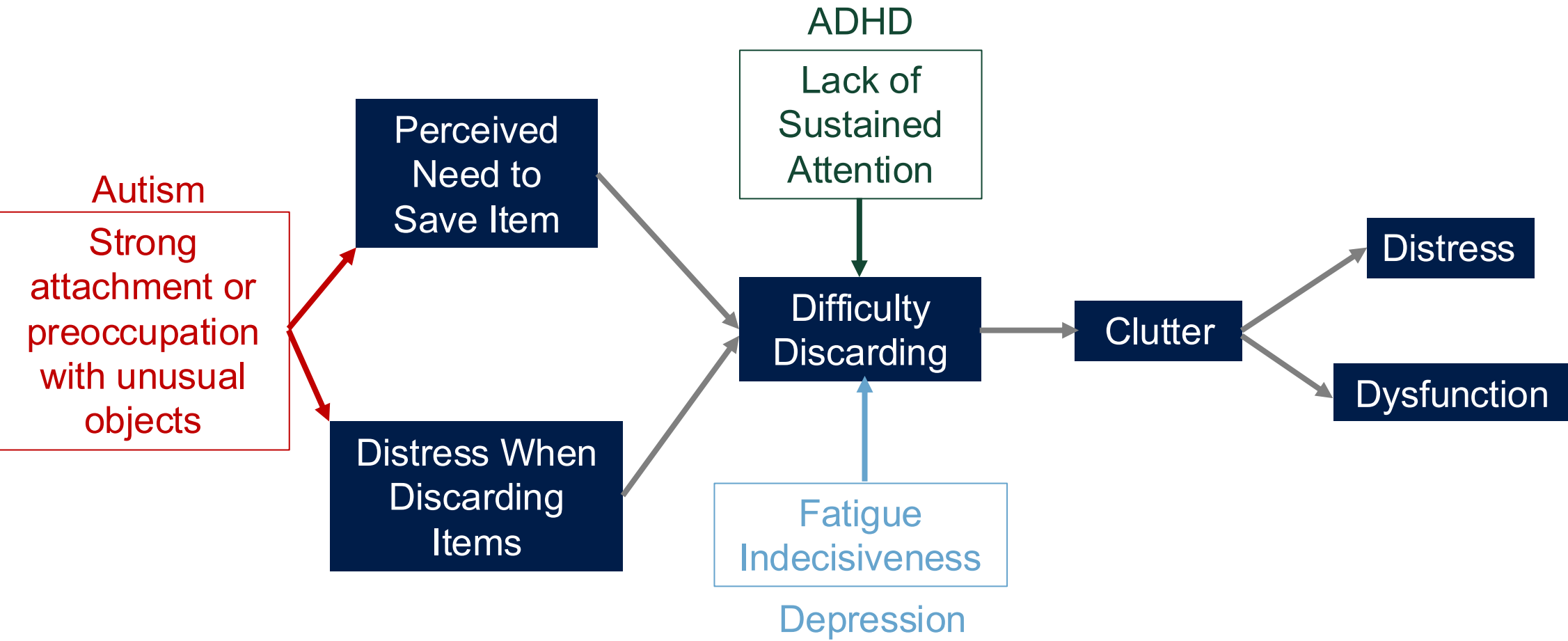




(Grassi et al., 2023; Kassel et al., 2024; Morein-Zamir et al., 2022; South et al., 2011)



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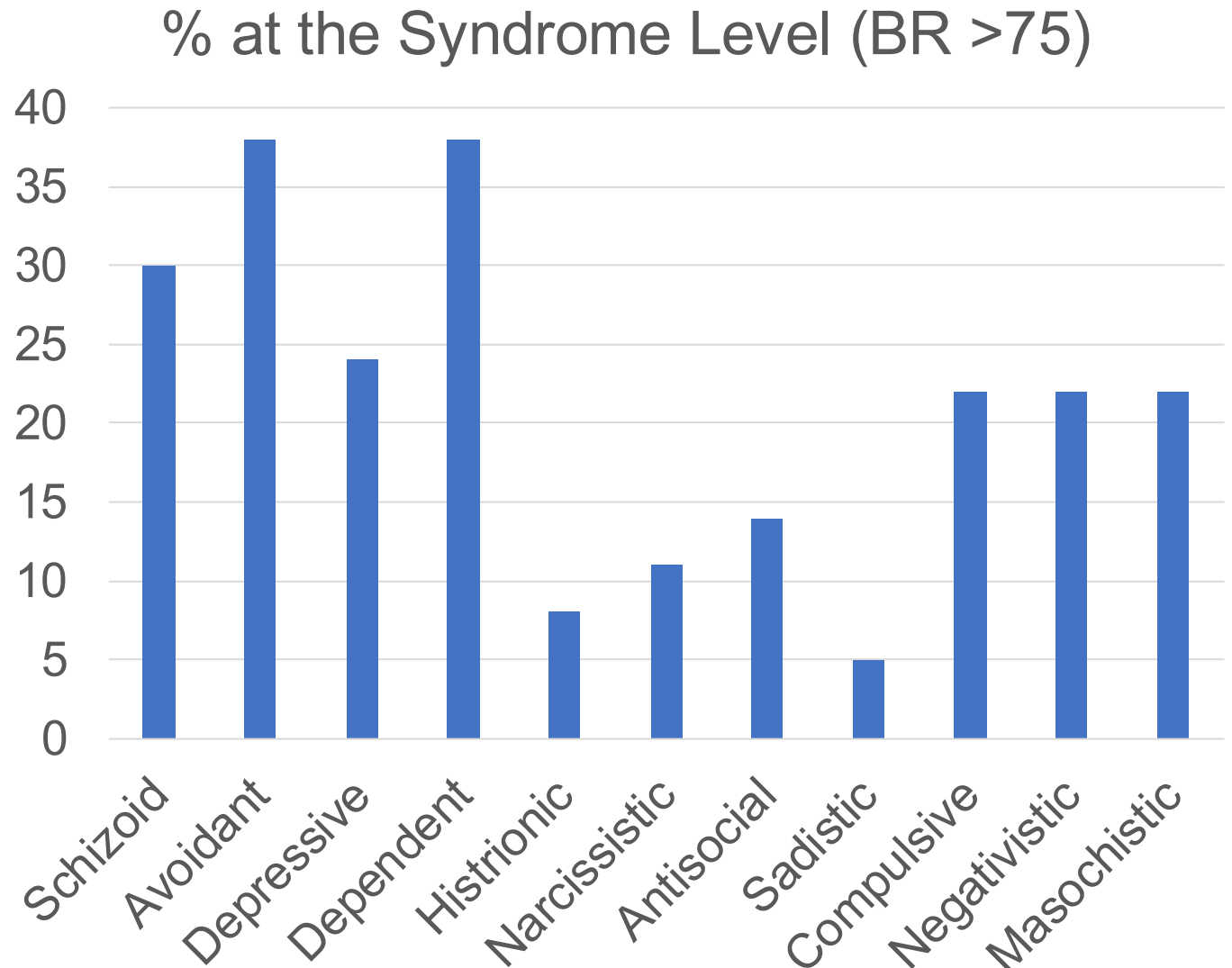
# Gap #1: Isolating Psychopathology Unique to Hoarding Disorder

## Study #1

- Sample: 72 treatment-seeking adults in San Diego who met DSM-5 criteria for hoarding disorder.
- *Mage* = 61 (*SD* = 11; range: 26 to 83)
- Completed the MCMI-III as part of baseline battery
- Raw scores converted into base rate scores that indicate the relative rarity of the response pattern. Base rate scores of 75 or greater were used to indicate the presence of a syndrome level of pathology.

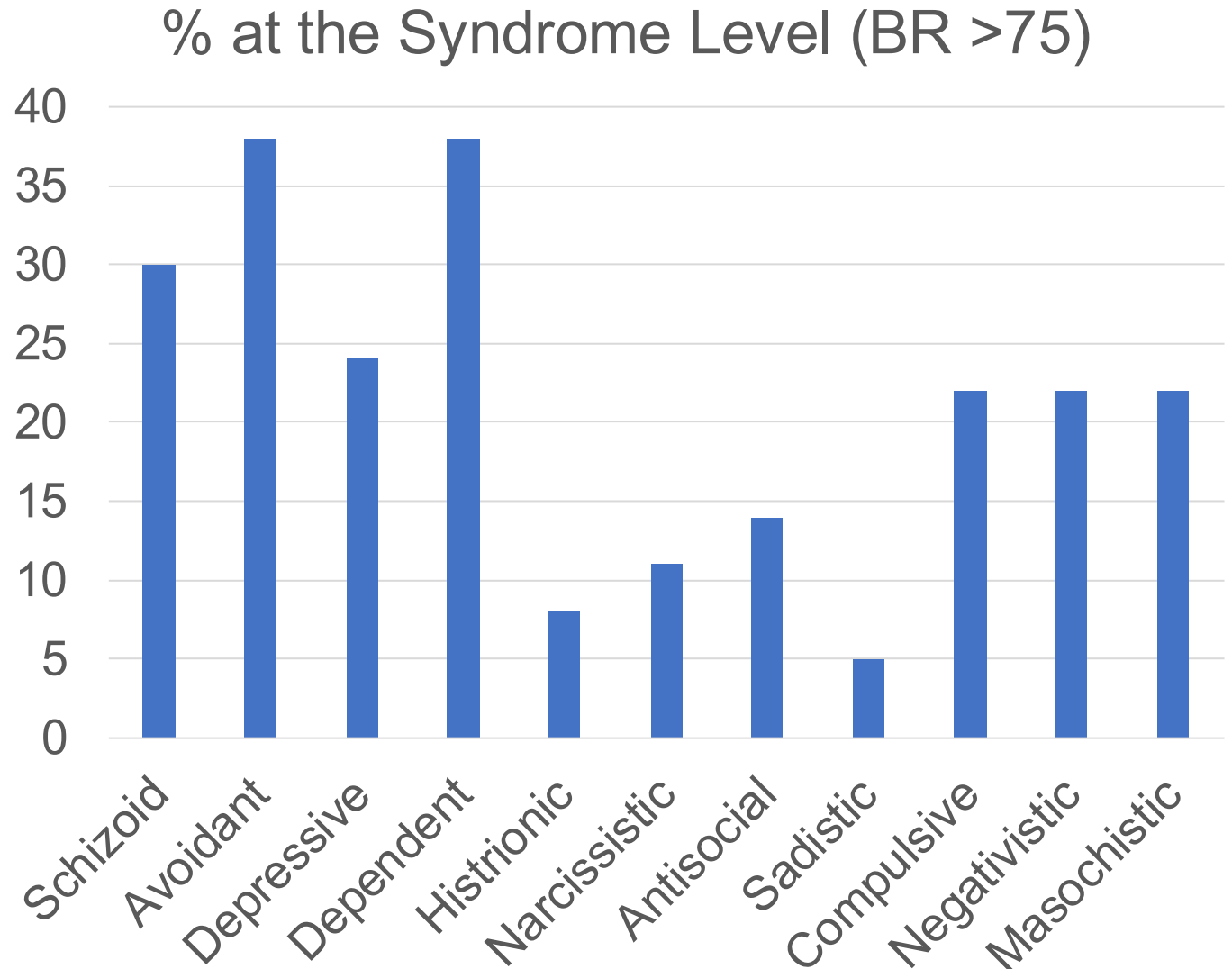
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# Gap #1: Isolating Psychopathology Unique to Hoarding Disorder

89% of participants had an elevated score on at least one Personality Disorder subscale



# Gap #1: Isolating Psychopathology Unique to Hoarding Disorder

## Study #2

- Sample: 42 treatment-seeking older adults in rural Mississippi who met DSM-5-TR criteria for hoarding disorder.
- *M*age = 69 (*SD* = 9.00; range: 53 to >85)
- Completed the IPIP-NEO-60 as part of baseline battery; scores compared against a normative sample of 910 gender-matched older adults (Johnson, 2005)
- Scores within a standard deviation from the normative mean of each factor or facet were classified as average, while scores falling above or below those cutoffs were considered high or low, respectively.

# Gap #1: Isolating Psychopathology Unique to Hoarding Disorder

- Sample: 42 treatment-seeking older adults in rural Mississippi who met DSM-5-TR criteria for hoarding disorder.
- $M_{age} = 69$  ( $SD = 9.00$ ; range: 53 to >85)
- Completed the IPIP-NEO-60 as part of baseline battery; scores compared against a normative sample of 910 gender-matched older adults (Johnson, 2005)
- Scores within a standard deviation from the normative mean of each factor or facet were classified as average, while scores falling above or below those cutoffs were considered high or low, respectively.

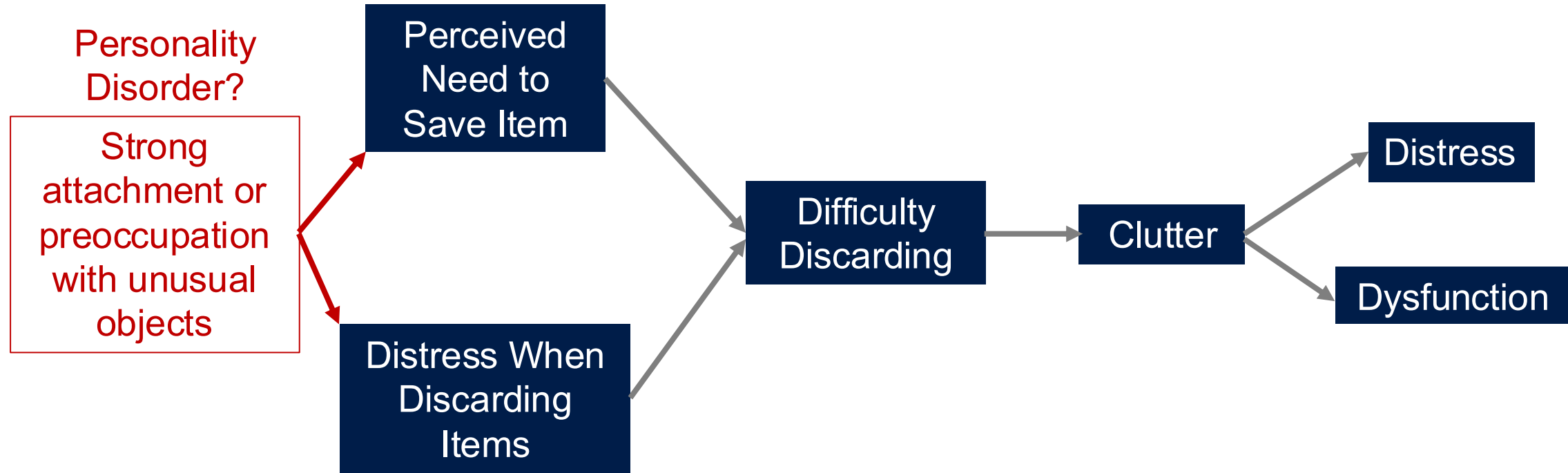
	% (n)		
	Low	Average	High
<b>Neuroticism</b>	16.67% (7)	69.05% (29)	14.29% (6)
Anxiety	4.76% (2)	57.14% (24)	38.10% (16)
Anger	23.81% (10)	57.14% (24)	19.05% (8)
Depression	7.14% (3)	76.19% (32)	16.67% (7)
<b>Self-Consciousness</b>	40.48% (17)	50.00% (21)	9.52% (4)
Immoderation	16.67% (7)	59.52% (25)	23.81% (10)
Vulnerability	28.57% (12)	50.00% (21)	21.43% (9)
<b>Extraversion</b>	4.76% (2)	54.76% (23)	40.48% (17)
Friendliness	16.67% (7)	42.86% (18)	40.48% (17)
Gregariousness	9.52% (4)	47.62% (20)	42.86% (18)
Assertiveness	11.90% (5)	54.76% (23)	33.33% (14)
Activity Level	19.05% (8)	38.10% (16)	42.86% (18)
Excitement-Seeking	11.90% (5)	50.00% (21)	38.10% (16)
Cheerfulness	7.14% (3)	71.43% (30)	21.43% (9)
<b>Openness</b>	16.67% (7)	69.05% (29)	14.29% (6)
Imagination	16.67% (7)	61.90% (26)	21.43% (9)
Artistic Interests	11.90% (5)	71.43% (30)	16.67% (7)
Emotionality	9.52% (4)	64.29% (27)	26.19% (11)
Adventurousness	9.52% (4)	80.95% (34)	9.52% (4)
Intellect	19.05% (8)	61.90% (26)	19.05% (8)
<b>Liberalism</b>	35.71% (15)	52.38% (22)	11.90% (5)
<b>Agreeableness</b>	2.38% (1)	45.24% (19)	52.38% (22)
Trust	4.76% (2)	57.14% (24)	38.10% (16)
<b>Morality</b>	9.52 (4)	90.48 (38)	0
<b>Altruism</b>	0	14.29 (6)	85.71 (36)
Cooperation	7.14% (3)	83.33% (35)	9.52% (4)
Modesty	2.38% (1)	71.43% (30)	26.19% (11)
<b>Sympathy</b>	7.14% (3)	40.48% (17)	52.38% (22)
<b>Conscientiousness</b>	30.95% (13)	59.52% (25)	9.52% (4)
Self-Efficacy	21.43% (9)	64.29% (27)	14.29% (6)
<b>Orderliness</b>	30.95% (13)	59.52% (25)	9.52 (4)
Dutifulness	14.29% (6)	85.71% (36)	0
<b>Achievement-Striving</b>	4.76% (2)	47.62% (20)	47.62% (20)
Self-Discipline	26.19% (11)	64.29 (27)	9.52 (4)
<b>Cautiousness</b>	30.95% (13)	52.38% (22)	16.67% (7)

# Gap #1: Isolating Psychopathology Unique to Hoarding Disorder

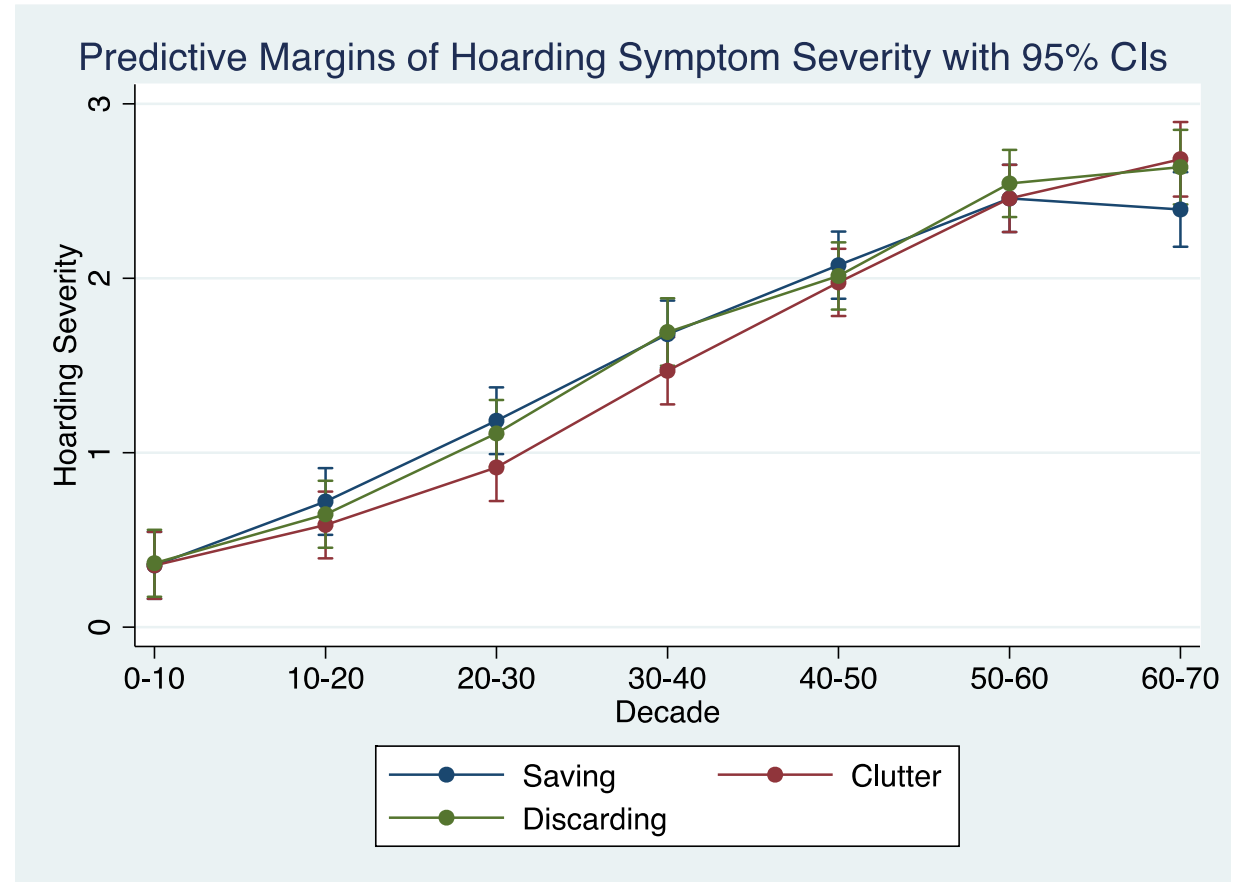
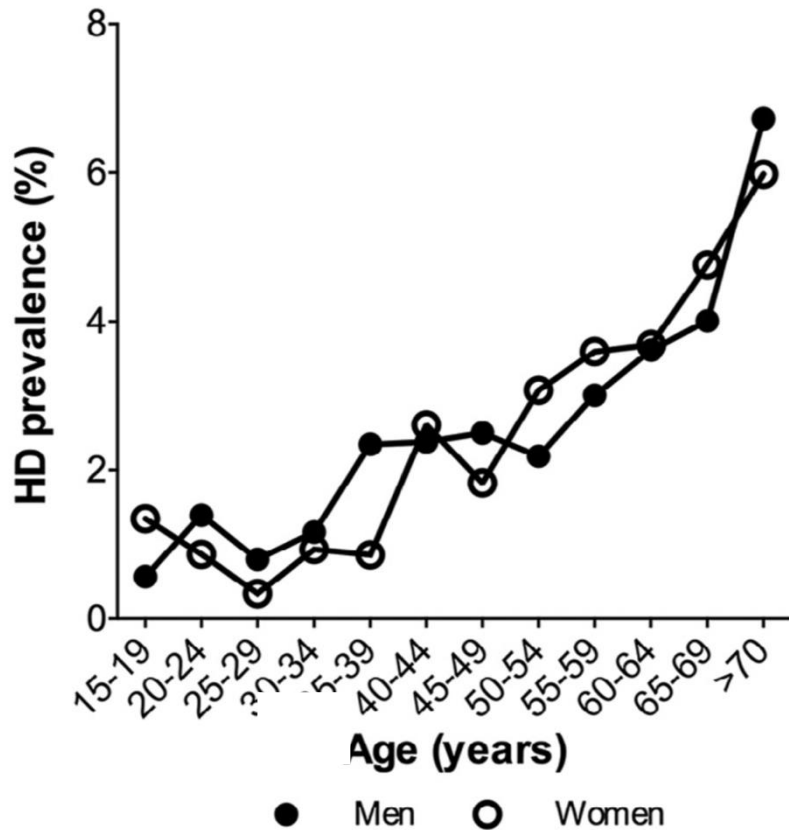
86% of the sample was high in Altruism

	% (n)		
	Low	Average	High
<b>Neuroticism</b>	16.67% (7)	69.05% (29)	14.29% (6)
Anxiety	4.76% (2)	57.14% (24)	38.10% (16)
Anger	23.81% (10)	57.14% (24)	19.05% (8)
Depression	7.14% (3)	76.19% (32)	16.67% (7)
<b>Self-Consciousness</b>	40.48% (17)	50.00% (21)	9.52% (4)
Immoderation	16.67% (7)	59.52% (25)	23.81% (10)
Vulnerability	28.57% (12)	50.00% (21)	21.43% (9)
<b>Extraversion</b>	4.76% (2)	54.76% (23)	40.48% (17)
<b>Friendliness</b>	16.67% (7)	42.86% (18)	40.48% (17)
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<b>Assertiveness</b>	11.90% (5)	54.76% (23)	33.33% (14)
<b>Activity Level</b>	19.05% (8)	38.10% (16)	42.86% (18)
<b>Excitement-Seeking</b>	11.90% (5)	50.00% (21)	38.10% (16)
Cheerfulness	7.14% (3)	71.43% (30)	21.43% (9)
<b>Openness</b>	16.67% (7)	69.05% (29)	14.29% (6)
Imagination	16.67% (7)	61.90% (26)	21.43% (9)
Artistic Interests	11.90% (5)	71.43% (30)	16.67% (7)
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Adventurousness	9.52% (4)	80.95% (34)	9.52% (4)
Intellect	19.05% (8)	61.90% (26)	19.05% (8)
<b>Liberalism</b>	35.71% (15)	52.38% (22)	11.90% (5)
<b>Agreeableness</b>	2.38% (1)	45.24% (19)	52.38% (22)
Trust	4.76% (2)	57.14% (24)	38.10% (16)
<b>Morality</b>	9.52 (4)	90.48 (38)	0
<b>Altruism</b>	0	14.29 (6)	85.71 (36)
Cooperation	7.14% (3)	85.55% (35)	9.52% (4)
Modesty	2.38% (1)	71.43% (30)	26.19% (11)
<b>Sympathy</b>	7.14% (3)	40.48% (17)	52.38% (22)
<b>Conscientiousness</b>	30.95% (13)	59.52% (25)	9.52% (4)
Self-Efficacy	21.43% (9)	64.29% (27)	14.29% (6)
<b>Orderliness</b>	30.95% (13)	59.52% (25)	9.52 (4)
Dutifulness	14.29% (6)	85.71% (36)	0
<b>Achievement-Striving</b>	4.76% (2)	47.62% (20)	47.62% (20)
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# Gap #1: Isolating Psychopathology Unique to Hoarding Disorder



# Gap #2: Why does hoarding increase in late life?



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## Study #1

- Sample: 122 treatment-seeking older adults in San Diego who met DSM-5 criteria for hoarding disorder.
- *Mage* = 63 (*SD* = 9.3; range: 29-85)
- Completed comprehensive baseline battery of functional and neuropsychiatric variables. Scores were corrected for age (and gender and education when available).
- The percentage of participants with scores in the impaired range was calculated using a definition of scores outside of one standard deviation (Strauss et al., 2006).

# Gap #2: Why does hoarding increase in late life?

- Sample: 122 treatment-seeking older adults in San Diego who met DSM-5 criteria for hoarding disorder.
- *Age* = 63 (*SD* = 9.3; range: 29-85)
- Completed comprehensive baseline battery of functional and neuropsychiatric variables. Scores were corrected for age (and gender and education when available).
- The percentage of participants with scores in the impaired range was calculated using a definition of scores outside of one standard deviation (Strauss et al., 2006).

Table 1 Descriptive statistics of psychiatric and behavior and daily functioning variables in 122 adults with HD

			Mean (SD)	% Above clinical cutoff
Mood	SI-R	Total	58.73 (12.31)	—
		Clutter	24.75 (7.00)	—
		Saving	14.63 (5.09)	—
		Difficulty discarding	19.34 (4.18)	—
		CIR	4.12 (1.75)	—
	HADS	Depression	8.28 (4.43)	48.33
		Anxiety	10.01 (4.20)	67.23
Behavior and daily functioning	FrSBc	Apathy	80.74 (10.01)	97.54
		Disinhibition	82.56 (14.38)	91.80
		Executive dysfunction	80.27 (11.29)	96.72
		Total	84.97 (10.94)	98.36
	ADL-H		31.45 (11.73)	—

CIR, Clutter Image Rating; HD, hoarding disorder; SI-R, Saving Inventory-Revised; HADS, Hospital Anxiety and Depression Scale; FrSBc, Frontal System Behavior Scale (age-, education-, and gender-matched T-score); ADL-H, Activities of Daily Living in Hoarding.

# Gap #2: Why does hoarding increase in late life?

Table 4 Associations among age and cognitive variables in 122 adults with HD and group differences co-varying for premorbid IQ (WRAT-4 word reading)

		$\beta$ (SE)	$t$	$p$
WCST-128	Total errors	0.09 (0.09)	1.05	0.298
D-KEFS	Letter fluency	0.01 (0.03)	0.09	0.927
verbal	Category	-0.02 (0.04)	-0.18	0.861
fluency	fluency			
	Category switching	0.04 (0.04)	0.45	0.651
<b>D-KEFS</b>	<b>Number-</b>	<b>0.04 (0.02)</b>	<b>2.01</b>	<b>0.047</b>
<b>Trail</b>	<b>Letter</b>			
<b>Making</b>	<b>Switching*</b>			
<b>D-KEFS</b>	<b>Total</b>	<b>-0.19 (0.03)</b>	<b>-2.09</b>	<b>0.039</b>
<b>Tower</b>	<b>achievement</b>			
D-KEFS	Inhibition	-0.03 (0.03)	-0.31	0.755
Color-Word	Inhibition/	-0.13 (0.03)	-1.40	0.163
Interference	switching			
<b>WAIS-IV</b>	<b>Letter-</b>	<b>-0.26 (0.03)</b>	<b>-2.95</b>	<b>0.004</b>
	<b>Number</b>			
	<b>Sequencing</b>			
	Coding	-0.17 (0.03)	-1.83	0.070
	Digit span	-0.14 (0.02)	-1.67	0.098
IGT	Net total	0.13 (0.11)	1.28	0.205
<b>UPSA</b>	<b>Total</b>	<b>-0.41 (0.06)</b>	<b>-3.98</b>	<b>&lt;0.001</b>

Table 3 Descriptive statistics of cognitive variables in 122 adults with HD

		Mean (SD)	% Impaired
WCST-128	Total errors	48.99 (9.18)	16.39
D-KEFS verbal	Letter fluency	10.95 (3.42)	13.11
fluency	Category fluency	11.37 (3.47)	7.38
	Category switching	11.02 (3.78)	13.11
D-KEFS Trail	Number-Letter	10.76 (2.83)	6.56
Making	Switching		
D-KEFS Tower	Total	10.83 (2.82)	6.56
	achievement		
D-KEFS	Inhibition	10.38 (3.25)	13.11
Color-Word	Inhibition/	10.63 (2.96)	8.20
Interference	switching		
WAIS-IV	Letter-Number	9.60 (2.73)	7.38
	Sequencing		
	Coding	9.80 (3.24)	11.48
	Digit span	10.26 (2.68)	6.81
IGT	Net Total	48.97 (10.60)	10.86
UPSA	Total	89.60 (6.17)	—

WCST-128, Wisconsin Card Sorting Test—128 items version (age-matched and education-matched T-scores); D-KEFS, Delis-Kaplan Executive Function System (age-matched scaled scores); IGT, Iowa Gambling Task (age-, education-, and gender-matched T-score); UPSA, UCSD Performance-Based Skills Assessment (raw scores).

# Gap #2: Why does hoarding increase in late life?

## Study #2

- Sample: 52 treatment-seeking older adults in rural Mississippi who met DSM-5-TR criteria for hoarding disorder.
- $M_{age} = 67$  ( $SD = 8.28$ ; range: 50 to >85)
- Completed PROMIS Cognitive Functioning and NIH Cognition Toolbox as part of in-home baseline battery Raw scores were converted into T scores adjusting for age, education, gender, and race/ethnicity for version 2 and age and education only for version 3.
- The percentage of participants with scores in the impaired range was calculated using a definition of scores outside of one standard deviation (Strauss et al., 2006).



# Gap #2: Why does hoarding increase in late life?

Table 1. Descriptive statistics for neurocognitive and hoarding variables for ( $N = 52$ ) older adults with hoarding disorder

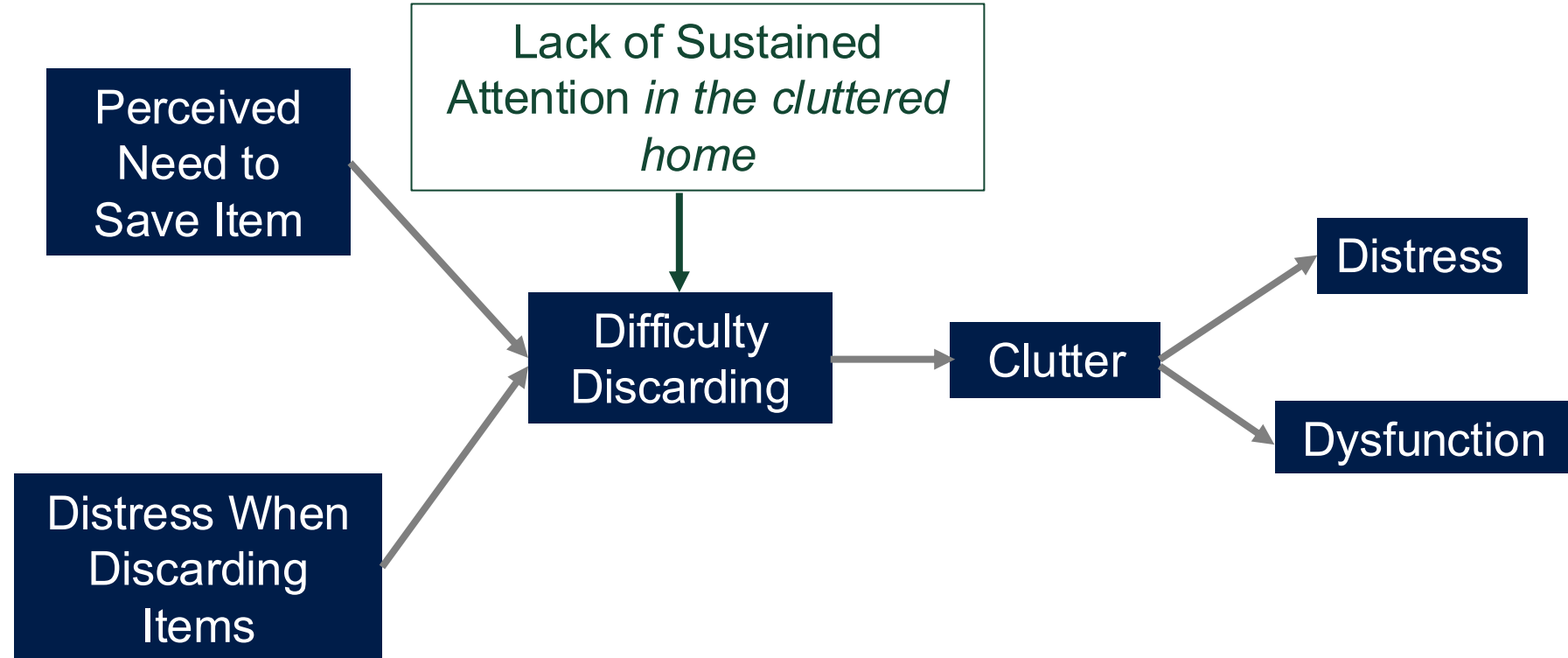
Domain/test name	$n$	$\chi^2(p)$	% Low	% Average	% High	$M$	$SD$	Range
<b>NIH Toolbox Cognition Battery</b>								
Total Composite	50	7.7 (0.02)	28.00	66.00	6.00	45.60	9.68	23–74
Fluid Composite	50	7.4 (0.02)	30.00	58.00	12.00	45.52	8.83	28–69
Crystallized Composite	51	3.0 (0.22)	23.53	66.67	9.80	48.02	10.19	19–67
Flanker Inhibitory Control and Attention	51	25.2 (<0.001)	41.18	52.94	5.88	42.65	8.63	20–62
Dimensional Change Card Sort	51	9.2 (0.01)	31.37	52.94	15.69	46.06	10.48	20–77
List Sorting Working Memory	51	5.4 (0.07)	11.76	82.35	5.88	49.59	8.29	34–77
Picture Sequence Memory	51	3.2 (0.20)	19.61	56.86	23.53	49.98	10.80	29–81
Pattern Comparison Processing Speed	51	10.0 (0.007)	31.37	60.78	7.84	44.76	11.15	19–81
Picture Vocabulary	52	0.4 (0.82)	19.23	65.38	15.38	48.83	9.80	21–67
Oral Reading Recognition	51	3.0 (0.22)	23.53	66.67	9.80	47.59	10.14	24–72
Face Name Associative Memory Delay	26	1.0 (0.61)	23.08	61.54	15.38	47.65	9.87	26–68
Rey Auditory Verbal Learning	25	0.07 (0.70)	12.00	76.00	12.00	50.28	10.57	20–67
Rey Auditory Verbal Learning Delay	24	16.6 (<0.001)	4.17	50.00	45.83	57.50	8.49	35–76
Oral Symbol Digit	25	10.9 (0.004)	40.00	52.00	8.00	44.24	8.37	30–62
Visual Reasoning	25	0.3 (0.86)	20.00	64.00	16.00	48.32	10.09	26–65
PROMIS Cognitive Functioning	26	7.1 (0.03)	30.77	69.23	0.00	44.55	5.69	35.1–53.7

# Gap #2: Why does hoarding increase in late life?

Table 1. Descriptive statistics for neurocognitive and hoarding variables for ( $N = 52$ ) older adults with hoarding disorder

Domain/test name	$n$	$\chi^2(p)$	% Low	% Average	% High	$M$	$SD$	Range
<b>NIH Toolbox Cognition Battery</b>								
Total Composite	50	7.7 (0.02)	28.00	66.00	6.00	45.60	9.68	23–74
Fluid Composite	50	7.4 (0.02)	30.00	58.00	12.00	45.52	8.83	28–69
Crystallized Composite	51	3.0 (0.22)	23.53	66.67	9.80	48.02	10.19	19–67
Flanker Inhibitory Control and Attention	51	25.2 (<0.001)	41.18	52.94	5.88	42.65	8.63	20–62
Dimensional Change Card Sort	51	9.2 (0.01)	31.37	52.94	15.69	46.06	10.48	20–77
List Sorting Working Memory	51	5.4 (0.07)	11.76	82.35	5.88	49.59	8.29	34–77
Picture Sequence Memory	51	3.2 (0.20)	19.61	56.86	23.53	49.98	10.80	29–81
Pattern Comparison Processing Speed	51	10.0 (0.007)	31.37	60.78	7.84	44.76	11.15	19–81
Picture Vocabulary	52	0.4 (0.82)	19.23	65.38	15.38	48.83	9.80	21–67
Oral Reading Recognition	51	3.0 (0.22)	23.53	66.67	9.80	47.59	10.14	24–72
Face Name Associative Memory Delay	26	1.0 (0.61)	23.08	61.54	15.38	47.65	9.87	26–68
Rey Auditory Verbal Learning	25	0.07 (0.70)	12.00	76.00	12.00	50.28	10.57	20–67
Rey Auditory Verbal Learning Delay	24	16.6 (<0.001)	4.17	50.00	45.83	57.50	8.49	35–76
Oral Symbol Digit	25	10.9 (0.004)	40.00	52.00	8.00	44.24	8.37	30–62
Visual Reasoning	25	0.3 (0.86)	20.00	64.00	16.00	48.32	10.09	26–65
PROMIS Cognitive Functioning	26	7.1 (0.03)	30.77	69.23	0.00	44.55	5.69	35.1–53.7

# Gap #2: Why does hoarding increase in late life?



# Gap #2: Why does hoarding increase in late life?

## Study #3

- Sample: 49 treatment-seeking adults in San Diego who met DSM-5 criteria for hoarding disorder.
- *Mage* = 61 (*SD* = 11; range: 26 to 83)
- Completed a 15-minute sorting task using items brought from home.
  - Provided distress ratings (SUDS 0-100) every 60 seconds
  - Identified current experienced emotion before and after task



# Gap #2: Why does hoarding increase in late life

**Table 1.** Comparison of participants who did and did not report feeling fear prior to sorting task.

		Mean (SD)		<i>t</i>	<i>p</i>
		Reported fear-related emotion ( <i>n</i> = 21)	Reported something other than fear ( <i>n</i> = 28)		
SUDS	<b>Peak</b>	<b>59.19 (25.74)</b>	<b>36.43 (19.39)</b>	<b>3.53</b>	<b>.001</b>
	<b>Final</b>	<b>34.24 (20.53)</b>	<b>24.57 (18.15)</b>	<b>1.74</b>	<b>.044</b>
	<b>WSH</b>	<b>24.95 (24.56)</b>	<b>12.39 (15.21)</b>	<b>2.20</b>	<b>.016</b>
Behavioral	# of Items Sorted	54.95 (27.83)	40.86 (36.93)	1.46	.075
	<b>% of Items Discarded</b>	<b>41.30 (16.76)</b>	<b>57.45 (19.35)</b>	<b>-3.06</b>	<b>.002</b>
	Speed of Sorting	5.39 (2.54)	5.69 (3.32)	-.35	.364

SUDS = Subjective Units of Distress; WSH = Within-Session Habituation (change from peak SUDS to final SUDS). Speed of sorting was calculated as items sorted per minute.

## Gap #2: Why does hoarding increase in late life

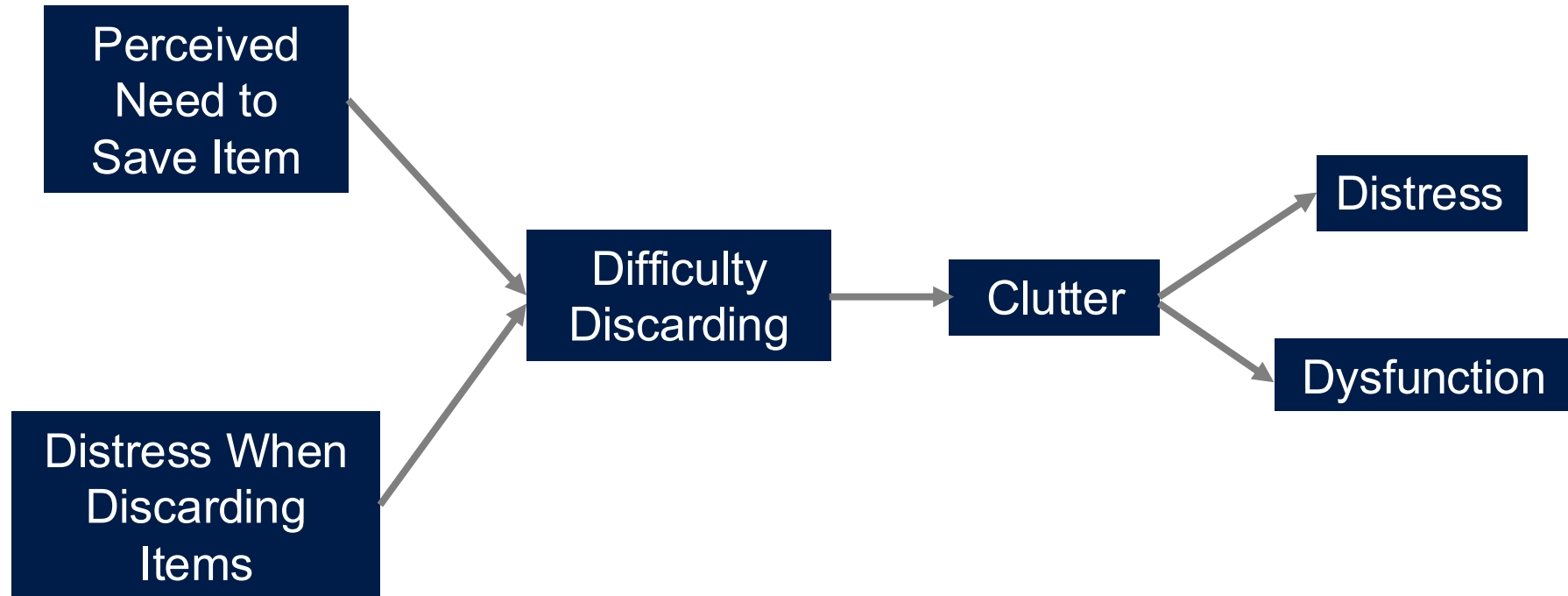
Older adults reported lower levels of overall distress during the task and were less likely to report a fear-based emotion (all  $ps < .05$ ).

**Table 1.** Comparison of participants who did and did not report feeling fear prior to sorting task.

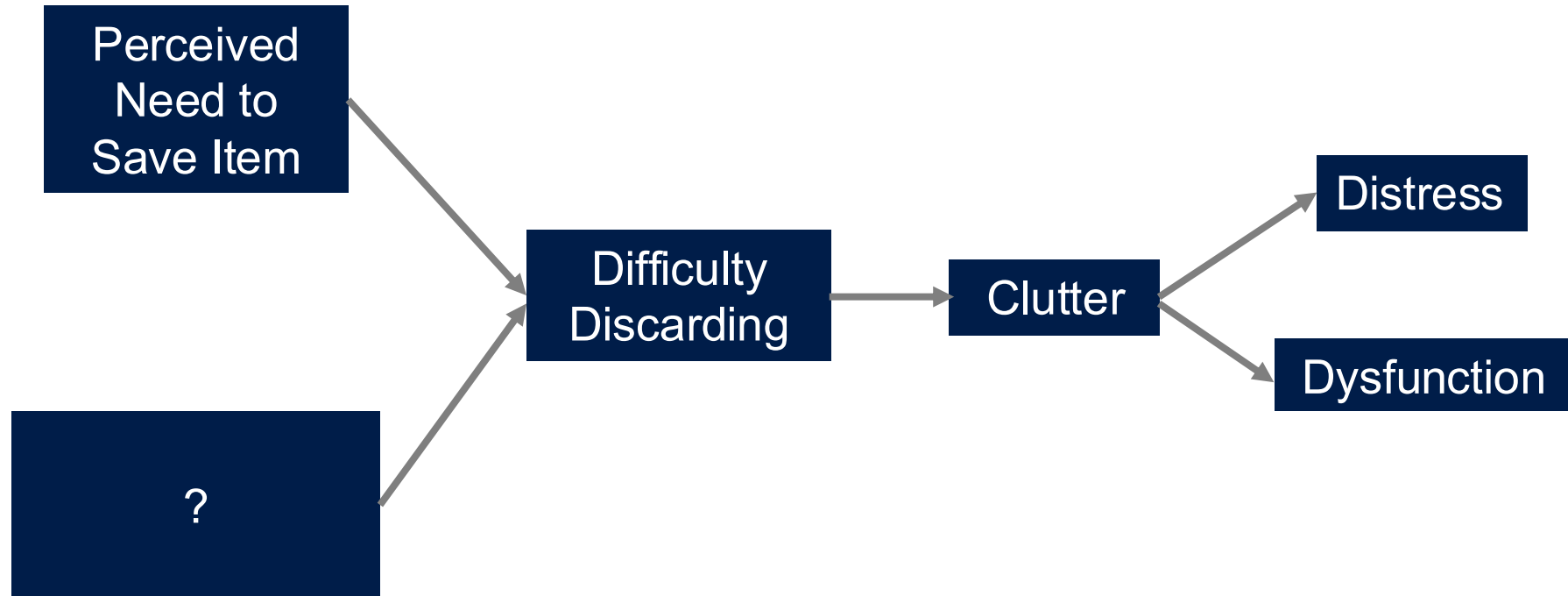
		Mean (SD)			
		Reported fear-related emotion ( $n = 21$ )	Reported something other than fear ( $n = 28$ )	$t$	$p$
SUDS	<b>Peak</b>	<b>59.19 (25.74)</b>	<b>36.43 (19.39)</b>	<b>3.53</b>	<b>.001</b>
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# Gap #2: Why does hoarding increase in late life



# Gap #2: Why does hoarding increase in late life



RECLAIM: Reduce Clutter and  
Increase Meaning in your life!



Cognitive  
Restructuring



Motivational  
Interviewing

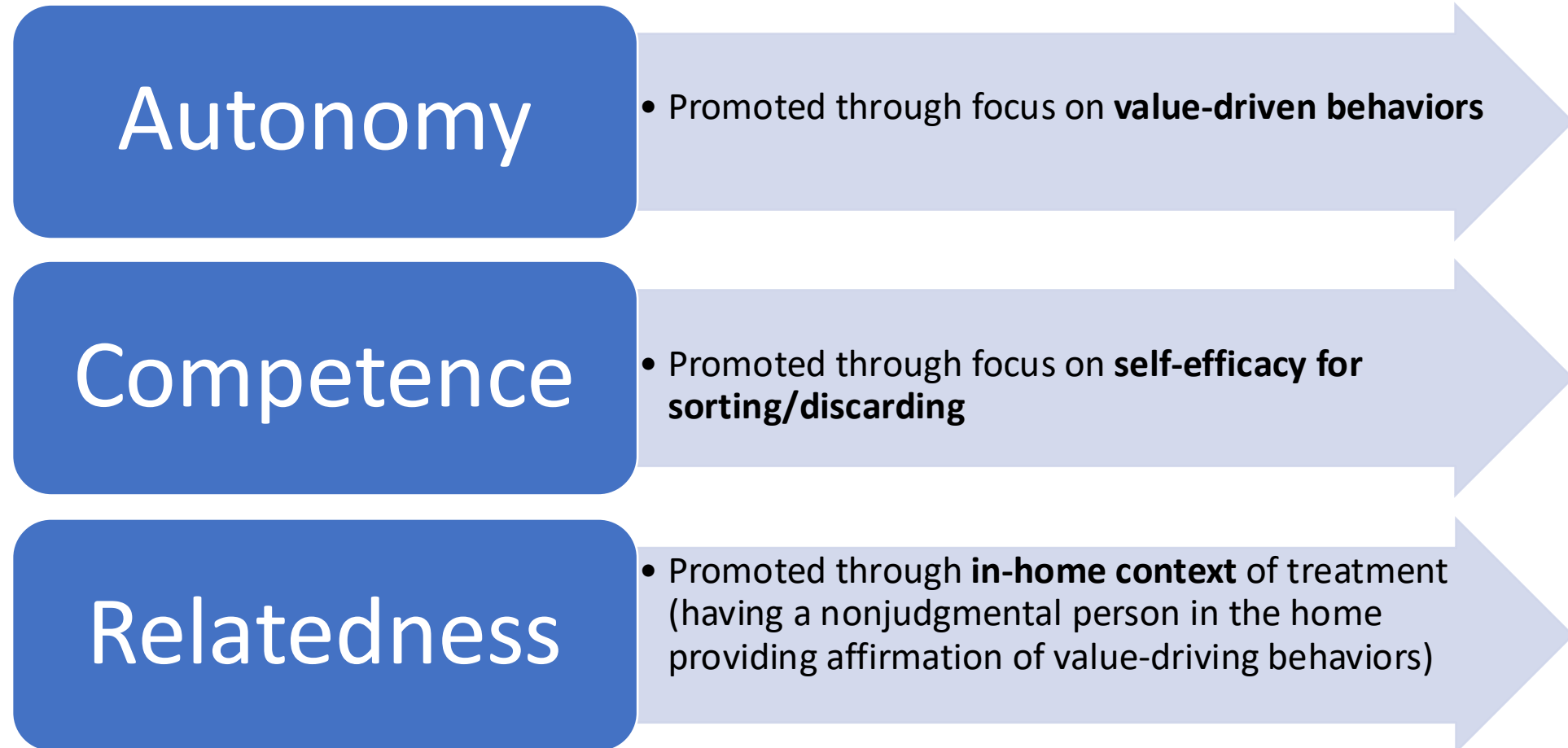


Current treatments = in the clinic, decreasing negative affect

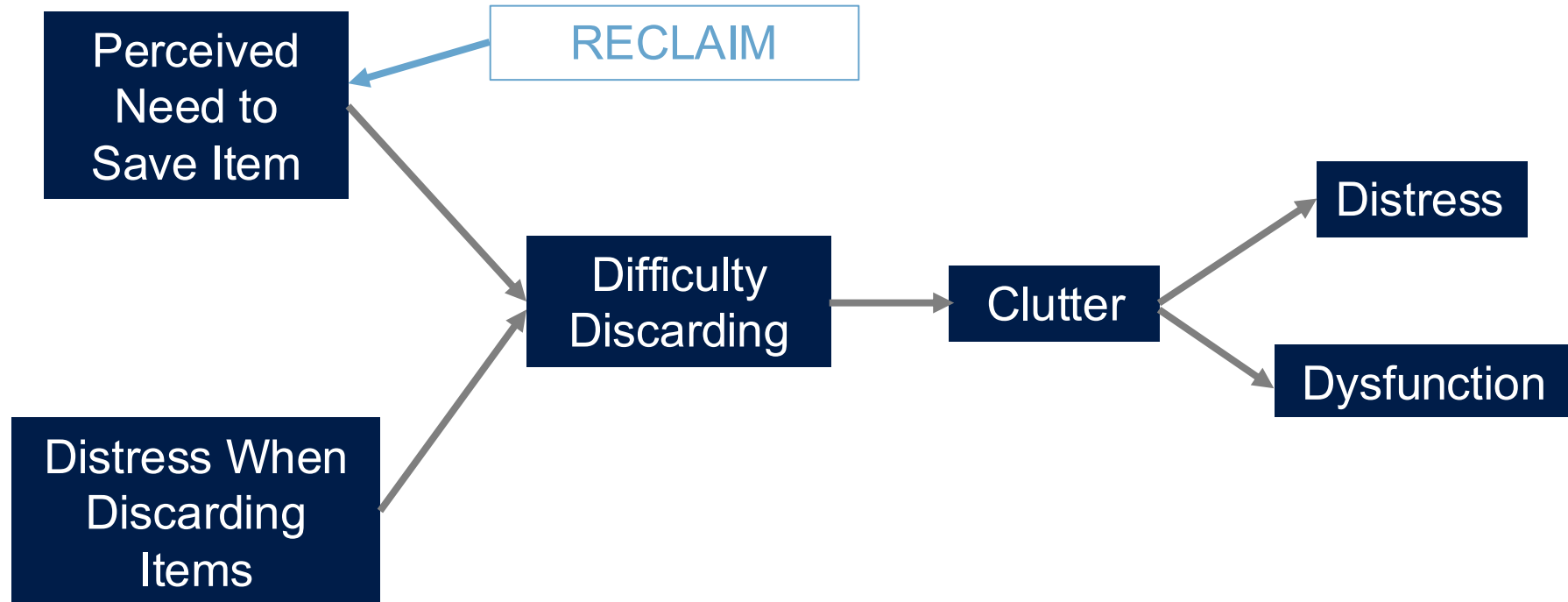


RECLAIM = in the home, increasing positive affect

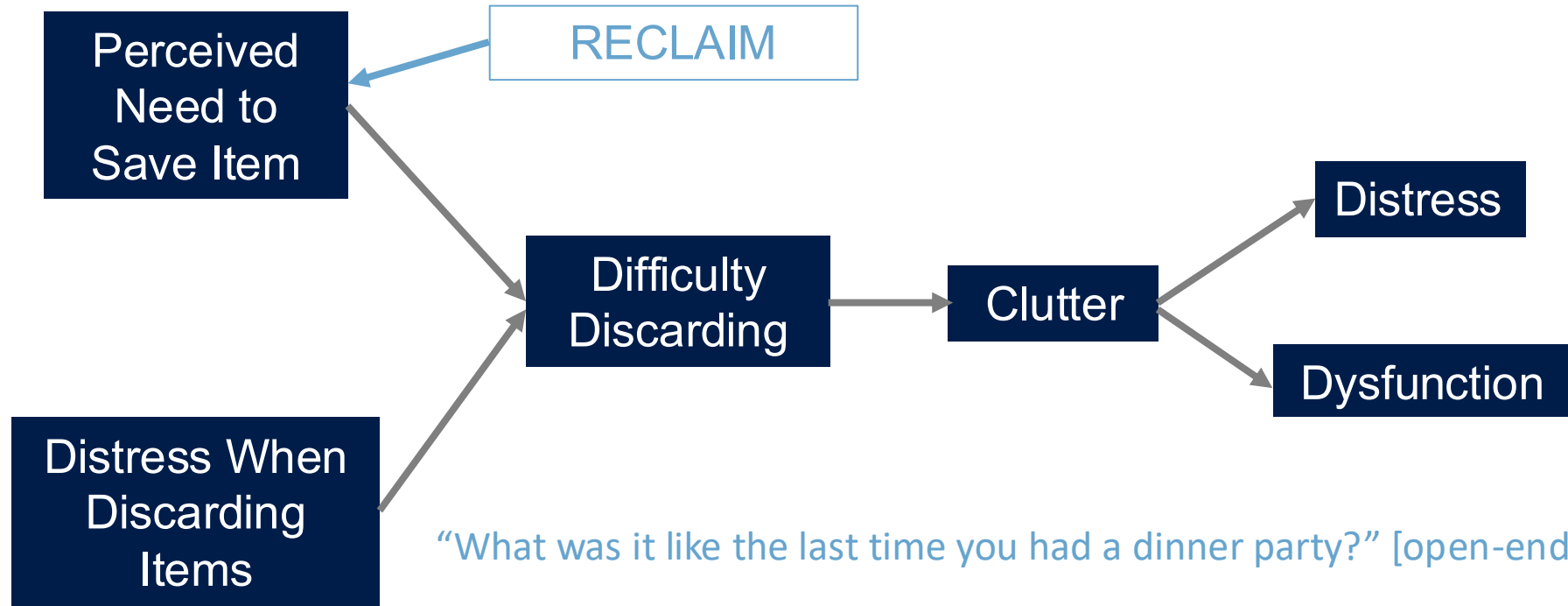
# Theoretical Background of RECLAIM: Self-Determination Theory



# Treatment Targets



# Treatment Targets

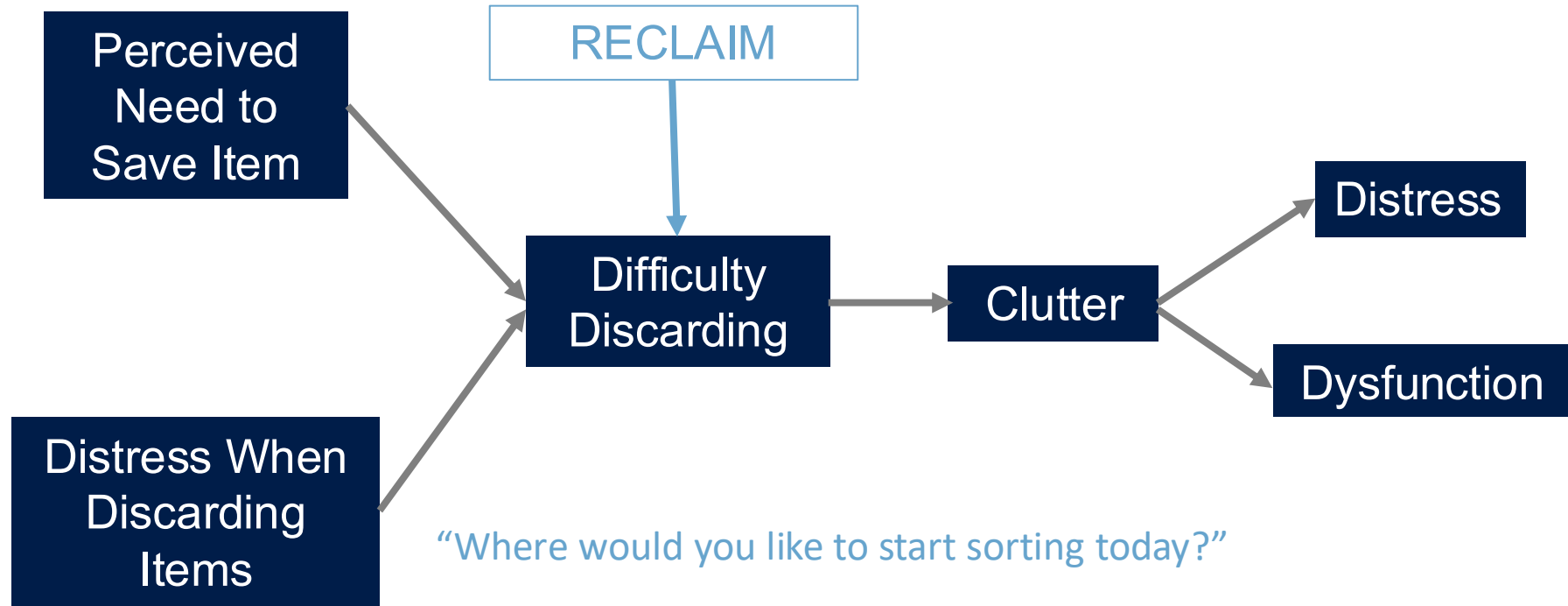


“What was it like the last time you had a dinner party?” [open-ended question]

“You’ve already started to think about the reasons you want to reclaim this part of your home” [affirmation]

“You miss using your kitchen to make food for your friends.” [reflection]

# Treatment Targets



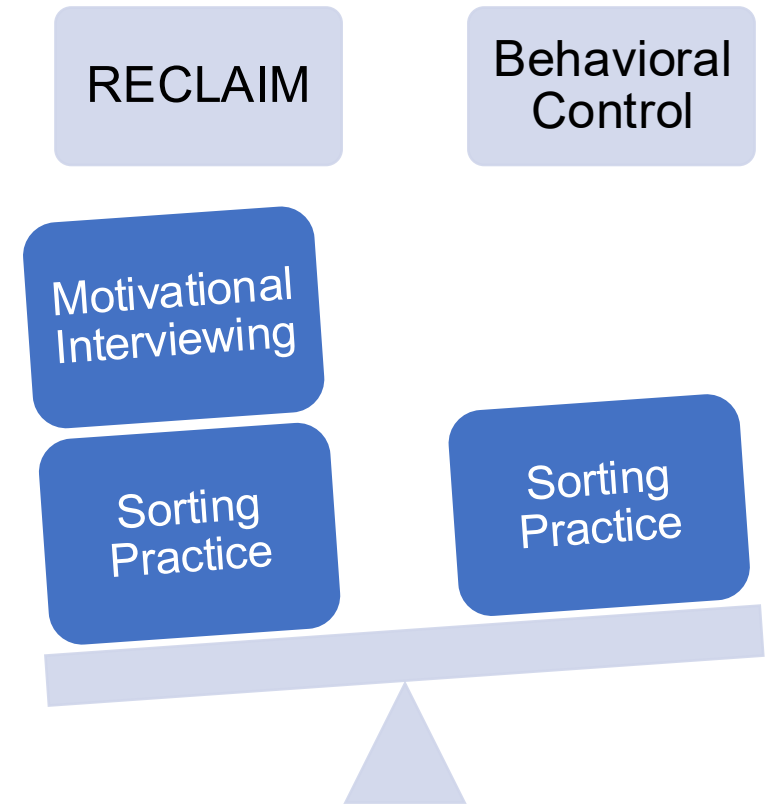
“Where would you like to start sorting today?”

“This item is bringing up a lot of emotions; what would you think about setting it aside for now and continuing to sort through the other papers in the desk?”

# Aims

**Aim 1. Determine the feasibility of and acceptability of RECLAIM.**

**Aim 2. Establish initial evidence of target engagement.**



# Methods

# Methods

---

Randomized clinical trial: 16 sessions of MI + sorting practice (RECLAIM) vs. sorting practice only (SP)

---

Initial screening by phone; all assessment and treatment done in the home

---

Exclusion criteria: active psychosis, drug use, or acute suicidal ideation.

---

Inclusion criteria: aged 60+, live within a one-hour driving distance of MSU campus; meet diagnostic criteria for hoarding disorder

---

Recruited between June 2022 and February 2025

---

25% of all sessions blindly reviewed for adherence, competency, and MI skill use

---

Study clinicians advanced clinical psychology doctoral students



# Recruitment

- Thirteen presentations provided to the community between February 2020 and February 2025 ( $N = 277$ )
- Nutrition sites and senior enrichment centers managed by the local Area Agency on Aging, senior housing complexes, and churches.

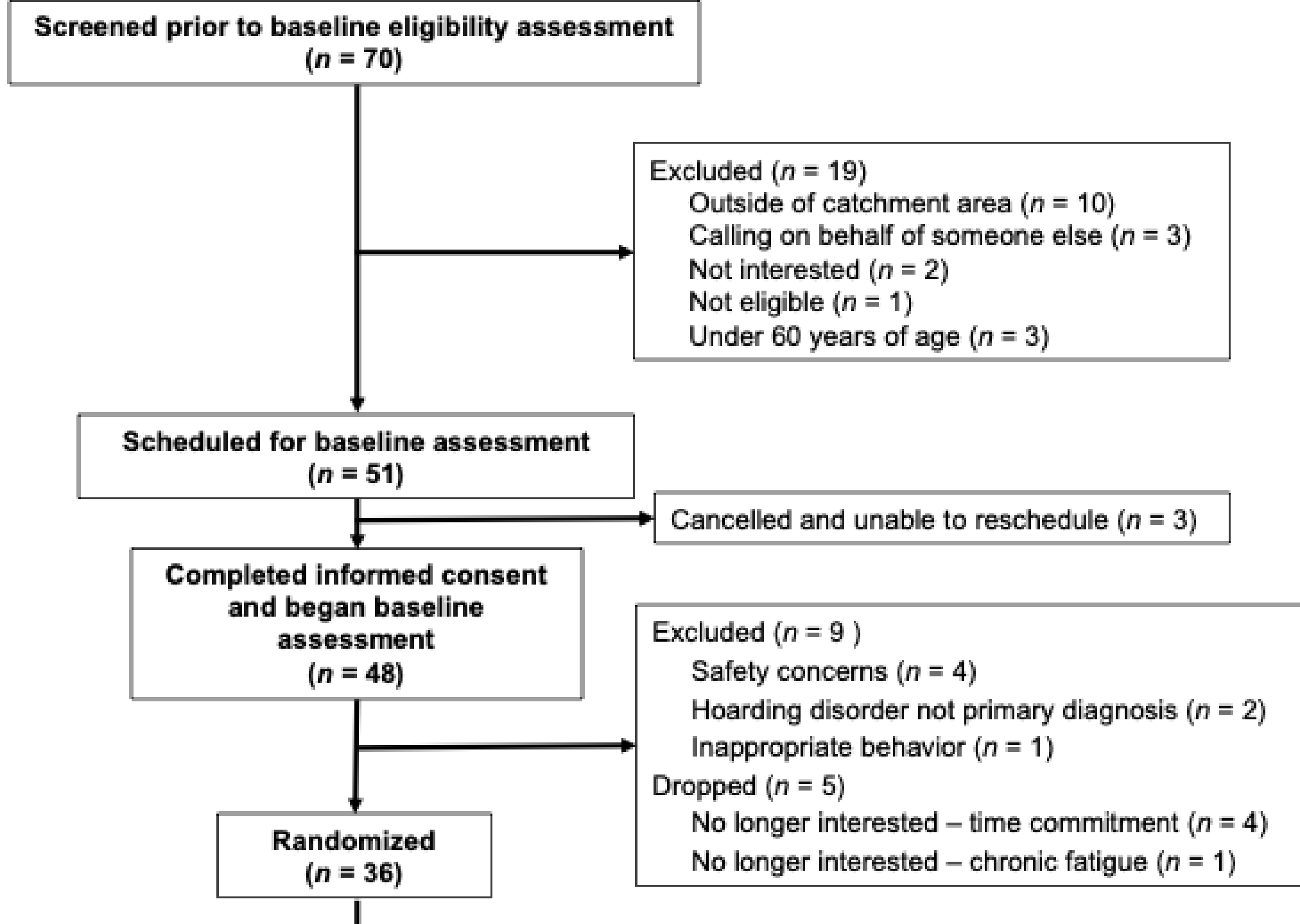


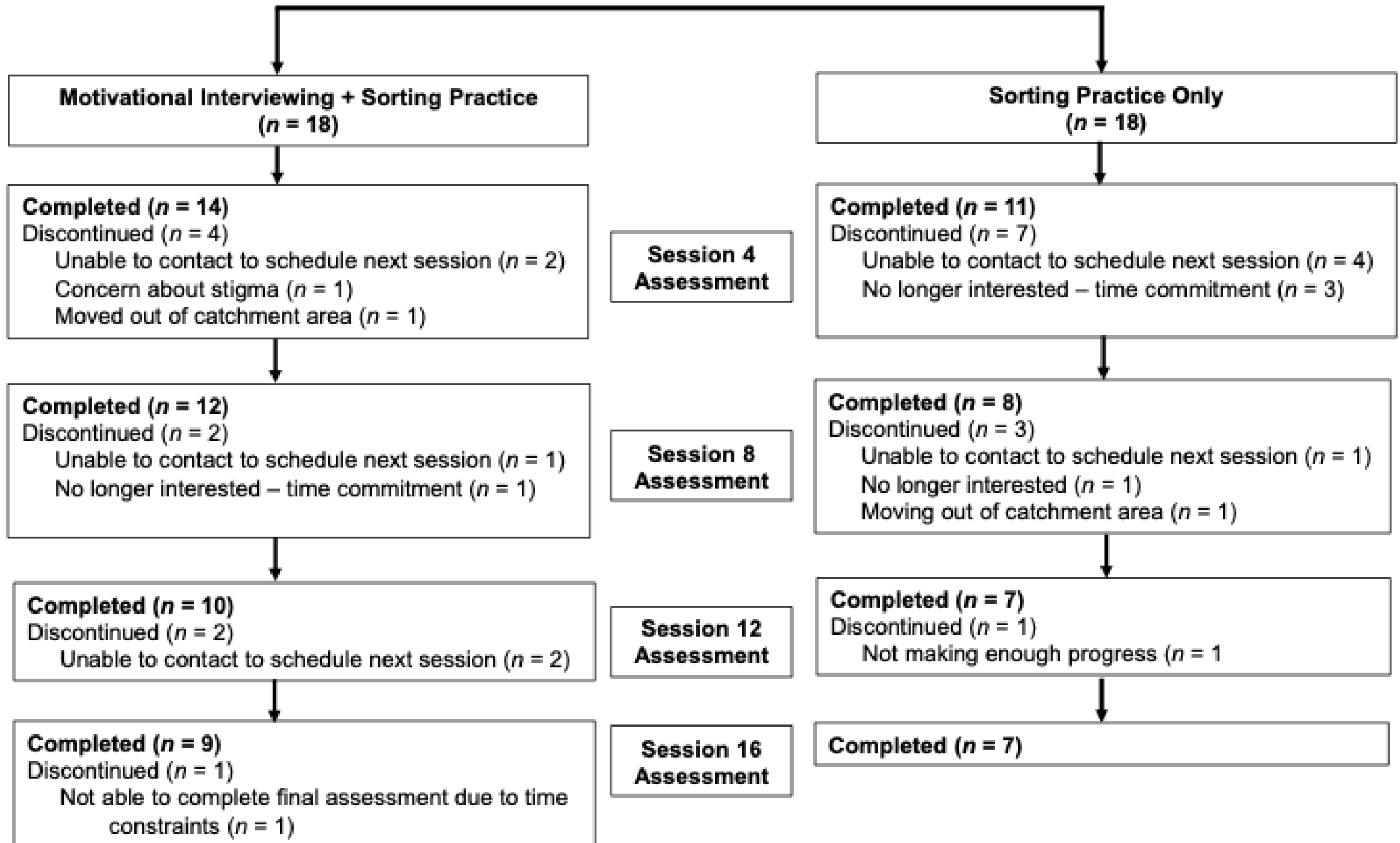
# Methods – Assessment Schedule

## Schedule

Date and Time	Appointment
	Baseline Assessment
	Session 1
	Session 2
	Session 3
	Session 4
	Month 1 Assessment
	Session 5
	Session 6
	Session 7
	Session 8
	Month 2 Assessment
	Session 8
	Session 10
	Session 11
	Session 12
	Month 3 Assessment
	Session 13
	Session 14
	Session 15
	Session 16
	Month 4 Assessment

Construct	Variable	Unit of Analysis	Assessment Schedule		
Motivation for Change	Frequency/Duration of Sorting	Behavior	Weekly		
	University of Rhode Island Change Assessment Questionnaire	Self-report	Monthly		
	Apathy Evaluation Scale	Self-report	Monthly		
Feasibility and Acceptability	Attrition	Behavior	N/A		
	Treatment Acceptability/Adherence Scale	Self-report	Session 1		
Hoarding Severity	Saving Inventory-Revised	Self-report	Monthly		
	Clutter Image Rating	Clinician-report	Monthly		
	Behavioral Approach Task	Paradigm	Monthly		
Suicidal Ideation	Columbia-Suicide Severity Rating Scale	Self-report	Monthly		
<b>NIH Toolbox Emotion Battery</b>					
Negative Affect	Anger (Affect; Hostility; Physical Aggression)	Self-report	Monthly		
	Fear (Affect; Somatic Arousal)				
	Sadness				
Psychological Well-Being	Positive Affect				
	General Life Satisfaction				
	Meaning and Purpose				
Stress and Self-Efficacy	Perceived Stress				
	Self-Efficacy				
Social Relationships	Emotional Support				
	Instrumental Support				
	Loneliness				
	Friendship				
	Perceived Hostility				
	Perceived Rejection				
<b>PROMIS-57 Profile v2.1</b>					
Daily Function	Physical Function	Self-report	Monthly		
	Ability to Participate in Social Roles and Activities				
Psychiatric Symptoms	Anxiety				
	Depression				
Sleep and Fatigue	Fatigue				
	Sleep Disturbance				
Pain	Pain Interference				
	Pain Intensity				
<b>NIH Toolbox Cognition Battery</b>					
Attention & Executive Functioning	Flanker Inhibitory Control and Attention Test			Paradigm	Baseline
	Dimensional Change Card Sort Test				
Episodic Memory	Picture Sequence				
Working Memory	List Sorting				
Language	Picture Vocabulary				
	Oral Reading Recognition				
Processing Speed	Pattern Comparison				





# Results

# Baseline Demographics

- Average age: 70, range 60-86
- 58% Women; 42% Men
- 17% Black; 77% White; 6% White/American Indian
- 53% currently married
- 72%  $\geq$  4 year college degree
- 44% retired; 39% employed; 6% unemployed; 11% on disability
- 17% Veteran
- 17% comorbid major depressive disorder
- Average distance from campus: 25 miles, range 9-68

# Adherence/Competency

	<i>n</i>	Adherence	Competency	MI Competency	Condition Guess
MI + SP (RECLAIM)	41	7.95	7.76	4.98	55% MI + SP 45% SP
SP only	26	7.85	8.00	2.42	100% SP

# Adherence/Competency

	<i>n</i>	Adherence	Competency	MI Competency	Condition Guess
MI + SP (RECLAIM)	41	7.95	7.76	4.98	55% MI + SP 45% SP
SP only	26	7.85	8.00	2.42	100% SP
				$t(65) = 6.62,$ $p < .0001$	$\chi^2 = 21.45,$ $p < .001$

# Adherence/Competency: Use of Specific Skills in Session

	<i>n</i>	Asking Open-Ended Questions	Affirmation	Reflective Listening	Summarizing
MI + SP (RECLAIM)	41	86%	81%	81%	49%
SP only	26	46%	54%	31%	12%

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	<i>n</i>	Asking Open-Ended Questions	Affirmation	Reflective Listening	Summarizing
MI + SP (RECLAIM)	41	86%	81%	81%	49%
SP only	26	46%	54%	31%	12%

$$\chi^2 = 12.53$$

$$p < .001$$

$$\chi^2 = 5.97$$

$$p = .015$$

$$\chi^2 = 17.68$$

$$p < .001$$

$$\chi^2 = 12.53$$

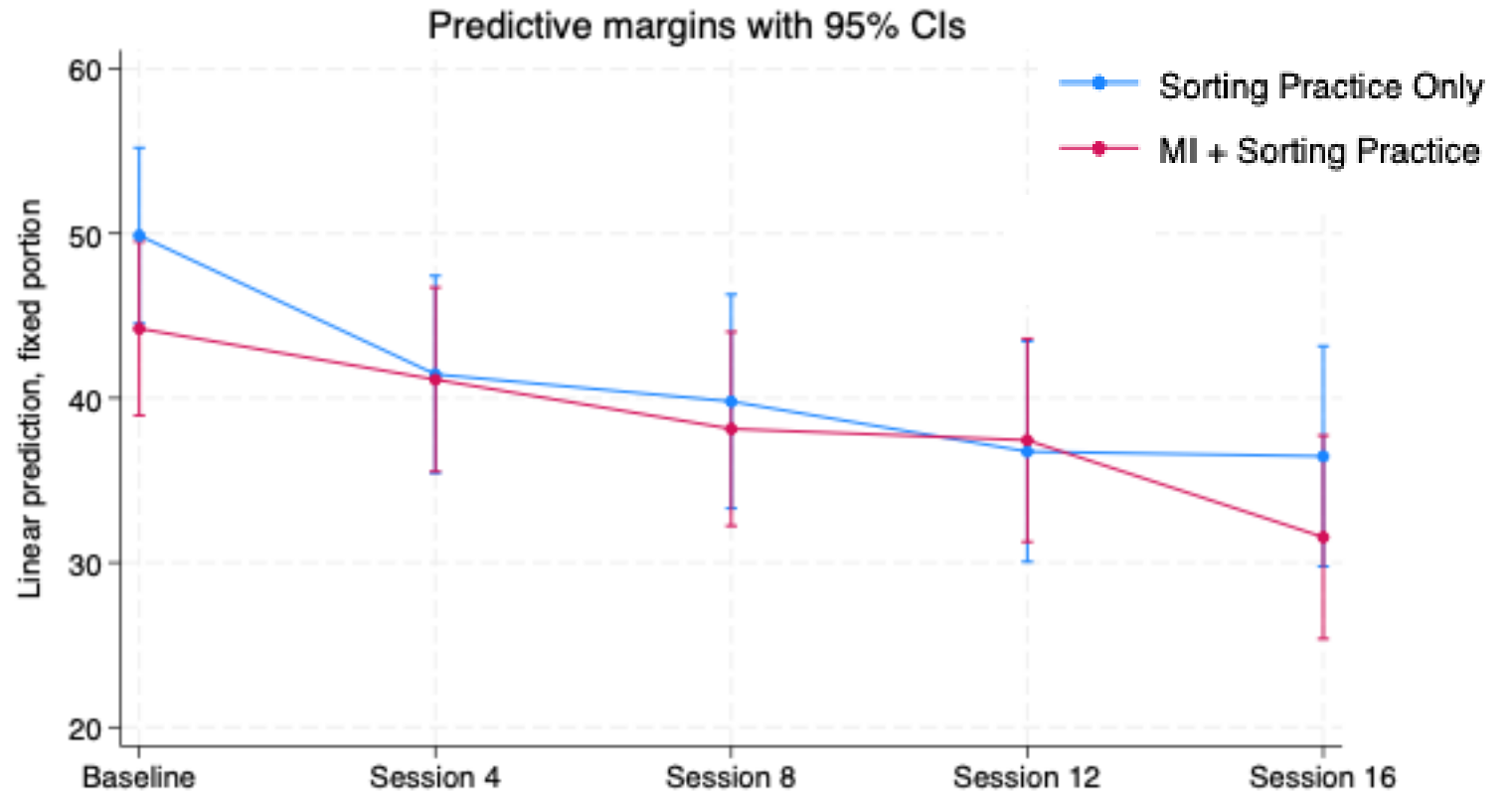
$$p < .001$$

# Treatment feasibility

- Attrition in first four sessions:
  - MI + SP = 22% dropped (4/18)
  - SP only = 39% dropped (7/18)
- Not related to baseline hoarding severity, readiness for change, or demographic characteristics (all  $p$ s > .05)

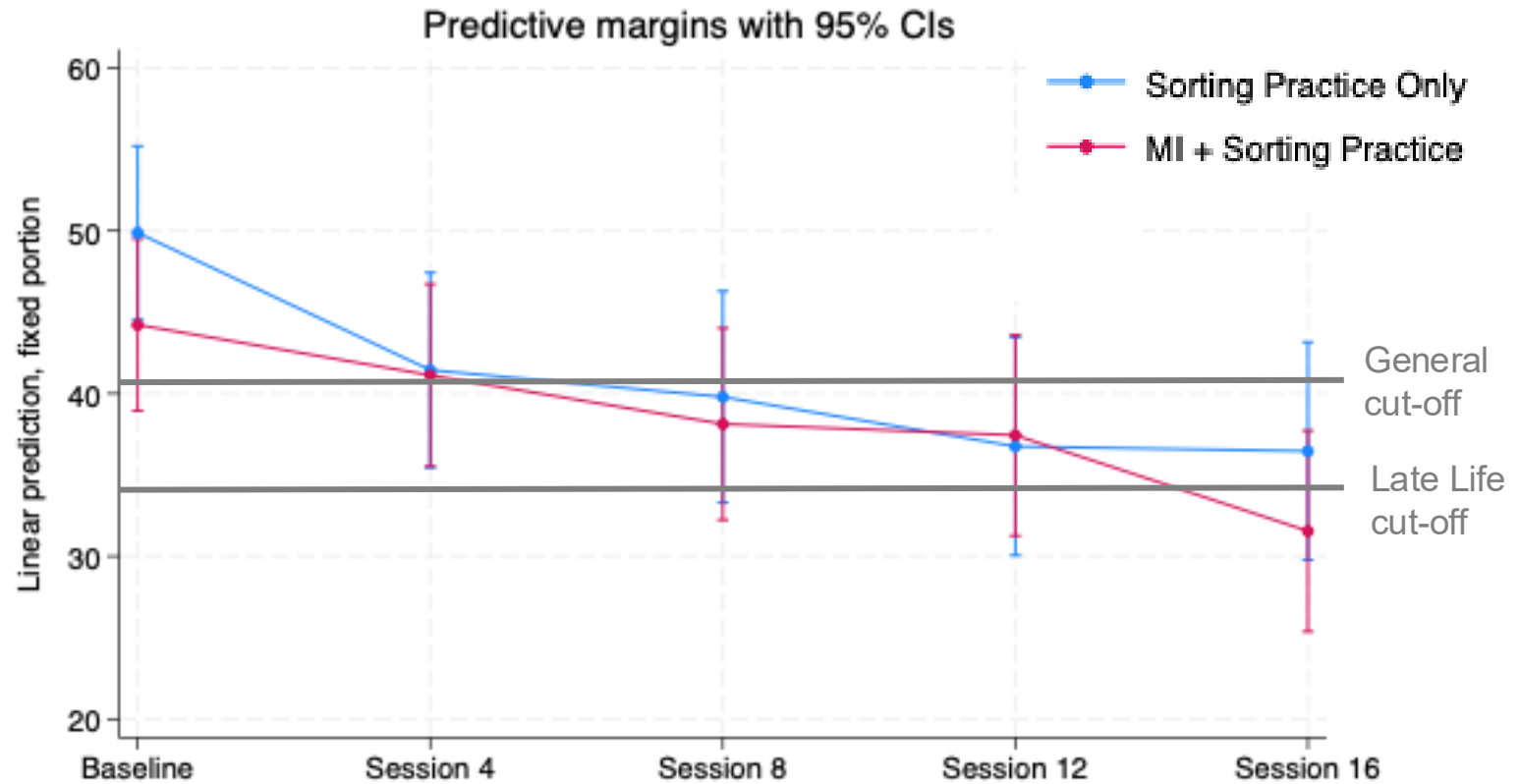
# Hoarding severity

- Both conditions exhibit significant decreases over the course of treatment ( $B = -13.27, p < .001$ )



# Hoarding severity

- Both conditions exhibit significant decreases over the course of treatment ( $B = -13.27, p < .001$ )



# Self-efficacy for clutter

**Definition of sorting:** Engaging in sorting is a behavior where people make decisions about their items, such as where to put them, whether to donate or recycle them, or to discard them.

**How confident are you that you could engage in sorting by yourself *if you really wanted to?***

0  
Not at all  
confident

1

2

3

4

5

6

7

8

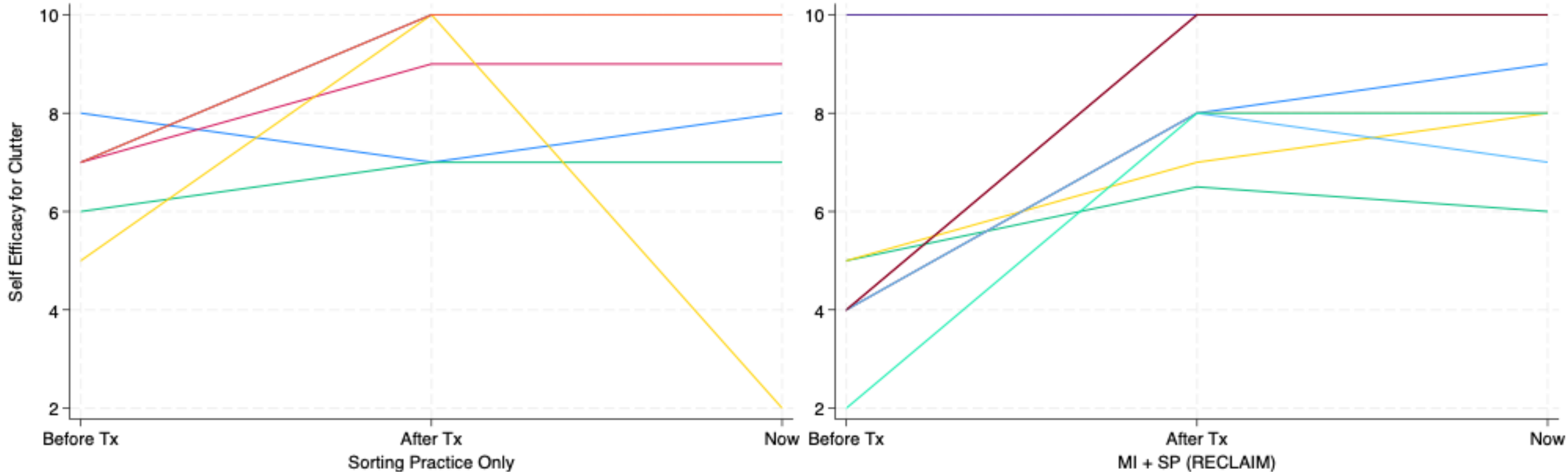
9

10  
Completely  
confident

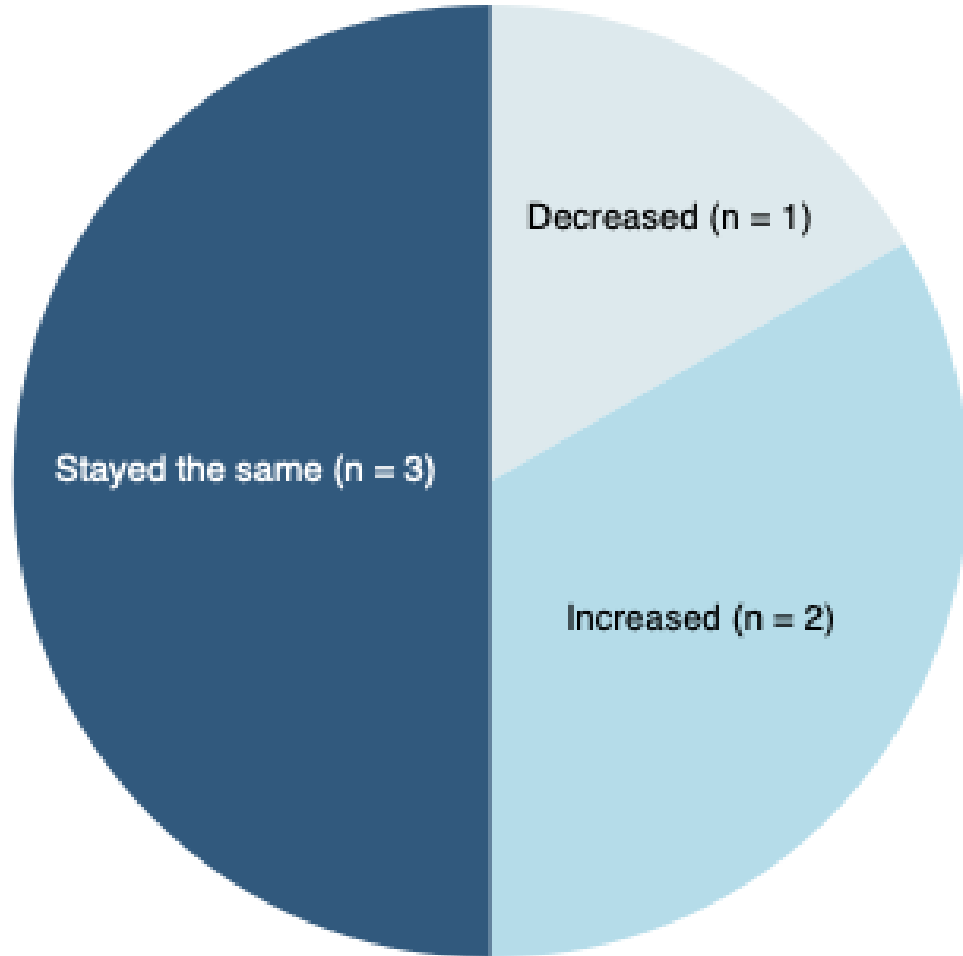
# Self-efficacy for clutter: Change within session

	Decrease or No Change	Increase	$\chi^2$	<i>p</i>
MI + SP (RECLAIM)	59.26%	40.74%	8.76	.003
SP only	100%	0		

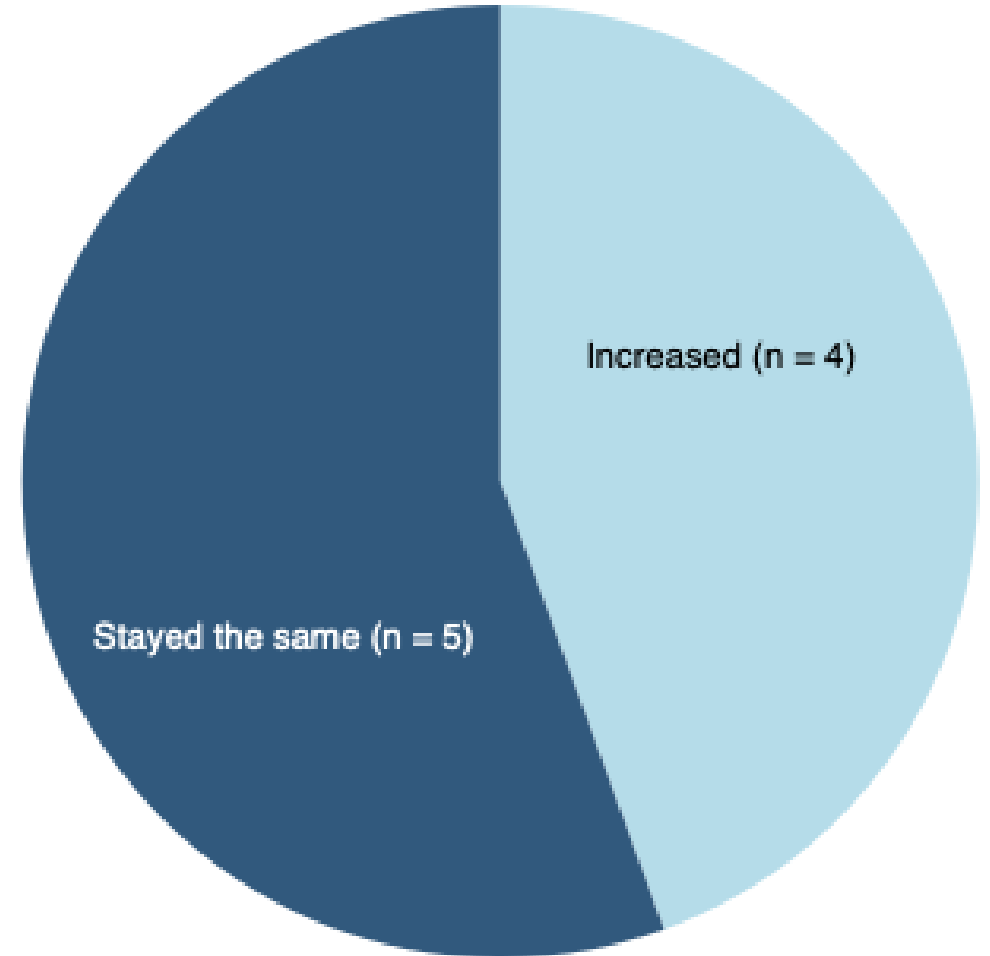
# Self-efficacy for clutter: Retrospective change reported at follow-up



Follow-up data: Since you completed your participation, has the time you spend on a weekly basis engaging in sorting increased, decreased, or stayed the same?

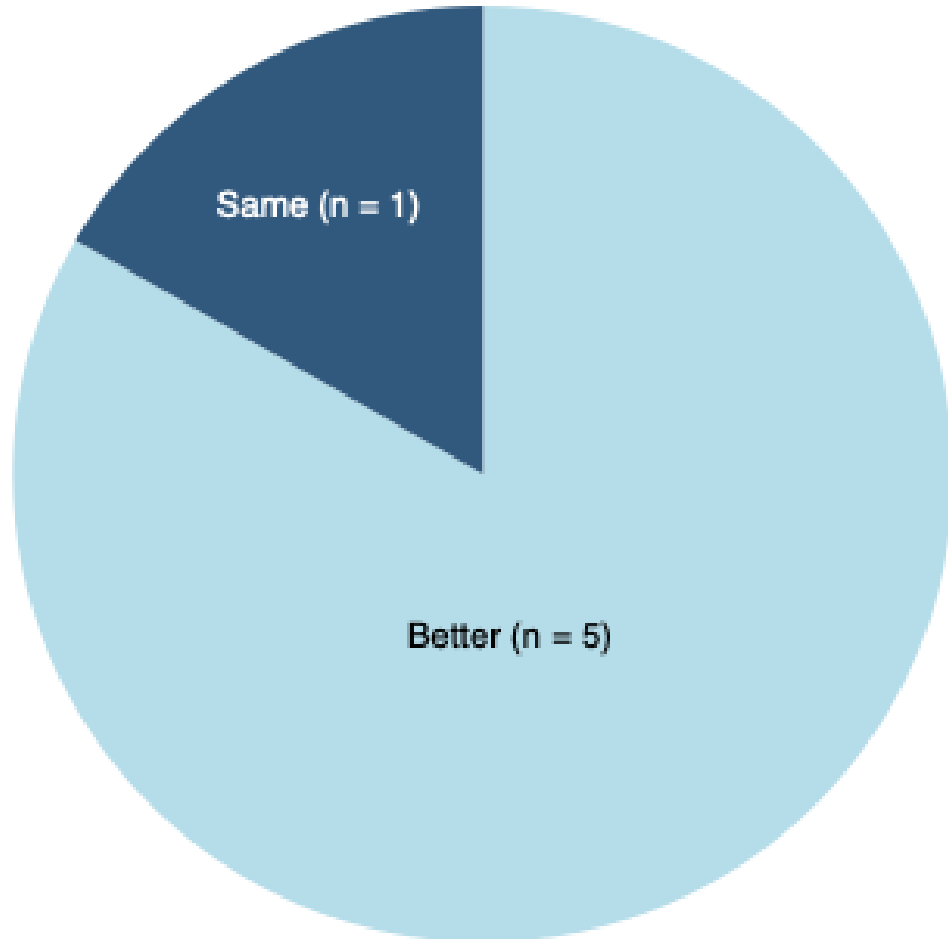


SP only

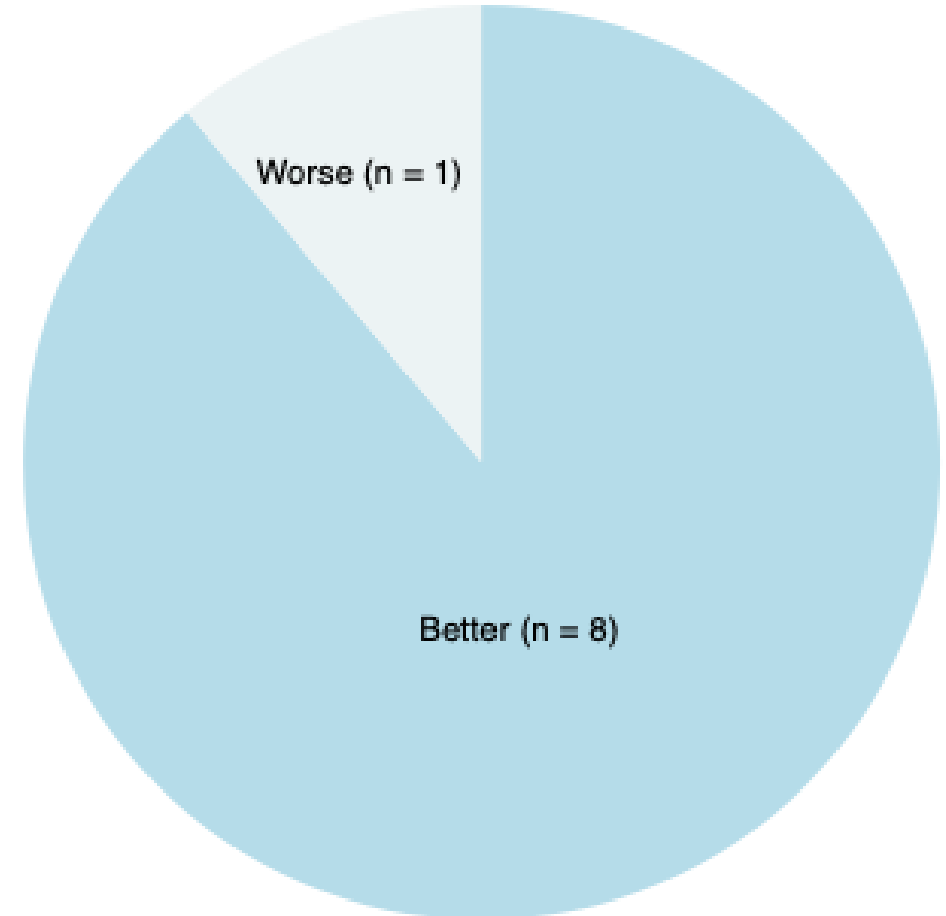


MI + SP (RECLAIM)

Follow-up data: Since you completed your participation, has your clutter level in your home gotten better, worse, or stayed the same?



SP only



MI + SP (RECLAIM)

# Conclusions

RECLAIM is a feasible and acceptable treatment for late life hoarding

Targeting behavioral change directly is a viable alternative mechanism for hoarding treatment

Additional analyses needed to understand potential drivers of attrition (e.g., self-stigma)

# Thank you!

