

# A Semi-Standardized Symptom Menu to Facilitate Goal Attainment Scaling in Dementia Drug Trials: Comparison with Traditional Approaches



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## BACKGROUND

- Goal Attainment Scaling (GAS) is an individualized outcome measure that enables patients/caregivers to identify and track treatment goals that are important to them.
- However, developing patient-voiced goals *de novo* and producing a full range of attainment levels (**Table 1A**) has proven to be challenging and time consuming.
- Using input from patients and expert clinicians, we developed a semi-standardized dementia symptom menu (SymptomGuide®-dementia, SG-D) to facilitate goal setting that does not require defined attainment levels (**Table 1B**).

## OBJECTIVE

- To compare dementia drug treatment effects measured with SG-D to those measured with traditional GAS.

## METHODS

- We compared SG-D and traditional GAS scores to primary and secondary outcome measures in three dementia drug trials.
  - Vascular Aspects of dementia (**VASPECT**) (N=148, 128 participated in SG-D), a six-month open-label trial of donepezil in vascular dementia (VaD) and mixed Alzheimer disease (AD)/VaD used SG-D.
  - Atlantic Canada Alzheimer Disease Investigation of Expectations (**ACADIE**, N=108), a twelve-month open-label trial of donepezil, used traditional GAS.
  - Video Imaging Synthesis of Treating Alzheimer disease (**VISTA**, N=130), an eight-month trial of galantamine (four months double-blinded, four months open-label), used traditional GAS.
- Associations between measures were assessed with Pearson’s *r* or Spearman’s *rho* where appropriate.
- Treatment effects were assessed by Standardized Response Means (SRM; a measure of effect size) measured at six months in VASPECT and ACADIE and eight months in VISTA.

## RESULTS

- Subjects were mostly older adults with mild-moderate dementia (**Table 2**)
- Mean goal attainment was similar across all three trials (**Figure 1**).
- GAS scores were strongly correlated with CIBIC-Plus in all three trials (**Figure 2**)
- Goal attainment was the most responsive measure in ACADIE and VISTA and second most in VASPECT (**Table 3**)

## CONCLUSIONS

- Goal attainment followed the same pattern whether tracked with traditional GAS or when simplified with SG-D.
- SG-D provides a valid approach to GAS that reflects patient-voiced input.
- The simplified menu in SG-D should make it easier for patients/clinicians to set treatment goals that are important to them.

## REFERENCES

1. Rockwood K, Graham JE, Fay S (2002) Goal setting and attainment in Alzheimer’s disease patients treated with donepezil. *J Neurol Neurosurg Psychiatry* 73: 500-507  
2. Rockwood et al. (2006) Attainment of goals by people with Alzheimer’s disease receiving galantamine: a randomized controlled trial. *CMAJ* 174(8): 1099-1105

Table 1. Example goal: Repetitive questions

A. Traditional, open-ended GAS (ACADIE, VISTA)		B. SymptomGuide® facilitated goal setting (VASPECT)	
Attainment Level	Description	Attainment Level	Description
+2: Much better than expected	Repeats the same questions only 1-2 times per day.	+3	Very much improved
+1: Somewhat better than expected	Repeats the same questions fewer than 10 times per day without being anxious.	+2	Much improved
0 (Baseline*): Expected outcome	Everyday, asks caregiver the same questions about 10 times per day, usually in relation to where things are and when things are going to happen For example: “When is my next blood test?”, “When do we see the Doctor again?”	+1	Somewhat improved
-1: Somewhat worse than expected	Repeats questions more often than 10 times per day, within 10 minutes of previously asking.	0 (Baseline): No Change	<ul style="list-style-type: none"><li>Asks repeatedly for details of upcoming events</li><li>Asks repeatedly if something was done</li><li>Tells a story more than once during a single conversation</li><li>Repeats stories even after being told they are repeating</li></ul> Frequency: 10/day
-2: Much worse than expected	Repeats questions almost immediately or within 5 minutes of asking and becomes agitated with the answer.	-1	Somewhat worse
*The baseline goal attainment level was set at 0 (opposed to -1) in both ACADIE and VISTA <sup>1,2</sup> .		-2	Much worse
		-3	Very much worse

Table 2. Baseline participant characteristics

Characteristic	ACADIE	VISTA	VASPECT
Sample Size (N)	108	130	128
Age, Mean (SD)	75.9 (7.8)	77.2 (7.8)	75.4 (9.2)
% Women	73%	63%	52%
Clinician’s Interview-Based Impression of Severity, Mean (SD)	3.7 (0.8)	3.6 (0.8)	3.4 (0.7)
Mini-Mental State Examination, Mean (SD)	19.7 (5.2)	20.3 (3.8)	23.5 (4.4)
Standardized Function <sup>a</sup> , Mean (SD)	46.8 (15.2)		
Disability Assessment for Dementia, Mean (SD)		73.4 (20.7)	80.8 (19.2)
Goals set, Mean (SD)	8.5 (3.3)	3.4 (1.2)	7.7 (5.1)

<sup>a</sup>Measures of function (Functional Activities Questionnaire, Lawton-Brody Instrumental Activities of Daily Living, and Lawton-Brody Physical Self-Maintenance Scale) were standardized to a 100-point scale in ACADIE.

Figure 1. Mean goal attainment by trial and by goal domain

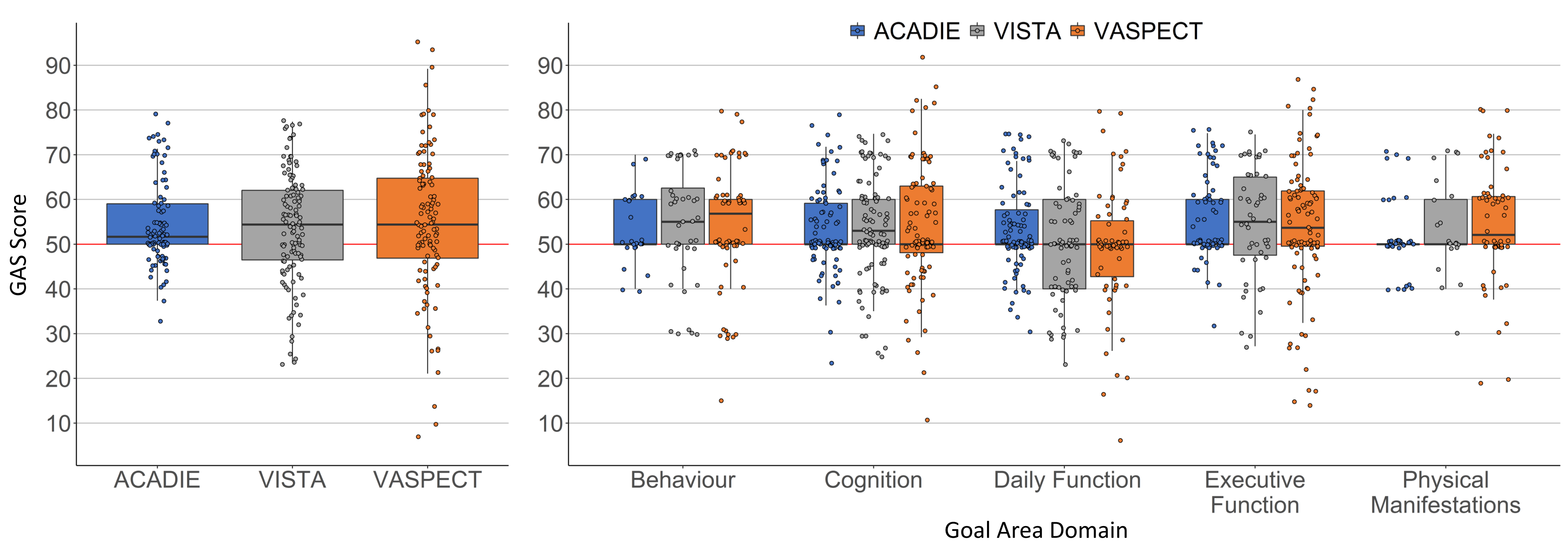
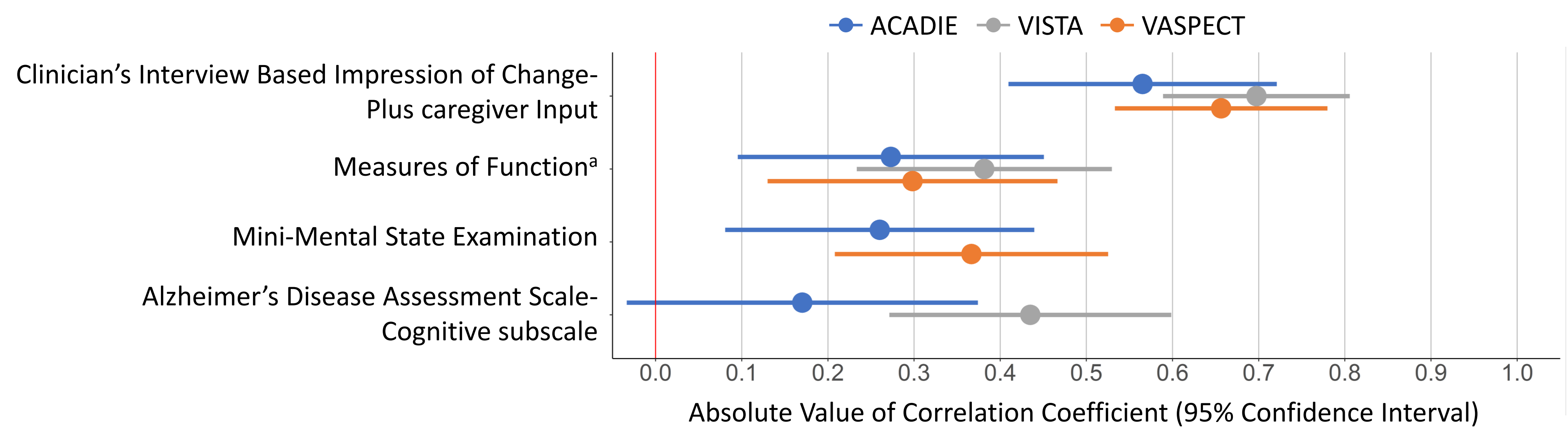


Figure 2. Correlations with goal attainment by trial



<sup>a</sup>VISTA and VASPECT used the Disability Assessment for Dementia (DAD) to measure function. The Functional Activities Questionnaire, Lawton-Brody Instrumental Activities of Daily Living and Lawton-Brody Physical Self-Maintenance Scale were standardized to a 100-point scale in ACADIE.

Table 3. Standardized Response Means by Trial

Outcome	ACADIE	VISTA	VASPECT
Goal Attainment	0.45	0.29	0.30
Clinician’s Interview Based Impression of Change-Plus Caregiver Input	-0.07	-0.11	-0.51
Standardized Function <sup>a</sup>	-0.32		
Disability Assessment for Dementia		-0.26	-0.02
Mini-Mental State Examination	0.03		0.22
Alzheimer’s Disease Assessment Scale-Cognitive subscale	0.12	-0.11	

<sup>a</sup>Measures of function (Functional Activities Questionnaire, Lawton-Brody Instrumental Activities of Daily Living, and Lawton-Brody Physical Self-Maintenance Scale) were standardized to a 100-point scale in ACADIE.