

Self-as-Context Scale

Reliability, Factor Structure, and Convergent and Divergent Validity

Geoffrey S. Gold, M.A. & Charles A. Dill, Ph.D.
Hofstra University



Background

Acceptance and Commitment Therapy (ACT) aims to increase psychological flexibility by targeting six theorized processes.^{1,2}

Self-as-context, one of these six processes, is a perspective from which we observe our experiences. Since self-as-context is content free, it acts as a safe and stable point-of-view.^{1,2}

There have been few studies aimed at developing a quantitative assessment tool specifically measuring self-as-context.⁵

Gird (2013) developed an 11-item measure called the Self-as-Context Scale (SACS). Early findings suggested good reliability ($\alpha = .85$). A factor analysis yielded two factors, called *transcending* and *centering*. The SACS was negatively correlated with a measure of psychological inflexibility.^{6,7}

The current study (N=140) built upon that work with a reexamination of the SACS along with a battery of self-report clinical assessment tools in a sample of undergraduates.

Aims and Hypotheses

Internal consistency. To determine the reliability of the SACS.

Hypothesis 1: The SACS was expected to demonstrate internal consistency around ($\alpha = .85$) as previously observed.

Construct Validity. To examine the factor structure.

Hypothesis 2: Previous research had identified two factors. The items were expected to load onto two factors, as previously observed. The 7-item *transcending* and 5-item *centering* factors were expected to contain the same items.

Convergent and Divergent Validity. To further define the validity of the SACS as it relates to clinically relevant measures.

Hypothesis 3: Positive relationships with EQ, FFMQ, VLQ-C, VLQ-I, and SCS. Negative relationships with CES-D, AAQ-II, ATQ-F, ATQ-B, and BAI.

Method

Participants

- * N=140 undergraduates from the research subject pool at Hofstra University in Hempstead, New York completed the survey (*table 1*). Missing data was corrected with random insertion (Hertel, 1976). The sample was similar in demographics to previous study.

Measures

- * The measures were selected for their relevance to ACT, psychological flexibility, and psychopathology. Scales were selected that measure constructs with clinical meaning and a variety of conceptual relatedness to self-as-context.

Procedure

- * After consenting, participants provided demographics and completed the measures using pen and paper. The questionnaires took about 30 minutes to complete.

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Table 1

Demographics of Study Sample	Frequency (N)	Percentage (%)
Gender		
Male	31	77.9
Female	109	22.1
Trans/Non-conforming	0	0
Age		
17	8	5.7
18	35	25.0
19	33	23.6
20	32	22.9
21	20	14.3
22	6	4.3
23+	6	4.2
Undergraduate Status		
Freshman	38	27.1
Sophomore	43	30.7
Junior	30	21.4
Senior	27	19.3
Fifth year or higher	2	1.4
Race		
Asian	15	10.7
Black	15	10.7
Latino	5	3.6
Multiracial	3	2.1
White	102	72.9
Ethnicity		
Hispanic	28	20.0
Non-Hispanic	112	80.0

Note. Percentages calculated using N=140.

Table 2

Descriptive Statistics for Self-as-Context Scale by Item				
Item	M (SD)	Skewness	Kurtosis	
1. When I am upset, I am able to find... ^C	4.9 (1.5)	- 0.81*	- 0.09	
2. I have a perspective on life that... ^C	4.9 (1.5)	- 0.74*	- 0.12	
3. Despite the many changes... ^I	6.1 (1.0)	- 1.55*	4.87*	
4. As I look back upon my life... ^T	5.7 (1.3)	- 1.52*	2.46*	
5. I allow my emotions to come and go... ^C	4.2 (1.6)	- 0.25	- 0.78	
6. I am able to notice my changing thoughts... ^C	4.4 (1.6)	- 0.44*	- 0.56	
7. There is a basic sense I have of myself... ^I	5.6 (1.1)	- 0.74*	0.16	
8. Though I have had many roles in my life... [#]	5.3 (1.4)	- 0.99*	0.59	
9. Even though there have been many changes... ^I	5.7 (1.1)	- 0.99*	1.18*	
10. I am able to access a perspective from which... [#]	5.6 (1.2)	- 1.15*	1.52*	
11. When I think back to when I was younger... ^I	5.7 (1.3)	- 1.17*	0.99*	

Note. Skewness standard error = .205. Kurtosis standard error = .407. N = 140. M = mean. SD = standard deviation. N = 140.

*|S| > 1.96, where S = Skewness/SE_{Skewness} or |K| > 1.96, where K = Skewness/SE_{Kurtosis} > 1.96.

^TTranscending factor item.

^CCentering factor item.

[#]Factorially complex item that loads on both *transcending* and *centering*.

Table 3

Descriptive Statistics for SACS and Convergent and Divergent Measures			
Measure	M (SD)	Skewness	Kurtosis
SACS – Full Scale	58.3 (9.3)	- 0.77*	1.22*
SACS – Factor 1 Transcending	39.8 (6.1)	- 1.08*	2.29*
SACS – Factor 2 Centering	29.4 (6.1)	- 0.55*	0.03
AAQ-II	22.5 (9.4)	0.59*	- 0.28
ATQ-F	61.7 (24.4)	0.99*	0.60
ATQ-B	66.8 (28.6)	1.00*	0.47
EQ	67.9 (8.8)	0.11	- 0.07
FFMQ	119.6 (19.7)	0.23	- 0.23
VLQ-I	81.3 (11.7)	- 0.74*	0.47
VLQ-C	66.7 (16.8)	0.27	0.67
SCS	74.8 (17.5)	0.08	- 0.03
BAI	19.8 (13.7)	0.91*	0.28
CES-D	19.0 (12.1)	0.94*	0.52

Note. M = mean. SD = standard deviation. Skewness standard error = .205. Kurtosis = .407. N = 140. Means calculated using sum score for each measure.

*|S| > 1.96, where S = Skewness/SE_{Skewness} or |K| > 1.96, where K = Skewness/SE_{Kurtosis} > 1.96.

Table 4

Scale Reliability	Cronbach's Alpha	Number of Items
Measure		
Self-as-Context Scale – Full Version	.85	11
Self-as-Context Scale – Transcending	.85	7
Self-as-Context Scale – Centering	.81	6
Acceptance and Action Questionnaire II	.89	7
Automatic Thoughts Questionnaire – Frequency	.96	30
Automatic Thoughts Questionnaire – Belief	.97	30
Experiences Questionnaire	.76	20
Five Facet Mindfulness Questionnaire	.90	39
Valued Living Questionnaire – Importance	.80	10
Valued Living Questionnaire – Commitment	.69	10
Self-Compassion Scale	.92	26
Beck Anxiety Inventory	.94	21
Center for Epidemiologic Studies Depression Scale	.92	20

Note. N=140.

Table 5

Factor Loading of Self-as-Context Scale (Construct Validity)		
Item	Transcending	Centering
1. When I am upset, I am able to find... ^C		.79
2. I have a perspective on life that... ^C		.85
3. Despite the many changes... ^I	.65	
4. As I look back upon my life... ^I	.86	
5. I allow my emotions to come and go... ^C		.51
6. I am able to notice my changing thoughts... ^C		.53
7. There is a basic sense I have of myself... ^T	.56	
8. Though I have had many roles in my life... [#]	.42	.35
9. Even though there have been many changes... ^I	.76	
10. I am able to access a perspective from which... ^T	.34	.35
11. When I think back to when I was younger... ^T	.72	

Note. Correlations presented are beta weights designating relationship with the factor. Extraction method used was principal axis factoring. Promax rotation method with Kaiser = 4 used for normalization.

^TItem previously observed to load only on the *transcending* factor.

^CItem previously observed to load only on the *centering* factor.

[#]Item previously observed to load on both factors.

Table 6

Convergent and Divergent Validity Coefficients of Self-as-Context Scale				
Validity Measure:				
Convergent	Divergent	Full SACS	Transcending	Centering
EQ ⁺		.56	.44	.59
FFMQ ^C		.46	.35	.49
VLQ- ^C ^C		.39	.36	.37
SCS ^C		.29	.29	.53
VLQ-I ^C		.27	.29	.23
	CES-D ^D	- .49	- .38	- .52
	AAQ-II ^D	- .49	- .34	- .56
	ATQ-F ^D	- .44	- .33	- .50
	ATQ-B ^D	- .36	- .27	- .38
	BAI ^D	- .33	- .24	- .35

Note. All reported Pearson *r* correlations are significant at $\alpha = 0.01$ (2-tailed). N = 140.

^CMeasure that was hypothesized to demonstrate convergence as positive correlation. All hypothesized convergent measures were positively correlated with the SACS and both factors.

^DMeasure that was hypothesized to demonstrate divergent validity as a negative correlation. All hypothesized divergent measures were negatively correlated with the SACS and both factors.

SACS

Below are several statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by selecting the appropriate number. Please be open and honest in your responding.

	1	2	3	4	5	6	7
	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
1.	When I am upset, I am able to find a place of calm within myself.					1 2 3 4 5 6 7	
2.	I have a perspective on life that allows me to deal with life's disappointments without getting overwhelmed with them.				1 2 3 4 5 6 7		
3.	Despite the many changes in my life, there is a basic part of who I am that remains unchanged.				1 2 3 4 5 6 7		
4.	As I look back upon my life so far, I have a sense that part of me has been there for all of it.				1 2 3 4 5 6 7		
5.	I allow my emotions to come and go without struggling with them.				1 2 3 4 5 6 7		
6.	I am able to notice my changing thoughts without getting caught up in them.				1 2 3 4 5 6 7		
7.	There is a basic sense I have of myself that doesn't change even though my thoughts and feelings do.				1 2 3 4 5 6 7		
8.	Though I have had many roles in my life, I have always had a sense of self that is stable and enduring.				1 2 3 4 5 6 7		
9.	Even though there have been many changes in my life, I'm aware of a part of me that has witnessed it all.				1 2 3 4 5 6 7		
10.	I am able to access a perspective from which I can notice my thoughts, feelings, and emotions.				1 2 3 4 5 6 7		
11.	When I think back to when I was younger, I recognize that a part of me that was there then is still here now.				1 2 3 4 5 6 7		

Results

Descriptive Statistics

- * Responses yielded significant skewness and kurtosis for a number of SACS items and for summated scale scores. These data may not be normally distributed.

Reliability

- * The 11-item SACS is a reliable measure ($\alpha = .85$) with normal distribution in this sample.

Construct Validity

- * The *transcending factor* – 7 items
 - * Defined as a continuous perspective from which to observe experiences.
- * The *centering factor* – 6 items
 - * Defined as stability in the face of emotional turmoil.
- * While these factors share the same names used by Gird (2013), they differ slightly. See *table 5*.

Convergent and Divergent Validity

- * Positive relationships - EQ, FFMQ, VLQ-C, SCS, and VLQ-I.
- * Negative relationships - CES-D, AAQ-II, ATQ-F, ATQ-B, and BAI.
- * Gird (2013) reported significant correlation with the AAQ-II at -0.55. The results suggest a similar correlation in this sample.
- * All relationships were valenced as hypothesized.

Discussion

- * Skewness was nonzero for most SACS items and scale scores. Analyses must consider that these data are not normally distributed. Given this nonclinical sample of undergraduates, consistent negative skewness may suggest a bias towards "high" self-as-context compared to a clinical sample.

Hypothesis 1: The SACS demonstrated internal consistency as previously observed ($\alpha = .85$), suggesting it is useful as a research tool, but may not be reliable enough for clinical decision making.

Hypothesis 2: While the analysis did yield two factors, item 10 loaded on both. The factors were otherwise the same as Gird (2013), and so the names of these constructs are applicable. Based on item content, these factors both relate to the construct and can be used together.

Hypothesis 3: As predicted, conceptually convergent scales yielded positive correlations with the SACS. The EQ and FFMQ were most strongly correlated. Scales predicted to have negative relationships also correlated as expected.

References

- Hayes, S. C. (2004). Acceptance and Commitment Therapy and the new behavior therapies: Mindfulness, acceptance and relationship. In S. C. Hayes, V. M. Follette, & M. Linehan (Eds.), *Mindfulness and acceptance: Expanding the cognitive behavioral tradition* (pp. 1-29). New York: Guilford.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2012). Acceptance and commitment therapy: The process and practice of mindful change (2 ed.). New York: Guilford Press, p. 240. ISBN 978-1-60918-962-4.
- Kashdan, T., & Rottenberg, J. (2010). Psychological flexibility as a fundamental aspect of health. *Clinical Psychology Review*, 30 (7), 865-878.
- Hayes, S. C., Barnes-Holmes, D., & Roche, B. (Eds.). (2001). *Relational frame theory: A post-Skinnerian account of human language and cognition*. Springer Science & Business Media.
- Batink, T., Jansen, G., & Peeters, F. (2015). Nieuwe generatie gedragstherapie, nieuwe generatie meetinstrumenten; een overzicht van beschikbare ACT-meetinstrumenten [New generation behaviour therapy; new generation assessment measures; a review of currently available assessment measures]. *Tijdschrift voor Psychiatrie*, 57, pp 739-748.
- Gird, S.R. (2013). Developing a Quantitative Measure of Self-as-Context. -- In *Proceedings: 9th Annual Symposium: Graduate Research and Scholarly Projects*. Wichita, KS: Wichita State University, p.47-48
- Gird, S., Zettle, R. D., Webster, B. K., & Hardage-Bundy, A. (2012). Developing a quantitative measure of self-as-context: Preliminary findings. In *R.D. Zettle (Chair), Sizing up selfing: Efforts to assess self-as-context*. Symposium presented at the ACBS Annual World Conference, Washington, D.C, July 2012
- Bond, F.W., Hayes, S.C., Baer, R.A., Carpenter, K.M., Gueenole, N., Orcutt, H.K., Waltz, T., & Zettle, R.D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire - II: A revised measure of psychological flexibility and experiential avoidance. *Behavior Therapy*, 42, 676-688
- Zettle, R.D. & Hayes, S.C. (1986). Dysfunctional control by client verbal behavior: The context of reason giving. *The Analysis of Verbal Behavior*, 4, 30-38.
- Fresco, D.M., Moore, M.T., van Dulmen, M.H., Segal, Z.V., Ma, S.H., Teasdale, J.D., Williams, J.M. (2007). Initial psychometric properties of the experiences questionnaire: validation of a self-report measure of decentering. *Behavior Therapy*, 38: 234-46.
- Baer, R.A., Smith, G.T., Lykins, E., Burton, D., Krietemeyer, J., Sauer, S., et al. (2008). Construct validity of the five facet mindfulness questionnaire in meditating and nonmeditating samples. *Assessment*, 15, 329-342.
- Wilson, K.G., Sandoz, E.K., Kitchens, J., & Roberts, M.E. (2010). The Valued Living Questionnaire: Defining and measuring valued action within a behavioral framework. *The Psychological Record*, 60, 249-272.
- Trompetter, H.R., ten Klooster, P.M., Schreurs, K.M.G., Fledderus, M., Westerhof, G.J., Bohlmeijer, E.T. (2013). Measuring values and committed action with the Engaged Living Scale (ELS): Psychometric evaluation in a nonclinical and chronic pain sample. *Psychological Assessment*; 25: 1235-46.
- Neff, K.D. (2003). The Development and Validation of a Scale to Measure Self-Compassion. *Self and Identity* 2, 223-50.
- Beck, A.T., & Steer, R.A. (1993). Beck Anxiety Inventory Manual. San Antonio, TX: Psychological Corporation.
- Radloff, L.S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*; 1, 385-401.
- Hertel, B. R. (1976). Minimizing error variance introduced by missing data routines in survey analysis. *Sociological Methods & Research*, 4(4), 459-474.
- Kaiser, H. F. (1958) The varimax criterion for analytic rotation in factor analysis. *Psychometrika* 23, 187-200