Construct and Criterion-related validation of the Bifactor Engagement Scale

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Our Measure of Engagement

Our theoretical conceptualization of work engagement is primarily informed by Schaufeli & Bakker (2003) and Rosenberg (1960). Here, engagement is a mental state wherein employees: a) feel energized (Vigor), b) are enthusiastic about the content of their work and the things they do (Dedication), and c) are so immersed in their work activities that time seems compressed (Absorption). We further decompose each of these facets into three attitudinal components: d) feeling (Affect), e) thought (Cognition), and f) action (Behavior).

The current study's focus is on exploring external variable associations with our measure, focusing on indicies of construct and criterion-related validity via retention of two alternative measures of engagement (the Saks scale and the UWES), two measures of theoretically orthogonal constructs (activity regarding household chores and tending to pets), and one measure of a theoretically relevant outcome (intentions to quit).

Participants

Of the 743 total Qualtrics panel respondents, roughly half were excluded based on conservative indices of carelessness across the larger survey. These screens included respondents with more than 50% missing responses, those who provided consistently non-differentiating responses across more than 12 consecutive items, and those who completed the survey in less than 300 seconds. These conservative screens resulted in a retained validation sample of 377. All analyses were derived from this n of 377.

Results

The current sample internal consistency estimates for our three substantive subscales were: 1) Absorption (α = 0.75), 2) Dedication (α = 0.89), and 3) Vigor (α = 0.75), and estimates for our three attitudinal subscales were: 1) Affect/"Feel" (α = 0.86), 2) Behavior/"Do" (α = 0.77), and 3) Cognition/"Think" (α = 0.77).
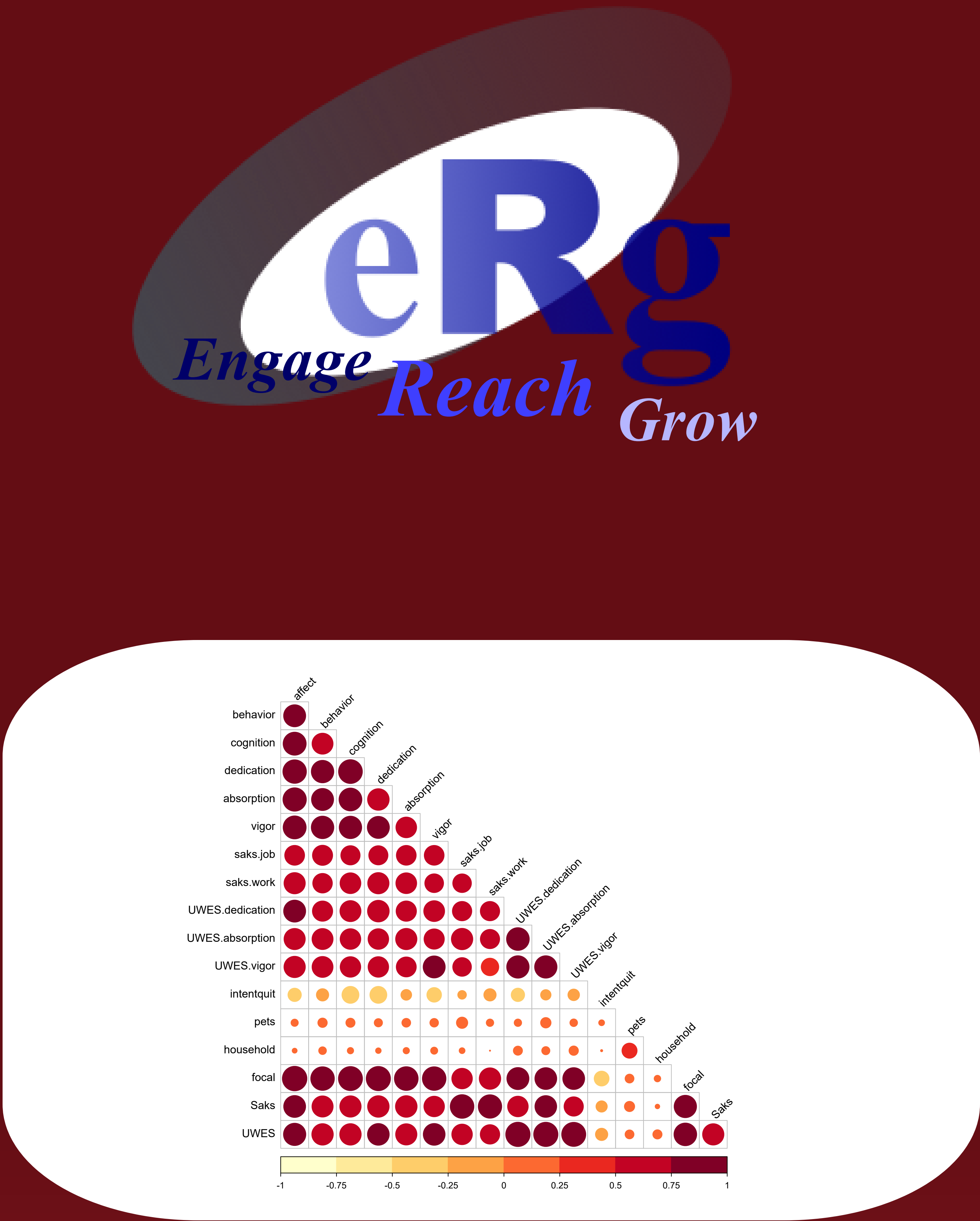
Construct validation

For convergent validity indices, we administered the 17-item Utrecht Work Engagement Scale (Schaufeli et al., 2002; Schaufeli & Bakker, 2010) as well as Saks (2006)'s 12-item measure which aggregates to two scales: job and organizational engagement (see also Saks, 2019).[1]

The Schaufeli et al. (2002) measure follows the same structure as our focal measure, so we aggregated to subscales of Absorption (α = 0.84), Dedication (α = 0.87), and Vigor (α = 0.85). Internal consistency estimates for the Saks scale were α = 0.69 (job engagement) and α = 0.84 (organizational engagement).

5-item "Pets" and "Household Activities" scales from the Oregon Avocational Interest Scales (Goldberg, 2010) were retained for discriminant validation.

Criterion-related validation

We administered a short 4-item intent-to-quit scale developed by Kelloway et al. (1999) (current sample α = 0.92).

Table 1:
Scale intercorrelations (overall engagement aggregates).

	1	2	3	4	5	M	SD
1. focal	–					4.19	0.82
2. Saks	.79***	–				3.55	0.73
3. UWES	.81***	.69***	–			4.83	1.18
4. intentquit	-.39***	-.29***	-.29***	–		2.85	1.22
5. pets	.09	.13*	.11	.03	–	3.71	1.01
6. household	.15**	.09	.23***	-.07	.34***	4.00	0.64

Note. * p < 0.05; ** p < 0.01; *** p < 0.001

The central figure presents associations among the focal measure subscales, the convergent construct validity subscales, the intent to quit criterion, and the two discriminant validity scales, whereas Table 1 presents correlations among "collapsed" subscales. The focal scales of Cognition and Dedication did exhibit the highest magnitude associations with the intent to quit criterion of all administered variables, and the discriminant measures revealed generally small associations, although r's above .15 are potentially of concern. Collectively the results suggest a high level of convergent validity, a fair degree of discriminant validity, and potentially superior predictive validity (focused on the intent to quit scale).

1. We had also intended to use the Gallup "Q12" for construct validation (Harter et al., 2013; Thackray, 2005), but Gallup was not willing to share item- or person-level data.↩