Construct and Criterion-related validation of the Bifactor Engagement Scale

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Intro

The roots of employee (sometimes aka work, e.g., Schaufeli & Bakker, 2010a) engagement research likely started with theoretical expansions of forms of employee participation (see, for example, Ferris & Hellier, 1984) and job involvement (e.g., Elloy et al., 1991). This exploration extended into broader considerations of attitudes and emotions (Staw et al., 1994) and were informed by further exploration of the dimensionality of constructs such as organizational commitment (Meyer & Allen, 1991). The 1990's saw focused development and refinement. Staw et al. (1994) investigated the relationships between positive emotions and favorable work outcomes, and although they do not use the word, "engagement", their distinction between felt and expressed emotion likely held influence upon the burgeoning interest in the engagement construct.

Kahn (1990) described engaged employees as being physically involved, cognitively vigilant, and emotionally connected. Although occasionally referred to as residing on the opposing pole to *burnout* (Maslach & Leiter, 2008), these two constructs are currently most commonly conceptualized as being distinct (Goering et al., 2017; Kim et al., 2009; Schaufeli et al., 2008; Timms et al., 2012), although certainly not universally (Cole et al., 2012; Taris et al., 2017). Goering et al. (2017) explore nomological networks, concluding that these two constructs have a moderate (negative) association, but also distinct nomological networks. Schaufeli et al. (2008) investigated both internal and external association indicators, concluding that engagement and burnout (as well as *workaholism*) should be considered three distinct constructs.

Burnout can be defined as a psychological syndrome characterized by exhaustion (low energy), cynicism (low involvement), and inefficacy (low efficacy), which is experienced in response to chronic job stressors (e.g., Leiter & Maslach, 2004; Maslach & Leiter, 1997). Alternatively, engagement refers to an individual worker's involvement and satisfaction as well as enthusiasm for work (Harter et al., 2002).

Engagement as an attitude

Staw et al. (1994) investigated the relationships between *positive emotions* and favorable work outcomes, and, although they do not explicitly mention the word "engagement", their distinction between felt and expressed emotion likely held influence upon the burgeoning interest in the engagement construct. Clear in this history is the conceptualization of engagement as a work *attitude*. Kahn (1990) defines engagement as "the harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances" (p. 692). This definition of engagement as an attitude was also heavily influenced by Rosenberg (1960)'s tripartite model of attitudes, which was popular in the 1990's. According to Rosenberg (1960), attitudes are a molar construct with cognitive, affective, and behavioral dimensions. Although falling out of favor in the decades following its construction, interest in the tripartite model was revived by Kaiser & Wilson (2019). The attitudinal perspectives of engagement eventually blended into perspectives that focused on exploring the engagement construct through the lens of other conceptually similar constructs Shaw (2005).

Existing Measures of Engagement

Our review of existing instruments non-exhaustively presents measures that are commonly viewed as *either* predominantly academic or applied, although please note that this is an imposed subjective distinction.

Research measures (e.g., freely available).

Schaufeli & Bakker (2003) characterize engagement as a "positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (p. 74). Via their conceptualization, vigor is described as high levels of energy and mental resilience while working. Dedication refers to being strongly involved in one's work and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge. Absorption is characterized by being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work (Schaufeli et al., 2002). This absorption element has been noted as being influenced in conceptual specification by (Csikszentmihalyi, 1990)'s concept of "flow". Schaufeli & Bakker (2003) use this tripartite framework to measure engagement via the Utrecht Work Engagement Scale (UWES).

The Intellectual, Social, Affective (ISA) Engagement Scale (Soane et al., 2012) is another option for researchers. This 9-item measure draws inspiration from Kahn (1990)'s theory of engagement and can aggregate to three 3-item scales (Intellectual Engagement, Social Engagement, and Affective Engagement) or one 9-item summary aggregate (Overall Engagement). Intellectual engagement refers to the degree of intellectual absorption one has in their work and the degree they think about improving work (Soane et al., 2012). Social engagement primarily concerns social connections in a workplace context as well as having shared values with colleagues (Soane et al., 2012). According to Soane et al.

am testing this shit out!





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(2012), affective engagement refers to a positive emotional state relating to one's work role. This measure has been explicitly validated at both the subscale and overall aggregate level (Soane et al., 2012)

Another example of an engagement measure comes from Saks (2006), who splits engagement into two distinct entities: job engagement and organization engagement. This dichotomy largely results from Kahn (1990)'s theory that an individual's role is central to engagement. Saks (2006) further posits that employees typically have more than one role, with the most important being their work role and their role as a member of an organization. The former role is specific to the employee's job, while the latter is more broad and refers to the organization as a whole. Antecedents and consequences of this measure have been tested, with findings suggesting that perceived organizational support precedes both job and organizational engagement and that job satisfaction, organizational commitment, intent to quit, and organizational citizenship behaviors (OCBs) are consequences (Saks, 2006). Recently the broader theoretical model underpinning the measure was revisited and revised to include several new antecedents (e.g. leadership, job demands, dispositional characteristics, etc.) leading to engagement as well as consequences (e.g. burnout, stress, health and well-being, etc.) resulting from high or low levels of engagement (Saks, 2019).

Commercial measures (e.g., typically fee-based).

Gallup's Q12 is a popular commercial measure for engagement. The Q12 is a 12-item measure that originated from a push to use "soft" metrics as opposed to "hard" ones for future action planning (Coffman & Harter, 1999). In this interpretation "soft" metrics tend to be metrics that are more abstract and difficult to measure (e.g. engagement, brand loyalty), while "hard" metrics are easily-measured and typically deal with concrete numbers (e.g. turnover, profitability). In the original creation of the survey, each of the 12 items were found to relate to important organizational outcomes including productivity, profitability, turnover, and customer satisfaction (Coffman & Harter, 1999). A recent meta-analysis of 456 studies revealed that the Q12 also relates to additional performance measures such as absenteeism, wellbeing, and organizational citizenship (Harter et al., 2013). While this engagement measure is one of the most popular, some scholars disagree with its conceptualization as "engagement"; some feel that this measure is better described as (or no different than) a measure of overall satisfaction, as the two concepts are highly correlated, r = .91 (Sirota & Klein, 2013).

Gallup is not the only organization with an engagement measure; many consulting companies have commercially available surveys, models, and processes for measuring engagement. One such example is Aon Hewitt, a consulting firm that annually measures engagement for over 1000 companies worldwide. Their measurements are centered around an engagement model that focuses on three main factors: say, stay, and strive. Essentially, the model states that employees demonstrate engagement through saying positive statements about their organization, staying at their organization for a long time, and striving to put in their best effort and help the organization succeed (Hewitt, 2017). In their most recent analysis. Hewitt (2017) recently noted that global levels of engagement may be declining as in this report they had retracted since the previous year.

BlessingWhite, another consulting firm, provides a different model for engagement. BlessingWhite's model, the X Model, measures engagement through the lens of satisfaction and contribution. Essentially, BlessingWhite believes that cooperation between the organization and individual employees is necessary, and that maximum engagement can only be reached when an employee reaches maximum levels of satisfaction while also outputting maximum contribution towards the organization (BlessingWhite, 2018). Their model holds each level in the organization accountable for employee levels of engagement. From their view, executive leaders must shape the organization's culture, and managers must be able to effectively communicate with and motivate their subordinates (BlessingWhite, 2018).

The last commercial example discussed here 1 is the Towers Perrin-ISR, which holds the philosophy that employee engagement can only be worked on indirectly; engagement can only be attained through effective leadership, business strategy, and organizational culture (Ballendowitsch & Perrin-ISR, 2009). Rather than focus on building an involved model for engagement, Towers Perrin-ISR instead focuses on leadership development and creating a healthy organizational culture. Through fulfilling these antecedents of engagement, Ballendowitsch & Perrin-ISR (2009) argues that employees will have a vivid understanding of organizational goals. In addition, employees will become committed to the organization and motivated to contribute.

Our Measure of Engagement

Our theoretical conceptualization of work engagement is primarily informed by Schaufeli & Bakker (2003) and Rosenberg (1960). Through the lens of our framework, 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 (e.g., affect), e) thought (e.g., cognition), and f) action (e.g., behavior).

Schaufeli (2013) stated a preference for the label "work engagement" rather than referring to the construct as "employee engagement", arguing that the "employee" referrent perhaps invites a blurring of definitions with other conceptually similar constructs such as commitment or organizational citizenship. Regarding this distinction between "the job" and "the organization", our measure scatters indicators of both throughout, although we did not intentionally balance the measure with regard to the referent, as do others, such as Saks (2006).

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

Methods

We purchased Qualtrics panels of working adults and admin delivery, however, as noted below, very cautious screening for our exclusion of many of these Qualtrics respondents from comprised of 74 items across 6 constructs of interest as we the focus of this current presentation.

Participant

Of the 743 total Qualtrics panel respondents, roughly half we of carelessness across the larger survey. These screens missing responses, those who provided consistently non-difference consecutive items, and those who completed the survey in screens resulted in a retained validation sample of 377. All a

Data analysi

We used R (Version 4.2.0; R Core Team, 2022) and the R-pa Barth, 2022), psych (Version 2.1.9; Revelle, 2022), and tinyla analyses. As a straightforward validation study, our analy product-moment correlations.

Results

I speak positively ab

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Suggested final scale definitions. Substantive Attitudinal Item.Number Item.Stem		
Attitudinal	Item.Number	Item.Stem
Cognitive	1	I am able to concent
Cognitive	3	Time passes quickly
Affective	5	I enjoy thinking abou
Affective	8	I love starting my wo
Behavioral	10	I have to be reminde
Behavioral	11	I never miss a work o
Cognitive	14	Thinking about work
Cognitive	16	I'm able to maintain
Affective	17	I enjoy spending time
Affective	19	I feek motivated to g
Behavioral	21	When work is slow I
Behavioral	22	I express enthusiasn
Cognitive	25	I plan to stay with thi
Cognitive	26	I believe this compar
Affective	31	I feel proud of my ac
Affective	32	My job makes me fe
Behavioral	34	I embrace challengin
	Attitudinal Cognitive Cognitive Affective Affective Behavioral Cognitive Cognitive Affective Affective Affective Cognitive Cognitive Cognitive Affective Affective Behavioral Cognitive Affective Affective Affective Affective	AttitudinalItem.NumberCognitive1Cognitive3Affective5Affective8Behavioral10Behavioral11Cognitive14Cognitive16Affective17Affective19Behavioral21Behavioral22Cognitive25Cognitive26Affective31Affective32

Note. The recommended response scale is 'Strongly Disagree' Agree', 'Agree', and 'Strongly Agree'

The items comprising the focal measure along with the administered response scale are located in Table 1. The curr our three substantive subscales were: 1) Absorption (α = 0.700, and estimates for our three attitudinal subscales were: α = 0.770, and 3) Cognition/"Think" (α = 0.770).

Construct validation

Dedication Behavioral 35

For convergent validity indices, we administered the 17-item et al., 2002; Schaufeli & Bakker, 2010b) as well as Saks (2001) two scales: job and organizational engagement (see also Saks (2006) (job) scale is, "Sometimes I am so into my job that the Schaufeli et al. (2002) scale is, "At my work, I feel burst measure follows the same structure as our focal measure

Two short scales from the Oregon Avocational Interest discriminant validitation - the 5-item "Pets" and 5-item "asked how frequently respondents engaged in different act is, "Cleaned the house" (current sample α = 0.72) and a (current sample α = 0.88).