Role-based engagement: scale development and validation

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Abstract
The purpose of this paper is to build on personal engagement and role theory to develop a conceptual definition of engagement to different organizational roles (job, organization, supervisor, and coworkers) and create and validate the Role-Based Engagement Scale (RBES). Data were collected from four samples ($n = 1,302$) of employees, including three from multiple organizations and one from an aircraft manufacturer. Results across three studies consistently support the four dimension structure of the RBES, its internal consistency, convergent, discriminant, and predictive validity based on a series of confirmatory factor analyses. The RBES is a psychometrically sound instrument that measures engagement to job, organization, supervisor, and coworkers. This instrument will provide more targeted information for human resource management (HRM) professionals tasked with developing training methods and processes to improve low-scoring dimensions of engagement, optimizing HRM interventions.

Key words: Coworker engagement; employee engagement; job engagement; organization engagement; supervisor engagement

Personal engagement was initially defined as 'the harnessing of organizational members' selves to their work roles' (Kahn, 1990: 694). Since then, engagement in many forms has been linked to a variety of positive individual level (e.g., job satisfaction, organizational commitment, and job performance) and organizational level outcomes (e.g., profitability, turnover, and sales; Macey & Schneider, 2008). In a meta-analytic path model, Christian, Garza, and Slaughter (2011) found that 'work engagement' was related to both task and contextual performance. Work engagement also had adequate discriminant validity from related constructs such as job satisfaction, organizational commitment, and job involvement, and predicted performance outcomes beyond these related attitudes. MacKay, Allen, and Landis (2017) replicated this work with additional studies and also found that work engagement predicted incremental variance in turnover intention and absenteeism. Finally, a recent meta-analysis found a small effect for work engagement interventions (Knight, Patterson, & Dawson, 2017).

The rise of the importance of engagement for organizations has been well documented (Byrne, 2015; Shuck & Wollard, 2010). Alongside practical applications of engagement, researchers have been working on clarifying the definition and measurement of the construct. These include approaches to employee engagement (Shuck, Adelson, & Reio, 2017), work engagement (Schaufeli & Bakker, 2010), job engagement (Rich, Lepine, & Crawford, 2010), organization engagement, (Saks, 2006, 2019), and social engagement (Soane, Truss, Alfes, Shantz, Rees, & Gatenby, 2012). Indeed, the field has come a long way in understanding the nuances of engagement. However, our observation is that these theoretically derived approaches to engagement could be enhanced so that the specific interventions for improving engagement are more obvious.

Engagement interventions that lack focus may in part, explain why improvement efforts have only resulted in a small overall effect (Knight, Patterson, & Dawson, 2017; Saks, 2019). In this paper, we describe an approach to engagement, role engagement, which identifies the specific set of work-related roles to which an employee may be engaged. The role engagement model will illuminate targeted and actionable approaches for human resource management (HRM) professionals because it measures four specific roles to which an employee may engage – job, organization, supervisor, and coworker – thus allowing for more direct identification of proximal antecedents.

Role theory suggests that employees enact different roles in organizations and identify in different ways with those roles (Ilgen & Hollenbeck, 1991). Roles are positions within the social framework of the organization and employees must participate in multiple roles to accomplish their job (Rothbard, 2001; Welbourne & Paterson, 2017). Roles are central to understanding employee behavior in organizations (Katz & Kahn, 1978). Employees may be more engaged to some roles than other roles. The key to harnessing engagement is to direct it toward roles that are critical for the organization's mission and find ways to improve engagement to those roles, if necessary (Welbourne & Schlachter, 2014). Therefore, the purpose of this paper is to draw on the existing academic and practitioner literatures to develop a conceptual definition of engagement to different organizational roles (job, organization, supervisor, and coworkers), and validate a measure for this conceptualization.

This study contributes to the literature by developing a theory-based measure of role engagement that can support the expansion of its nomological network in an organized and coherent fashion. The purpose of our study is to present the development and validation of a four-dimensional engagement measure based on role theory and the roles employees invest in within the workplace. Our measure is grounded in Kahn's (1990) seminal theory of personal engagement in which engaged employees are believed to bring their full selves to their work roles, investing cognitively, emotionally, and physically. Based in role theory (Welbourne & Schlachter, 2014), we suggest that employees will engage differently with their job, organization, supervisor, and coworkers.

This study contributes to practice by providing HRM professionals with an intuitively appealing framework of engagement (Schaufeli, 2013) that holds great promise for increasing engagement in organizations in a more efficient and directed manner. In fact, role development is an area specifically addressed by HRM professionals (De Wang & Niu, 2010). More specifically, organizations adopting our measurement approach to engagement may design more targeted HRM interventions to more quickly and efficiently raise engagement targets linked to key business metrics. For example, employees may indicate they are more engaged with their job than with their supervisor, suggesting interventions directed toward supervisors may be needed. In this situation, organizations implementing HRM interventions aimed at a more generic notion of engagement, may not realize their full potential. Alternatively, HRM methods and processes aimed at supervisor supportive behaviors and performance management practices will be more proximally linked to the engagement target and thus more likely to move the engagement needle. In the following sections, we discuss the theoretical derivation of role engagement and the scale development and validation process. We conclude with a discussion of implications for HRM practice and research.

A role theory conceptualization of engagement

Personal engagement was originally defined as the 'harnessing of organizational members' selves to their work *roles*: in engagement, people employ, and express themselves physically, cognitively, and emotionally during *role performances*' (Kahn, 1990: 694, italics added). Engagement is thus, the expression of the self within a role while disengagement refers to the decoupling of the self from the role. A motivational construct, engagement reflects the extent to which employees are

attached to their work roles physically, cognitively, and emotionally. Engaged employees choose to invest themselves actively and completely and are psychologically present, connected, and attentive. Engagement is therefore viewed as the investment of physical, emotional, and cognitive energy into the work role. People exhibit engagement when they are tangibly involved in their tasks, emotionally connected to their work and to others in the accomplishment of their work goals, and cognitively involved and focused.

Kahn (1990) specifically applied Goffman's (1961) theory of role performance to the workplace and suggested that employees can become engaged to the various work roles and social interactions present within their job. In fact, the first sentence of his seminal paper is 'People occupy roles at work: they are the occupants of the houses that roles provide' (Kahn, 1990: 692). Kahn's focus was on how people occupy these various roles, identifying what it means to be psychologically present within different work roles. Furthermore, Kahn specifically describes how he builds on job design research that focuses on the job/work tasks, along with an 'interpersonal,' 'intergroup,' and 'organizational' perspective (1990: 694). Interpretations of Kahn's notion of engagement suggest that engagement is a holistic concept in which employees bring their complete selves to their work role, employing their full personal resources (Rich, Lepine, & Crawford, 2010). These post-Kahn approaches amalgamate the various work roles discussed by Kahn into one, generic work role. This may indeed be the approach that Kahn endorsed, however integrating role theory with Kahn's work on personal engagement suggests a role-based approach to engagement in which employees can personally engage, and bring their full selves, to the different work roles they occupy.

Since Kahn's (1990) original work, some published research has expanded on this notion of engagement in multiple roles by formally defining and measuring engagement to different organizational roles. For instance, Saks (2006, 2019) reported that engagement to the job and engagement to the organization were separate constructs that had different antecedents and outcomes. He reported that members of the particular organization studied had greater job engagement than organizational engagement. These results suggest there is value in differentiating engagement into multiple roles. Schaufeli and Salanova (2011) suggested that engagement may be broader than just work engagement and that employees can also be engaged with their occupation, job, and organization. In an attempt to extend the theoretical work on engagement, Saks and Gruman (2014) proposed that it is possible for employees to be engaged (or disengaged) with the numerous roles they have at work including the job, task, work group, and organization. They suggest that it is critical to identify which type of engagement is being referred to in any study or application because being engaged in one role does not necessarily imply one is engaged in a different role. These types of engagement should have different antecedents and different outcomes.

Roles are generated in organizations based on normative expectations (Biddle, 1986). Traditional theories imply that role identities are discrete psychological phenomena (Ashforth & Johnson, 2001). However, people don't just abandon one role when another is activated, rather they are faced with multiple role choices and held accountable for these different roles simultaneously (Lynch, 2007). It is the nature of society itself, as well organizations that are inherently social, to generate multiple roles for each individual. In fact, individual identity is viewed as being comprised of these multiple roles (Rothbard, 2001). People can easily switch roles and often do so at a moment's notice, as in the case when an employee moves seamlessly between the role of supervisor and the role of subordinate. Alternatively, an employee may predominantly operate as job incumbent, focused on specific job tasks, but must switch to the role of organizational member as needed, attentive to the organization's mission and values. Thus, multiple roles are enacted in organizations, often simultaneously (Biddle, 1986; Welbourne & Paterson, 2017), and within organizations, employees must engage in multiple roles to accomplish their job (Griffin, Neal, & Parker, 2007; Rothbard, 2001).

Traditional role theory purports that people navigate their roles through role taking and role-making behaviors (Biddle, 1986). A cognitive component to role enactment (Lynch, 2007)

explains people's ability to inhabit multiple roles, even when those roles are inconsistent and conflicting. Through the reciprocal interaction of behaviors and cognition with the complex work environment, actors construct multiple roles that are constantly evolving. Roles are both flexible and permeable (Lynch, 2007). Flexibility is the degree to which role boundaries are malleable (Hall & Richter, 1988), while permeability refers to the degree to which a person can be physically located in one role domain, while being psychologically, emotionally, or behaviorally involved in a different role. As a result, employees are likely to be involved in multiple roles simultaneously and move swiftly among different roles.

Role-based engagement is defined as the extent to which an individual is attached to and invested in his or her work-related roles. Consistent with Kahn (1990), role-based engagement is personal engagement that occurs when employees choose to be psychologically, cognitively, and emotionally present during role performances. Based on role theory, we suggest that most employees can be engaged with four different organizational roles – their job, organization, supervisor, and coworkers. For instance, employees could feel a high level of engagement to their job and coworkers but less engagement to their organization and supervisor. Alternatively, it is easy to imagine a situation where an employee is highly engaged with coworkers and less engaged with the job, organization, or supervisor. In this way, we have made explicit, Kahn's inference that employees do engage in multiple roles at work, also drawing upon Rothbard's (2001) preliminary evidence of multiple role engagements. This is consistent with discussions of multiple types of engagement (Rich, Lepine, & Crawford, 2010; Saks, 2017; Soane et al., 2012). However, role-based engagement extends the work on multiple engagements by clarifying the primary set of elements that employees actually engage with. In subsequent sections, we specifically define what we mean by engagement to each role: job, organization, supervisor, and coworkers.

Job engagement

Kahn (1990) proposed that personal engagement represents the investment of personal resources in the work role, or job. Thus, job engagement refers to the willingness to invest physically, cognitively, and emotionally to the job role (Christian, Garza, & Slaughter, 2011). Employees who are engaged with their job feel a connection to the specific job role they play. They are described as psychologically present, focused, and completely involved in the full performance of that job role (Rich, Lepine, & Crawford, 2010). In other words, job engagement refers to extent to which employees are attentive and absorbed/energized with their job role. Similar to Rich, Lepine, and Crawford (2010), we choose the term job engagement to reflect our grounding in Kahn's (1990) theory of engagement. Although the concept of work engagement is popular, it has not been embraced by organizations and its theoretical foundation is burnout rather than engagement (Schaufeli, Salanova, González-romá, & Bakker, 2002). The notion of job role engagement is related to both task and contextual performance (Christian, Garza, & Slaughter, 2011).

Organization engagement

Organizational engagement was originally defined as the 'extent to which an individual is psychologically present in a particular organizational role' (Saks, 2006: 604). Employees can vary in the extent to which they invest in their role as an organizational member. Saks and Gruman (2014) also note that organizational engagement is distinct from job engagement. It is easy to envision an employee who is not very engaged with the job but strongly engaged with the organization, or vice versa. For instance, an employee might not care for their specific job tasks but be very attached to the mission and values of the organization overall. Saks (2006, 2019) reported a significant difference between job and organization engagement, with respondents reporting higher job engagement than organization engagement. Furthermore, job and organization engagement had different antecedents and outcomes. For example, perceived organizational support more

strongly predicted organizational engagement. Job and organization engagement also explained significant and unique variance in job satisfaction and organizational commitment. Farndale, Beijer, Veldhoven, Kelliher, and Hope-Hailey (2014) found that job engagement and organizational engagement have differential relationships with important employee outcomes (commitment, organizational citizenship behavior [OCB], initiative, active learning, and job satisfaction), and organizational performance. These results suggest that engagement is role specific with respect to the job and organization and that there is a meaningful distinction between job and organization role engagement. In the present study, we define organization engagement as the attention and absorption/energy employees give to their role as members of a specific organization.

Supervisor engagement

Consistent with societal roles, across jobs, people construct work roles around the interpersonal context of the job. Two important work roles are that of subordinate, comprised of role-prescribed interactions with one's supervisor, and the role of coworker, comprised of role-prescribed interactions with one's coworkers. In fact, Kahn's (1990) initial conceptualization of engagement emphasized the interpersonal context of organizations and presented engagement as having a social component. Kahn and Heaphy (2014) further explained that the social context within which people work shapes engagement and that the role of social interactions in personal engagement should not be overlooked. The social component of engagement reflects an experience of cognitive, affective, and behavioral connectedness with other people in the work environment; connectedness is a critical feature of Kahn's self-in-role approach to engagement. This has particular relevance for HRM practitioners because many HRM systems and processes address the interpersonal nature of work and can potentially be applied to enhance components of social role engagement.

A supervisor is arguably one of the most important individuals in an employee's work environment as he or she is directly responsible for monitoring an employee's performance, as well as charged with making many decisions (e.g., pay, promotions, etc.) that have a direct economic impact on employees (Shanock & Eisenberger, 2006). Supervisor engagement, therefore, is the extent to which employees are behaviorally, cognitively, and affectively connected to their direct supervisor, that individual most closely responsible for managing their performance. Supervisor engagement refers to the attention and absorption/energy employees give to their role as subordinate to a specific supervisor.

Coworker engagement

Coworker engagement also draws on the social context of work and the expression of self in the role of coworker. Coworker engagement is the behavioral, cognitive, and affective connection to others in the workplace. The role of team member has been identified in a number of studies on role performance in the workplace (Griffin, Neal, & Parker, 2007; Welbourne & Paterson, 2017). Additionally, Soane et al. (2012) propose social engagement as the experience of social connection with colleagues in the work environment. However, their measure of social engagement showed weaker predictive validity evidence compared to affective and intellectual engagement measures. This may be due to their definition and items not reflecting Kahn's (1990) notion of social engagement which emphasized attention and absorption/energy dimensions. Regardless, with the increasing importance of teamwork in general in organizations (Mathieu, Maynard, Rapp, & Gilson, 2008), the role-related engagement to coworkers is also necessary (Kahn, 1990). Therefore, coworker engagement refers to the attention and absorption/energy employees give to their role as coworker within a specific workgroup. Our conceptualization and measure of coworker engagement is different from collective organizational engagement, defined by Barrick and colleagues as 'shared perceptions of organizational members that

members of the organization are, as a whole, physically, cognitively, and emotionally invested in their work' (Barrick, Thurgood, Smith, & Courtright, 2015: 113). Although collective organizational engagement is a firm-level construct with a descriptive focus and an indicator of the overall motivational environment within the firm, coworker engagement is an individual-level engagement construct that is based on the perception of one's own engagement with their coworkers and thus has a more evaluative focus (Klein & Kozlowski, 2000).

Based on the multiple roles employees occupy within organizations, we argue that an expanded, role-based, conceptualization of engagement is theoretically justified in an HRM context for optimal measurement and specification of HRM interventions that correspond to referents regarding the job, organization, supervisor, and coworkers. Though some research has already examined and found support for various multi-dimensional engagement conceptualizations (Farndale et al., 2014; Rothbard, 2001; Saks, 2006), we aim to provide a framework that can more comprehensively capture how employees navigate the various job, organizational, and social roles in their work environments. Though a case can be made for other roles in the workplace (e.g., customers and profession; Reichers, 1985), our framework accounts for engagement to *work* and to *others in the workplace* (Kahn, 1992) by incorporating the existing constructs of job and organization engagement in addition to supervisor and coworker engagement. By including supervisor and coworker engagement, we aim to better capture the social roles in organizations and therefore the social aspect of engagement apparent in most jobs (Kahn & Heaphy, 2014). This role-based approach is designed to align with HRM practitioner needs to have a targeted and actionable way to assess and act on low-scoring aspects of engagement (Knight, Patterson, & Dawson, 2017; Shuck & Reio, 2011).

Following best practices for scale development (Hinkin, 1995; Robinson, 2018), we conducted three studies to create and validate the Role-Based Engagement Scale (RBES). The first study was conducted to generate and assess items that tapped the four roles of job, organization, supervisor, and coworker engagement, and then to refine this measure based on reliability analysis and exploratory factor analysis (EFA). The second study involved a confirmatory factor analysis (CFA) to demonstrate dimensionality and correlational analyses to establish its nomological net. The third study was conducted to confirm study 2's construct validity evidence in an organizational setting and to demonstrate criterion-related validity.

Study 1

The purpose of study 1 was to develop items for the RBES and conduct an initial pilot test on the measure. To develop a parsimonious scale composed only of those items that best characterized the four roles of engagement and their attention and absorption/energy elements (Kahn, 1990), we began by writing a large item pool that deliberately oversampled the construct space (Little, Lindenberger, & Nesselroade, 1999) and could be reduced through subsequent analyses (Hinkin, 1995; Spector, 1992). Five I/O psychology graduate students, supervised by a Ph.D. in I/O psychology, wrote a pool of 75 items (approximately 18–19 items per foci) to capture the

Table 1. Descriptives and correlations of 12-item role-based engagement measure (study 1)

	Mean	SD	1	2	3	4
1. Organization Engagement	5.47	1.23	.86			
2. Job Engagement	5.27	1.27	.69**	.86		
3. Supervisor Engagement	4.77	1.50	.52**	.44**	.95	
4. Coworker Engagement	4.98	1.27	.51**	.46**	.56**	.85

Note: Coefficient αs are presented on the diagonal.
*$p < .05$, **$p < .01$.

Table 2. Results from principal axis factoring of 12-item RBES (study 1)

	Component			
	1	2	3	4
I feel inspired by the mission and goals of my organization	.80			
I am proud to be a part of my organization	.84			
I want to give my all to my organization	.63			
I enjoy the work I do		.88		
Time goes by quickly when I am at work		.82		
I typically approach my job with a great deal of enthusiasm		.71		
My supervisor inspires me			.90	
My supervisor gets me excited about my work			.88	
My supervisor contributes to my feelings of well-being at work			.88	
My work group energizes me to do my job				.84
My coworkers inspire me				.81
My coworkers and I share an enthusiastic work ethic				.77

Note: Component matrix from principal axis factoring with varimax rotation.

construct definition of each engagement role (Hinkin, 1995). All items were rated by the I/O graduate students on the following: (1) degree to which each item tapped into the specific role-based engagement and (2) clarity and readability of the items. Only items reaching 80% agreement on these indices were retained. Redundant and overlapping items were removed, resulting in 40 items (9–12 per foci).

Method

Sample
Participants were 173 working adults enrolled in psychology courses at a university and community college in the southeastern United States. Of these, 23 participants were removed based on incomplete data, leaving a sample of 150 which is viewed as sufficient for EFA (Hinkin, 1995; Robinson, 2018; Spector, 1992). Participants were from a variety industries, including agriculture, computer/data processing, construction, education, and financial services. The majority was female (59%). The sample contained an equal percentage of part-time and full-time employees (50%).

Procedure
Participants completed an online version of the 40 item measure using a 7-point Likert-type scale (1 = strongly disagree and 7 = strongly agree). Items were administered in random order to offer a more rigorous test of both dimensionality and internal consistency (Harrison & McLaughlin, 1996). This study was approved by the university's research ethics committee.

Results and discussion

A principal axis factor analysis with varimax rotation was run on the item pool. We opted to use varimax rotation because we reasoned the dimensions of role-based engagement should not be strongly correlated with each other (Tabachnick & Fidell, 2001). Examination of the scree plot and eigenvalues showed four components, corresponding to the four dimensions of the RBES.

We examined the items within each dimension and dropped those items that loaded less than .35 on its component, cross loaded more than .35 on another dimension, or did not load on any dimension (Tabachnick & Fidell, 2001). We also dropped several items in the interest of parsimony; their content was redundant due to overlap with other retained items (Little, Lindenberger, & Nesselroade, 1999) that possessed stronger loadings.

At the conclusion of this process, we retained a total of 12 items with each dimension containing three items. Descriptive statistics on the final 12 items can be found in Table 1. The resulting four components and their loadings are presented in Table 2 with 81.7% variance explained. As expected, our results reflected the four component conceptualization of engagement and showed adequate α coefficients: job ($\alpha = .86$), organization ($\alpha = .86$), supervisor ($\alpha = .95$), and coworker ($\alpha = .85$).

Study 2

The purpose of study 2 was to confirm the dimensionality of the new 12 item RBES in two different samples. CFAs were conducted independently for these two samples. Items were rated on a 7-point Likert-type scale (from *strongly disagree* to *strongly agree*). This study was approved by the university's research ethics committee.

Participants and procedure

Sample 1

Sample 1 participants included 333 working adults in introduction to psychology courses in an online degree program and a face-to-face degree program at a medium-sized university in the southeastern United States. Participants were from a variety industries, including agriculture, computer/data processing, construction, education, and financial services. They ranged in age from 18 to 67 years old ($M = 37.3$) and the majority was female (54%). The average tenure was 3.8 years and most were employed full time (66%). The job ($\alpha = .91$), organization ($\alpha = .94$), supervisor ($\alpha = .96$), and coworker ($\alpha = .94$) dimensions all had acceptable reliabilities.

Sample 2

Sample 2 included a global, cross-sector survey of 318 individual contributors and managers (69.8% United States) recruited through a market research firm that maintains a database of people willing to complete online surveys for research purposes. They ranged in age from 18 to over 65 years old with 35 to 49 being the largest percentage (22%). The majority was male (55%). The majority reported working in corporate/for-profit organizations (55%) with additional participants from the non-profit sector (18%), government (11%), education (10%), and other (7%). The job ($\alpha = .86$), organization ($\alpha = .86$), supervisor ($\alpha = .93$), and coworker ($\alpha = .90$) dimensions all had acceptable reliabilities.

Results and discussion

Sample 1

Scale intercorrelations and descriptive statistics for sample 1 can be found in Table 3. To assess the structure of the RBES in this sample following conventional standards (Anderson & Gerbing, 1988), we specified a series of models and tested them using CFA with maximum likelihood estimation using Mplus 7.3 (Muthen & Muthen, 1998). First, we specified the hypothesized four-factor model in which each item was loaded onto its corresponding engagement dimension (job, organization, supervisor, and coworker). Results from this model indicated that the hypothesized four-factor model (12 items) showed satisfactory fit to the data ($\chi^2(48) = 167.93$, $p < .01$; comparative fit index [CFI] = .96; root mean square error of approximation (RMSEA) = .09;

Table 3. Correlations and descriptives (study 2)

	Mean	SD	1	2	3	4
1. Organization Eng[1]	5.73	1.18	.94			
2. Job Eng[1]	5.76	1.08	.75**	.91		
3. Supervisor Eng[1]	5.00	1.60	.51**	.44**	.96	
4. Coworker Eng[1]	5.53	1.06	.42**	.43**	.33**	.94
5. Organization Eng[2]	5.63	1.25	.86			
6. Job Eng[2]	5.70	1.12	.68**	.87		
7. Supervisor Eng[2]	4.62	1.67	.37**	.38**	.93	
8. Coworker Eng[2]	5.03	1.37	.48**	.49**	.37**	.90

Note: Superscripts denote sample (1 vs. 2). Coefficient αs are presented on the diagonal.
*$p < .05$, **$p < .01$.

Table 4. Confirmatory factor analysis results (study 2: sample 1)

	4-Factor model	3-Factor model[a]	3-Factor model[b]	3-Factor model[c]	3-Factor model[d]	3-Factor model[e]	3-Factor model[f]
χ^2	167.93*	346.36*	750.70*	566.40*	889.88*	651.95*	603.63*
df	48	51	51	51	51	51	51
CFI	.96	.91	.79	.84	.75	.82	.84
RMSEA	.09	.13	.20	.17	.22	.19	.18
SRMR	.04	.06	.16	.09	.16	.14	.10

df, degrees of freedom; CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardized root mean squared error.
[a]Model with job engagement and organization engagement combined (factor 1), supervisor engagement (factor 2), and coworker engagement (factor 3).
[b]Model with job engagement and supervisor engagement combined (factor 1), organization engagement (factor 2), and coworker engagement (factor 3).
[c]Model with job engagement and coworker engagement combined (factor 1), organization engagement (factor 2), and supervisor engagement (factor 3).
[d]Model with job engagement (factor 1), supervisor engagement and organization engagement combined (factor 2), and coworker engagement (factor 3).
[e]Model with job engagement (factor 1), supervisor engagement and coworker engagement combined (factor 2), and organization engagement (factor 3).
[f]Model with job engagement (factor 1), supervisor engagement (factor 2), and organization engagement and coworker engagement (factor 3).
*$p < .001$.

standardized root mean residual (SRMR) = .04). In addition, all factor loadings were statistically significant ($p < .01$) and were above .73 in magnitude. The average factor loading was .83 for job engagement, .89 for organization engagement, .93 for supervisor engagement, and .85 for coworker engagement. The average correlation among the latent factors was .55 (range: .44 to .81). These results provide evidence that the model meets Hu and Bentler's (1999) conservative two-index criteria for good model fit.

Because the correlations among the latent factors were relatively large, we tested a series of nested three-factor models in which we combined all possible pairs of highly correlated factors. As shown in Table 4, each of the six three-factor models fit the data much worse than did our hypothesized four-factor model. The χ^2 values for each of the three-factor models were significantly higher than the four-factor model, and fit indices of the four-factor model were far superior than the fit indices associated with the three-factor models.

Table 5. Confirmatory factor analysis results (study 2: sample 2)

	4-Factor model	3-Factor model[a]	3-Factor model[b]	3-Factor model[c]	3-Factor model[d]	3-Factor model[e]	3-Factor model[f]
χ^2	102.19*	238.06*	620.66*	500.42*	595.41*	663.57*	500.45*
df	48	51	51	51	51	51	51
CFI	.98	.93	.79	.84	.80	.78	.84
RMSEA	.06	.11	.19	.17	.19	.20	.17
SRMR	.03	.04	.17	.10	.16	.15	.08

df, degrees of freedom; CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardized root mean squared error.
[a]Model with job engagement and organization engagement combined (factor 1), supervisor engagement (factor 2), and coworker engagement (factor 3).
[b]Model with job engagement and supervisor engagement combined (factor 1), organization engagement (factor 2), and coworker engagement (factor 3).
[c]Model with job engagement and coworker engagement combined (factor 1), organization engagement (factor 2), and supervisor engagement (factor 3).
[d]Model with job engagement (factor 1), supervisor engagement and organization engagement combined (factor 2), and coworker engagement (factor 3).
[e]Model with job engagement (factor 1), supervisor engagement and coworker engagement combined (factor 2), and organization engagement (factor 3).
[f]Model with job engagement (factor 1), supervisor engagement (factor 2), and organization engagement and coworker engagement (factor 3).
*$p < .001$.

Sample 2

Scale intercorrelations and descriptive statistics for sample 2 can be found in Table 5. The fit of the four-factor model was again assessed with Mplus 7.3 (Muthen & Muthen, 1998). Identical information was used to assess model fit. The hypothesized four-factor model (12 items) showed satisfactory fit to the data ($\chi^2(48) = 102.19$, $p < .01$; CFI = .98; RMSEA = .06; SRMR = .03). In addition, all factor loadings were statistically significant ($p < .01$) and were above .73 in magnitude. The average factor loading was .83 for job engagement, .83 for organization engagement, .90 for supervisor engagement, and .87 for coworker engagement. The average correlation among the latent factors was .54 (range: .45 to .76).

Again, because the correlations among the latent factors were relatively large, we tested a series of nested three-factor models in which we combined all possible pairs of highly correlated factors. As shown in Table 5, each of the six three-factor models fit the data much worse than did our hypothesized four-factor model. The χ^2 values for each of the three-factor models were significantly higher than the four-factor model, and fit indices of the four-factor model were far superior to the fit indices associated with the three-factor models. Given this pattern of results across two independent samples, we concluded that the measurement of four engagement roles were indeed discriminant and advanced to testing the convergent validity hypotheses in study 3.

Study 3

The purpose of study 3 was to collect convergent validity evidence of the new RBES, this time using a sample of full-time employees. Specifically, we developed and tested hypotheses about potential antecedents to RBES as well as task and contextual performance outcomes of the four aspects of role-based engagement. The antecedents and outcomes examined in study 3 were derived from the theoretical and empirical engagement literature (Kahn, 1992; Macey & Schneider, 2008; May, Gilson, & Harter, 2004; Rich, Lepine, & Crawford, 2010; Saks, 2006, 2019). Our goal was to identify and assess antecedents and outcomes specifically targeted to the individual dimensions of the RBES, thus paving the way for future research and practical applications. The rationale for our hypothesized predictions is in the following sections.

Person-job and person-organization fit

Individuals who perceive good fit with their job and organizational roles are more likely to be engaged in those roles than those with low fit because it will be easier to be psychologically present and express their true selves. That is, when employees realize that their jobs require behaviors that are consistent with how they want to see themselves (their preferred self-images), they are more likely to see their job roles as valuable and worthwhile, and thus will be more eager to fully engage themselves (Kahn, 1992). Furthermore, when individuals see alignment between their personal values and those of their organization, they perceive that organizational role expectations are consistent with their preferred self-images (Chatman, 1989; Kahn, 1990). In support, Kahn (1990) suggests that 'it is difficult for people to engage personally in fulfilling work processes when organizational ends do not fit their own values' (716). Within this context, we argue that there are two major types of fit that should produce greater job and organizational engagement respectively.

First, person-job (P-J) fit is defined as the match between the abilities of a person and the demands of a job or the needs/desires of a person and what is provided by a job (Edwards, 1991). When individuals perceive congruence between themselves and their job, they should be more likely to fully engage in their jobs. In a study of organizational newcomers, P-J fit was positively correlated with a job engagement measure (Saks & Gruman, 2011). Second, person-organization (P-O) fit is 'the compatibility between people and organizations that occurs when at least one entity provides what the other needs, they share similar fundamental characteristics, or both' (Kristof, 1996: 4–5). Research indicates that P-O fit is associated with attitudes on the job (Saks & Ashforth, 2002) including employee engagement (Biswas & Bhatnagar, 2013). Biggs, Brough, and Barbour (2014) reported that strategic alignment, a combination of P-J and P-O fit, predicted work engagement in a longitudinal study. When individuals perceive good P-O fit, they should be more likely to fully engage in their organizational roles. Therefore we put forth the following two hypotheses:

Hypothesis 1: Job engagement will be positively related to P-J fit.

Hypothesis 2: Organization engagement will be positively related to P-O fit.

Leader-member and team-member exchange

Individuals who perceive positive relationships with their supervisor and coworkers are more likely to become engaged in those roles than those with poor relationships because it will be easier to be psychologically present and express their true selves in those social interactions. According to Kahn (1990), individuals who are sure of their fit with a social system are more likely to derive greater meaning from it and to become more engaged. Individuals are also likely to feel insecure and less psychologically available when they are unsure of their fit with an organization. Moreover, it is the rich and expressive interactions with coworkers and managers that allow people to feel valued, appreciated, and respected (Kahn, 1990). Thus, supervisors and coworkers are two important sources of social support that can provide individuals with a sense of social fit and connection with others in the workplace. As individuals connect with their supervisor and coworkers at an increasingly deeper level, they should become more engaged in those respective roles. We argue for two major types of social support to produce greater supervisor and coworker engagement respectively.

First, leader-member exchange refers to the quality of one's relationship with his or her supervisor (Graen & Uhl-Bien, 1995). When individuals perceive strong leader-member exchange, they should be more likely to fully engage with their supervisor. Team-member exchange refers to the overall quality of one's relationship with his or her work team members (Seers, 1989). When

individuals perceive strong team-member exchange, they should be more likely to fully engage with their coworkers. Therefore, we put forth the following two hypotheses:

Hypothesis 3: Supervisor engagement will be positively related to LMX.

Hypothesis 4: Coworker engagement will be positively related to TMX.

Individual task proficiency and organizational citizenship behaviors

Individuals with high job engagement are more fully invested in their formal job roles and are thus more likely to perform better on measures of individual task proficiency than those who are lower on job engagement (Rich, Lepine, & Crawford, 2010). Individual task proficiency refers to formal task expectations of the job. In other words, it is an indication of how well an individual has met the known expectations and requirements of the job role (Griffin, Neal, & Parker, 2007). Individual task proficiency is similar to Borman and Motowidlo's (1993) concept of 'task performance.' Meta-analytic research shows a positive relationship between job engagement and task performance (Christian, Garza, & Slaughter, 2011).

Individuals with high organizational engagement invest their full selves in the organization's mission and purpose. Because they bring their full selves when performing their duties as organizational members, they are apt to go above and beyond their formal job roles and contribute to the organization's overall goals in the form of OCB (Saks, 2006, 2019). OCB are employee behaviors that serve to enhance general organizational functioning such as helping coworkers and attending functions that are not required (Borman & Motowidlo, 1993; Organ, 1997). Furthermore, there are two major types of OCB, namely citizenship behavior directed to individuals (OCB-I; i.e., helping coworkers) and those directed to the organization (i.e., attending optional functions; OCB-O; McNeely & Meglino, 1994; Williams & Anderson, 1991). Past research has demonstrated a positive relationship between organizational engagement and OCB-O (Saks, 2006, 2019). Since organizational engagement concerns investment in one's organizational role, higher OCB-O should result as a function of greater organizational engagement. Therefore, we hypothesize the following:

Hypothesis 5: Job engagement will be positively related to individual task proficiency.

Hypothesis 6: Organization engagement will be positively related to OCB-O.

Citizenship behaviors directed to supervisor and coworkers

OCB-I may be further divided into two additional facets: OCB directed to supervisor (OCB-S; Rupp & Cropanzano, 2002) and organizational citizenship directed to coworkers (OCB-C; Lee & Allen, 2002). Managers who effectively motivate and inspire others are thought to set up contexts where individuals can find greater meaning and motivation at work, causing followers to feel more connected to them (Kahn & Heaphy, 2014). As individuals increase their attention and absorption/energy within their role as a subordinate of a specific supervisor, they are more likely to voluntarily help and support their supervisor and his/her specific needs as an individual. Followers with high supervisor engagement may engage in greater OCB-S because they are socially connected to their supervisor.

Positive work relationships with coworkers can produce quicker problem-solving (Baker, Cross, & Wooten, 2003), improve physical energy (Heaphy & Dutton, 2008), and promote deeper caring for work (Hinshelwood, 2001). As individuals increase their attention and absorption/ energy within the coworker role, they are more likely to voluntarily help and support their

coworkers' specific needs as individuals. Individuals with high coworker engagement may engage in greater OCB-C because they are socially connected to their coworkers. Therefore, we hypothesize the following:

Hypothesis 7: Supervisor engagement will be positively related to OCB-S.

Hypothesis 8: Coworker engagement will be positively related to OCB-C.

Method

Participants

Participants in this study were 491 employees at a small aircraft manufacturer in the southern United States who participated as part of a larger survey effort. All employees at the organization were invited to participate; the final response rate was 80%. Participants worked in departments spanning the entire organization (e.g., engineering, clerical, and production). The average tenure was 3.1 years (SD = 1.2). This study was approved by the university's research ethics committee.

Measures

Participants had the option of completing the survey either online or in via paper and pencil in a secure room on-site. The final 12-item RBES was administered, as well as the following measures.

Leader-member exchange (LMX). LMX was measured using the LMX-7, a seven item measure rated on a 5-point Likert-type scale where the scale anchors varied depending on the nature of the item (Graen & Uhl-Bien, 1995). This scale had an α of .90. A sample item is 'How well does your leader understand your job problems and needs?'

Team-member exchange (TMX). TMX was measured using the 10-item TMX Quality Scale rated on a 5-point Likert-type scale (from *totally disagree* to *totally agree*; Seers, Petty, & Cashman, 1995). The scale had an α of .85. A sample item is 'Individuals in my team work together effectively.'

Person-organization fit. Person-organization fit was measured with a three-item instrument by Cable and DeRue (2002). We used a 7-point Likert-type format (from *strongly disagree* to *strongly agree*). The α was .96. An example item is 'The things that I value in life are very similar to the things that my organization values.'

Person-job fit. Perceived person-job fit was measured using Lauver and Kristof-Brown's (2001) five-item measure. We utilized a 7-point Likert-type format (from *strongly disagree* to *strongly agree*). The α was .86. An example item is 'I am the right type of person for this type of work.'

Individual task proficiency. Individual task proficiency was measured using Griffin, Neal, and Parker's (2007) three-item measure. However, to reduce the likelihood of bias in the self-reporting of one's own job performance, the referent for each item was changed so that respondents provided the performance rating from the perspective of their supervisor rather than from their own perspective. Accordingly, an example item in this study was 'How would your supervisor rate your overall ability to carry out the core parts of your job over the past 12 months?' We utilized a 1–5 Likert-type format (from *poor* to *excellent*). The α was .94. The utility of having respondents provide a performance rating from their supervisor's perspective is supported by the results of a study by Schoorman and Mayer (2008) who found that such ratings are more highly correlated with actual supervisory ratings than are employee self-reports of their own performance.

Organization citizenship behavior to organization (OCB-O). OCB-O was measured with three items from Lee and Allen (2002). These items were developed to specifically target the organization as the outcome of citizenship behaviors. The items asked participants to report how often they engage in OCB-O. An example item is 'Defend the organization when other employees criticize it.' Items were assessed on a 5-point Likert-type scale (from *never* to *every day*). The α was .71.

Organization citizenship behavior to supervisor (OCB-S). Citizenship behaviors directed toward one's supervisor were assessed using three items from Rupp and Cropanzano (2002). The items asked participants to report how often they engage in OCB-S. An example item is 'Help my supervisor when he or she has been absent.' Rupp and Cropanzano (2002) reported a reliability of .88 for this measure. In the current study, the reliability was .78. Items were assessed on a 5-point Likert-type scale (from *never* to *every day*).

Organization citizenship behavior to coworker (OCB-C). OCB-C was measured with three items from Lee and Allen (2002). These items were developed to assess citizenship behaviors directed to others. The items asked participants to report how often they engage in OCB-C. A sample item is 'Show genuine concern and courtesy toward coworkers, even under the most trying business or personal situations.' Items were assessed on a 5-point Likert-type scale (from *never* to *every day*). The α was .66.

Results

In order to improve the participant to parameter ratio for testing the convergent validity hypotheses, we used domain-representative parceling to create three parcels as indicators of the four engagement dimensions, LMX, TMX, person-organization fit, person-job fit, task performance, OCB-O, OCB-S, and OCB-C. This approach is appropriate when researchers are interested in relationships at the level of the overall construct (Williams & O'Boyle, 2008). Items from the measures were distributed between three parcels each so that each parcel reflected the overall construct. To scale the latent variables, we arbitrarily fixed one of the factor loadings for each latent variable to 1.0. We freely estimated all other factor loadings and error variances of the indicators and the covariance among the latent variables.

The CFA model, which included 12 latent constructs representing the four aspects of engagement (job, organization, supervisor, and coworker), LMX, TMX, person-organization fit, person-job fit, task performance, OCB-O, OCB-S, and OCB-C fit the data well $\chi^2(528) =$ 1,095.66, $p < .01$, CFI = .95, RMSEA = .05, and SRMR = .05.

Hypothesis testing

Descriptive statistics and standardized latent correlation coefficients are shown in Table 6. All hypotheses were examined by evaluating the pattern of standardized latent correlation coefficients.

Construct validity hypotheses. Consistent with hypothesis 1, P-J fit was positively related to job engagement ($\beta = .54$, $p < .01$). Consistent with hypothesis 2, P-O fit was positively related to organization engagement ($\beta = .67$, $p < .01$). Consistent with hypothesis 3, LMX was positively related to supervisor engagement ($\beta = .87$, $p < .01$). Consistent with hypothesis 4, TMX was positively related to coworker engagement ($\beta = .69$, $p < .01$).

Criterion-related validity hypotheses. Supporting hypothesis 5, job engagement was positively related to individual task proficiency ($\beta = .30$, $p < .01$). Supporting hypothesis 6, organization engagement was positively related to OCB-O ($\beta = .54$, $p < .01$). Supporting hypothesis 7, supervisor engagement was positively related to OCB-S ($\beta = .32$, $p < .01$). Supporting hypothesis 8, coworker engagement was positively related to OCB-C ($\beta = .33$, $p < .01$).

Supplemental analyses

Due to concerns about the distinctiveness of the LMX and supervisor engagement constructs, we compared two CFA models. The first CFA model (four-factor), which included three latent constructs representing the three aspects of engagement (job, organization, and coworker) and a single latent construct comprised of both LMX and supervisor engagement, did not fit the data well $\chi^2(84) = 519.50$, $p < .01$, CFI = .93, RMSEA = .10, and SRMR = .04. The second CFA model (five-factor), which included four latent constructs representing the four aspects of

Table 6. Correlations and descriptives (study 3)

	Mean	SD	Org Eng	CoW Eng	Sup Eng	Job Eng	P-O Fit	TMX	LMX	P-J Fit	OCB-O	OCB-C	OCB-S
Org Eng	5.76	.93	.77										
CoW Eng	5.44	1.03	.53**	.90									
Sup Eng	4.97	1.45	.52**	.43**	.96								
Job Eng	5.93	.72	.80**	.49**	.44**	.77							
P-O Fit	4.57	1.39	.67**	.40**	.57**	.46**	.94						
TMX	5.66	.75	.39**	.69**	.38**	.29**	.38**	.74					
LMX	4.94	1.45	.45**	.36**	.87**	.37**	.49**	.42**	.93				
P-J Fit	6.32	.62	.51**	.23**	.18**	.54**	.21**	.29**	.20**	.82			
OCB-O	3.40	1.01	.54**	.28**	.31**	.49**	.30**	.23**	.25**	.18**	.71		
OCB-C	4.01	.90	.33**	.33**	.18**	.20**	.21**	.36**	.19**	.18**	.68**	.66	
OCB-S	3.40	1.12	.24**	.20**	.32**	.25**	.18**	.23**	.34**	.07	.55**	.41**	.78
Task Prof	4.05	.75	.30**	.13**	.23**	.30**	.17**	.29**	.32**	.31**	.14*	.10	.15**

Note: Coefficient αs are presented on the diagonal.
*$p < .05$, **$p < .01$.

engagement (job, organization, coworker, and supervisor) as well as a separate latent construct representing LMX, fit the data well $\chi^2(80) = 370.04$, $p < .01$, CFI = .96, RMSEA = .09, and SRMR = .04. A χ^2 difference test revealed a significant decrement in fit for the four-factor models $\Delta\chi^2(2) = 149.46$, $p < .01$. Furthermore, the CFI change between the four-factor and five-factor models was .03, indicating substantial improvement in model fit (see Cheung & Rensvold, 2002; Meade, Johnson, & Braddy, 2008). In other words, the five-factor model represents a substantial improvement in factor structure over the four-factor model, providing evidence for the distinctiveness of supervisor engagement and LMX.

Discussion

The purpose of study 3 was to gather support for the construct and criterion-related validity of the new RBES measure. The hypotheses predicting specific correlates of the four role-based engagement constructs were supported. Although not formally hypothesized, we found that alternative correlations were weaker than the predicted correlations. For instance P-O fit was most strongly related to organization engagement and P-J fit was most strongly related to job engagement. Finally, hypotheses were developed and tested to assess the predictive validity of the RBES. Job engagement was related to task proficiency, organizational engagement was related to OCB-O, supervisor engagement was related to OCB-S, and coworker engagement was related to OCB-C. Although the predicted relationships were supported, additional relationships emerged that warrant discussion.

First, job engagement predicted task proficiency to a similar degree of magnitude as did organizational engagement. Given that task proficiency measures the prescribed or predictable requirements of a role (Griffin, Neal, & Parker, 2007), individuals may be equally impacted by their level of engagement with the organization when deciding how to show up at work to fulfill their role's core requirements because these role requirements are put in place by the organization itself. Future research should examine other outcomes that may be more strongly impacted by job engagement such as individual proactivity (initiates change, is self-starting and future oriented; Griffin, Neal, & Parker, 2007) where the focus of one's discretionary work may be more driven by his/her intrinsic connection with the work itself and not required by the organization.

Second, coworker engagement predicted OCB-C to a similar degree of magnitude as did organizational engagement. Future research should examine contextual moderators of these effects. For example, organizational structure may impact the strength of these relationships such that more hierarchical, top-down contexts (e.g., manufacturing organizations such as in the present study) may constrain the extent to which coworker engagement impacts OCB-C. In these types of organizations there may be fewer opportunities to help coworkers beyond one's prescribed role requirements as compared to more matrixed organizations where role requirements are more fluid and emergent based on environmental and business needs.

General discussion

Integrating Kahn's original conceptualization of personal engagement as harnessing the self in work roles with role theory that suggests employees can enact multiple roles simultaneously (Lynch, 2007; Welbourne & Paterson, 2017), we conceptualize role-based engagement as an employee's attachment to different roles in the organization. In other words, role-based engagement is personal engagement that occurs when employees choose to be cognitively, psychologically, and emotionally present during work role performances. Role-based engagement is demonstrated by attention and absorption/energy directed to relevant work roles – job, organization, supervisor, and coworker. The four dimension RBES builds on and extends theory and research on different types of engagement (e.g., Saks & Gruman, 2014; Schaufeli & Salanova, 2011) by bringing together a more complete conceptualization of multiple engagements.

The items in the RBES were developed to assess the intensity of one's focus on a role (absorption/energy), and the duration of that intensity (attention). Data collected across three studies and four different samples consistently demonstrate the validity of the new RBES. First, the underlying four-factor dimensionality of the RBES was established in study 1 and confirmed in two different samples in study 2 with acceptable fit statistics and internal consistency reliabilities. The correlations among the four dimensions were modest, as expected. Second, the four-factor model fit better than did alternative, nested models as demonstrated in both samples in study 2. Third, the RBES' dimensions were related to conceptually similar constructs and less related to conceptually dissimilar constructs (study 3). Fourth, the dimensions of the RBES were related to relevant outcomes (study 3).

This role-based approach to engagement suggests that employees are able to simultaneously enact different roles in organizations, and that they can have different levels of engagement to those different roles. This targeted approach will be useful to understand how and why employees engage with and put forth effort to different aspects of their work. Recent studies suggest that engagement may not be a singular construct (Rothbard, 2001; Saks, 2006, 2019) suggesting that broad interventions may have limited impact. Thus, the RBES is a theoretically grounded tool that HRM practitioners can use to identify engagement issues and develop targeted HRM interventions.

Theoretical and practical implications

HRM researchers can expand on the role-based theory of engagement by studying antecedents specifically aligned with each role. For example, Wollard and Shuck (2011) identified several individual and organizational antecedents to engagement that have been mentioned in the literature. These antecedents can be linked to specific role-based engagements, providing HRM professionals with a roadmap of possible interventions that can be used to address low engagement to specific roles. Job characteristics, resources and tools to do the job, and opportunities for learning may be closely related to job engagement. Corporate social responsibility, vision, and mission may be related to organizational engagement. Performance management practices and supervisor leadership behaviors might be related to supervisor engagement, and coworker communication and cooperation may be related to coworker engagement. It is easy to see how HRM can continue to develop the theory around role-based engagement.

Organizations that do not clearly define engagement, struggle to improve engagement levels. Our targeted approach to measuring engagement to different roles will be useful for HRM practitioners to clearly define what is meant by role-based engagement and identify specific HRM factors that drive engagement. This ensures that HRM interventions will directly align with areas of engagement that are rated the lowest and/or most important to driving bottom-line metrics. Thus, the role-based approach makes the confusing notion of employee engagement tactical and something that can be managed. By providing a simple framework, more useful conversations should happen around what can be done to improve engagement.

Limitations and future directions

Although four independent U.S. working adult samples were used for cross-validation of the RBES, further evidence of the scale's generalizability should be explored. Future research should examine the RBES in samples outside of the United States and across a broader array of industries. Future research should also examine the discriminant validity of the RBES relative to other measures of employee attitudes such as job satisfaction and organizational commitment.

Second, although the majority of research on engagement is cross-sectional, including the current research, Kahn originally described engagement in terms of dynamic moments, ebbs and flows, and 'calibrations of self-in-role' (1990: 694). He recommended that researchers observe the interplay of the three primary psychological antecedents of engagement (meaningfulness,

availability, and safety) in order to examine their dynamic effects on engagement from moment-to-moment. Recent research supports within-person effects of engagement on outcomes (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Future research should use experience-sampling, within-subjects designs, and use multilevel modeling to develop and test models capturing the variance in individuals' job, organization, supervisor, and coworker engagement over time. Based on this theory, supervisor, and coworker engagement may be most directly impacted by psychological safety and personal resources/availability.

Although the variables used to establish convergent and predictive validity were grounded in the engagement literature, casting a wider net around the RBES will improve our understanding of the various engagement roles. For example, future research could examine the extent to which the various role-based dimensions predict incremental variance in individual and organizational outcomes beyond that of work engagement (Schaufeli et al., 2002), job engagement (Rich, Lepine, & Crawford, 2010), and organizational engagement (Saks, 2006). Future research may draw on Saks and Gruman's (2014) integrative theory of engagement to test how and why job resources, job demands, and leadership constructs impact various components of role-based engagement. Results from studies such as these will have strong implications for HRM practice and theory.

Because all constructs were measured from the same source, the results could have been biased due to common method variance (Podsakoff, MacKenzie, & Podsakoff, 2012). However, the lack of fit for the alternative models reduces this threat to validity. Future research could also collect peer and/or boss ratings of engagement outcomes (e.g., task proficiency, OCB-C, OCB-S, and OCB-O).

Finally, our research was cross-sectional, and so any inferences regarding causality are limited. Although we had strong theoretical and logical reasons to presume causal ordering, we encourage future research to use quasi-experimental and/or longitudinal designs to strengthen the conclusions made in this research. Indeed, some past research has utilized a longitudinal design, finding positive effects for antecedents to work engagement (job control and organizational-based self-esteem; Mauno, Kinnunen, & Ruokolainen, 2007).

Conclusion

In this paper, we described the development and validation of the RBES. With data from employees in four samples, we provided evidence of the psychometric properties of the RBES. The evidence in this study offers support for the utility of the RBES as a targeted measure of the four roles of engagement: job, organization, supervisor, and coworker. Due to the support for the RBES observed here, our hope is that HRM researchers and practitioners alike will utilize the RBES in future efforts to better understand the theory and practices surrounding these engagement roles, as well as to more efficiently improve employee engagement in a workforce that continues to be beleaguered by high levels of disengagement.

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