

## THE MEASUREMENT OF STATE ENGAGEMENT IN ACTIONS BEYOND BASIC PROFESSIONAL DUTIES

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### ABSTRACT

**Background:** The goal of this paper is to present the phenomenon of engagement in actions that go beyond basic professional duties, and the factor structure and other psychometric properties of the daily measurements of this construct, which corresponds with the growing interest of researchers in the phenomenon of employee engagement, extra-role behaviors and the factors that affect them on a daily basis. **Material and Methods:** The research was carried out among 62 full-time or part-time working students of the humanities and social sciences (79% of whom were female), using a 5-day on-line daily survey. The main measure was a modified Polish version of the 9-item questionnaire consistent with the *Utrecht Work Engagement Scale* (UWES), which was prepared on the basis of the adaptation of the *State Work Engagement* (SWE) questionnaire proposed by Breevaart et al. (2012) to measure daily work engagement. **Results:** The obtained results have shown that the adapted version of the SWE questionnaire is a reliable and valid measure which can be used to measure daily fluctuations in beyond-duties engagement. The 3-factor multilevel model has a satisfactory fit. **Conclusions:** The study contributes to the current body of literature by examining state engagement in actions that go beyond basic professional duties and the validity of its measurement. It also shows that giving employees more autonomy and feedback may positively influence their beyond-duties engagement. *Med Pr.* 2020;71(2):127–36

**Key words:** engagement in actions, beyond-duties engagement, state work engagement, multilevel factor analysis, psychological measurement, daily diary study

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### INTRODUCTION

#### Work engagement and beyond-duties engagement

The topic of employee work engagement has aroused great interest among both researchers and practitioners of industrial and organizational psychology for almost 3 decades [1]. Several conceptualizations of this phenomenon have appeared over this period, although not all of them have been empirically tested [2]. One of the most frequently quoted in the literature is the concept proposed by Schaufeli et al. [3, p. 74,75], who define work engagement as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption. The aforementioned components relate, respectively, to physical-energetic, emotional and cognitive types of engagement [4]. Vigor is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties. Dedication is understood as the sense of significance, enthusiasm, inspiration, pride, and challenge. Absorption is characterized by being fully concentrated and deeply

engrossed in one's work, and having difficulties in detaching oneself from work.

A meta-analysis of the correlates of work engagement has shown that its dimensions are positively associated with job resources such as social support, autonomy, feedback and self-efficacy; work engagement is also positively related with positive outcomes at work such as organizational commitment, performance, and health [5].

As previous research has shown [6], work engagement might also fluctuate within individuals over time. Thus, a within-person approach that examines daily fluctuations in work engagement has become a subject of great interest to psychologists in organizations. Thanks to such an approach, the characteristics of days on which employees show high engagement at work, as opposed to days on which their engagement is low, can be identified [7].

In a complex contemporary work environment that is constantly changing, managers and supervisors expect employees to be more than just satisfactory job performers [8]. As recent research has revealed, employ-

ees may influence their own levels of engagement [9]. Hence, the inclination of engaged employees to undertake additional actions on their own initiative seems a particularly important issue. As the research carried out by Sonnentag [10] has indicated, the daily level of employee engagement allows proactive behavior to be predicted. Other studies have shown that proactive goal generation is a strong predictor of individual innovative work behavior [11]; therefore, it may be important to examine employee engagement in actions that go beyond basic professional duties. Of particular concern is the need to both introduce a construct that captures this phenomenon, and to develop a tool to measure it.

The construct of “engagement in actions that go beyond basic professional duties” (shorter: beyond-duties engagement) concerns not only the physical-energetic component expressed in terms of behaviors, but also the thoughts and emotions associated with acting at work on one’s own initiative. Such engagement is a rather long-lasting state of mind in which a person takes goal-oriented actions and continues them regardless of the encountered difficulties and alternative aspirations. Devoting a greater amount of physical-energetic, cognitive and emotional efforts to extra-role work activities is a profound way for individuals to respond to their own needs that cannot be fulfilled by performing work activities strictly related to their job role. Beyond professional duties, engagement reflects a positive engagement which is based on an intrinsic nature of motivation, rather than a compulsive drive or other work addiction characteristics [12].

The present paper introduces the phenomenon of state engagement in actions that go beyond basic professional duties and presents research on the initial adaptation of the *State Work Engagement* (SWE) questionnaire – the state version of the *Utrecht Work Engagement Scale* (UWES) – in order to examine the described construct. The goal of the conducted research was to investigate both the between-person and within-person factor structure of the tool, as well as to examine the reliability and theoretical validity of the measurement.

### **Beyond-duties engagement and related constructs**

A review of the current literature was undertaken to check the current state of the theory and research on engagement in actions that go beyond basic professional duties. The search was carried out on the EBSCOhost database (last search: June 19, 2018) for the following entries: engagement in action, engagement in activities beyond job duties, self-initiative engagement, and

extra-role engagement. No relevant publications were found for the first 3 entries, but for the last a few publications were identified in which employee/work engagement was treated as a mediator of extra-role performance [13]. A search was also performed for “state engagement.” Only a few recent articles were found that referred to state work engagement measured with the state version of the UWES questionnaire [14,15].

The literature review also allowed the authors to find similar, though not identical, constructs with engagement in actions: proactive behavior, personal initiative and contextual performance. Proactive behavior is defined as “self-initiated and future-oriented action that aims to change and improve a situation or oneself” [16, p. 636]. As described by Grant and Ashford [17], the most important criterion for identifying proactive behavior is the employee’s anticipation, planning and focus on the future result that affects themselves or the environment; whether the task results from the in-role or extra-role is of little importance. Beyond-duties engagement applies only to extra-role activities. Personal initiative is understood as “as a constellation of behaviors in individuals with the following attributes: to be consistent with the organization’s mission, to have a long-term focus, to be goal-directed and action-oriented, to persist in the face of barriers and setbacks, and to be self-starting and proactive” [18, p. 38].

Beyond-duties engagement includes not only activities intended to implement the mission of the organization, but also activities aimed at self-development or the benefit of other people in the work environment. Moreover, both proactive behavior and personal initiative describe only a specific constellation of behaviors, while beyond-duties engagement also includes affective and cognitive elements – just like work engagement. Contextual performance is defined as non-task-related work behaviors and activities that contribute to the social and psychological aspects of the organization [19]. These activities include volunteering for additional work, following organizational rules and procedures even when they are personally inconvenient, and assisting and cooperating with coworkers, etc. Contextual performance maintains the broader organizational, social, and psychological environment in which the technical performance takes place [20]. It consists of 4 elements: persistence of enthusiasm, assistance to others, following rules and prescribed procedures, and openly defending the organization’s objectives [19]. Meanwhile, beyond-duties engagement is directed not only at the organization’s goals but also at the employee’s

personal goals; it also assumes a long-term engagement process.

Overall, 2 fundamental issues based on the literature review were found: first, there are a few constructs regarding extra-role phenomena; second, none of them are defined in terms of a gradual process that includes physical-energetic, cognitive and emotional aspects – they are focused solely on behaviors. In contrast, the assumption behind the development of a new construct of engagement in actions that go beyond professional duties is that motivation is a psychological process which includes activation or energy, effort or persistence and direction towards goals [21].

### **Measurement strategy – state beyond-duties engagement**

To measure work engagement, Schaufeli and Bakker [22] proposed a 17-item *Utrecht Work Engagement Scale* (UWES-17), which has already been translated into 29 languages. Subsequently, Schaufeli et al. [23] proposed a shortened 9-item version of the UWES questionnaire which maintains the 3-factor structure of the tool. Due to the similarities between the 2 constructs (work engagement and engagement in actions that go beyond basic professional duties), to measure the latter, the authors decided to use the modified version of UWES-9.

It was also assumed that – like work engagement – beyond-duties engagement might also fluctuate within individuals over time, hence the proposal to study the phenomenon of state work engagement in actions that go beyond basic professional duties. A natural choice for measuring this construct was to adapt the state version of UWES (SWE).

Sonnentag et al. [24] defined state work engagement (SWE) as a transient, work-related experience that fluctuates within individuals over a short period of time. According to these researchers, the measurement of the work engagement construct on a within-person level can bring threefold benefits. First, it helps in capturing the dynamic variability of the work engagement phenomenon: employees are more engaged in work on some days than on others [9]. Moreover, as Xanthopoulos and Bakker [6] have noted, studies on state work engagement suggest that at least one-third of the total variance of state work engagement can be attributed to within-person fluctuations.

Second, it helps to identify the situational factors that must be present in order for a person to get engaged in his or her tasks on a given day. The literature review by Bakker [25] shows that on days when employees have

sufficient levels of job control, they proactively try to optimize their work environment in order to stay engaged.

Third, it can bring stronger evidence about the predictors and outcomes of engagement than by studying this construct at the general level. For example, the research conducted among the scientific and administrative staff of a Dutch university has shown that positive emotions have an indirect effect on the level of vigor, dedication, and absorption through hope across days of the study [26].

The best method to study state-like constructs is the daily diary method. The daily diary is a self-report research tool that is completed by respondents every day, for a period of several days to several months, and is intended to measure daily variability in terms of psychological functioning and response to important life events [27]. Daily studies are popular in measuring many constructs: stress reactions, emerging and persistence of emotions and feelings, or functioning in interpersonal relationships [28]. What might be problematic is finding the right research tools that should be adapted to the daily measurement. For this purpose, most researchers shorten the longer tools for retrospective research, for example by choosing items with the largest factor loadings on the scale [29]. However, it is unclear whether the quality and configuration of constructs at the state-like level is identical to the quality and configuration of constructs studied at the trait-like level [24]. Hence, research on the reliability and relevance of such tools is needed [30]; this is also true of the daily version of the UWES questionnaire.

In previous studies of the daily levels of engagement using the daily diary method, a 9-item version of the UWES questionnaire was used. For this purpose, the researchers adapted the questionnaire items, adding the word “today” at the beginning of each item and respectively changing the forms of verbs. Although most diary studies carried out in such a way have shown the good internal consistencies of the UWES subscales, the factor structure of their state version has never been established using a multilevel analysis [30]. Sonnentag et al. [24] have not only suggested a study of the levels of day-related work engagement to better understand how it is related to its predecessors and consequences, but they also recommend distinguishing 3 elements of daily engagement in work because it is likely that employees do not experience vigor, dedication and absorption simultaneously.

Breevaart et al. [30] decided to undertake this task. For this purpose, they used data from 3 studies that cov-

ered a total of 271 people who completed the daily diary for 5 consecutive days (a total of 1355 cases). Based on the results of previous studies, they assumed that the factor structure would be invariant across the levels of analysis. Therefore, they decided to conduct a confirmatory multilevel factor analysis for the 1- and 3-factor model. It showed that the 3-factor model for SWE better fitted the data (CFI = 0.96, RMSEA = 0.06, BIC = 30686.5, SRMR<sub>within</sub> = 0.04, SRME<sub>between</sub> = 0.04) than the 1-factor model. An additional analysis revealed that the factor loadings at the between-level were higher (0.67–0.98) than at the within-level (0.59–0.88); also, correlations between the 3 factors were higher at the between-level (0.89–0.99) than at the within-level (0.78–0.97). They concluded that the adapted version of the UWES captured both trait and state work engagement, as well as the 3-factor structure of UWES.

To develop the tool measuring state engagement in actions that go beyond basic professional duties, the authors changed the content of particular items in SWE. Also, some changes were introduced in the instruction to focus the respondents' attention on activities that are not a result of the basic scope of the work responsibilities of the organization.

## MATERIAL AND METHODS

### Participants and procedure

The research was carried out among working students of the humanities and social sciences at 4 Polish universities. The respondents were recruited in 2 different ways: through an information group for students on a social network and through lecturers who talked during their classes about the idea of research and encouraged students to take part in it. Those willing to participate shared their e-mail addresses and received a link to a daily diary on the surveymonkey.com platform [31]. The participants were asked to fill in the daily diary in the evening for 5 consecutive days, from Monday to Friday. During the study, the participants used a pseudonym of their choice; this made it possible to match the data obtained on each day with demographic data. To increase the likelihood of completing the diary, the participants received an e-mail reminding them of their participation in the study every day at around 5 p.m.

One hundred and six people participated in the study, but the analysis included answers from only 62 people who filled in the daily diary for a minimum of 4 consecutive days. The sample consisted of 49 women and 13 men, aged 19–47 ( $M = 27.46$ ,  $SD = 6.90$ ), who were

studying in the daily system ( $N = 28$ ) or the extramural system (a popular form of studies in Poland for adults who are unable to attend standard studies for personal reasons,  $N = 34$ ), working full time ( $N = 34$ ) or part time ( $N = 28$ ).

### Materials

A modified Polish version of the 9-item UWES questionnaire [23] measuring work engagement was used, prepared through adapting the SWE questionnaire proposed by Breevaart et al. [30] to measure work engagement on a daily basis. The purpose of the modification was to receive a questionnaire measuring daily engagement in actions that go beyond basic professional duties. In the modified version, the instruction was as follows: "The following statements are about how you feel while performing activities that go beyond your basic professional duties – those that are not a result of the basic scope of work responsibilities of your organization. Please read each statement carefully and decide if you felt today this way about your job. If you did not have this feeling, choose 0 (zero) on the scale after the statement. If you had this feeling, choose the number from 1 to 6 that best describes how frequently you felt that way." In addition, in the content of the items, all instances of the phrases "work" and "I was working" were replaced by the words "actions" and "I was acting," respectively.

The participants rated items on a 7-point scale from 0 ("never/strongly disagree") to 6 ("always/strongly agree"). Examples of items are: "Today, my actions inspired me" and "Today, I felt proud of the actions that I took." Prior to the research, the intelligibility of the contents of the instruction and individual statements were consulted with 2 organizational psychologists and 2 non-academic persons.

In order to find the relationships between state engagement in actions that go beyond basic professional duties and job/personal resources, the following items were used:

- to measure daily autonomy at work – "Today I was able to decide how to perform my actions;"
- to measure the daily sense of competence – "My knowledge and skills allowed me to successfully perform today's actions;"
- to measure daily feedback – "Today, I received a lot of feedback from other people about my actions."

Although these variables are measured only with 1 item each that is not derived from commonly used questionnaires, such single items have been identi-



fied as important indicators of the commonly used scales [32].

### Strategy of analysis

Research was conducted using the daily diary method. In typical diary studies, 2 types of data are obtained: from the daily level within a given person and from the level of individual persons (between-person), where the daily data is embedded in the data at the level of persons [33]. A method that simultaneously uses the within- and between-person covariance matrices is the multilevel confirmatory factor analysis (MCFA).

The MCFA was conducted in Mplus 7 software. To assess the fit of the models, the  $\chi^2$  test, CFI, RMSEA, and SRMR were used. Due to the sample size (35 participants  $\times$  5 days + 27 participants  $\times$  4 days = 283 cases for the within-person level) and distributional assumptions, the weighted least square mean and variance adjusted (WLSMV) estimator was used. Other analyses were performed on averaged variables using Statsoft STATISTICA 13 software. To observe weekly changes in the level of individual factors, analyses with repeated measurements were used separately for 5-day and 4-day measurements.

## RESULTS

### Descriptive statistics

First, the means, standard deviations, and intercorrelations were calculated for the 9 items at the between-level of analysis and the within-level of analysis. The corresponding values are shown in Table 1.

### Multilevel confirmatory factor analysis

In order to verify the factor structure of the questionnaire, the MCFA was performed for 1- and 3-factor models. The analysis showed that the 3-factor model had a significantly better fit (Satorra-Bentler  $\Delta\chi^2(6) = 69.613$ ,  $p < 0.0001$ ). The fit indices also proved the considerably improved fit of the 3-factor model (Table 2).

The factor loadings of the 3-factor model seen in Figure 1 tend to be higher at the between-level (0.57–1.00) than at the within-level (0.60–0.92). Correlations between the 3 factors were very high for both the between-level (0.82–0.99) and the within-level (0.91–1.00). This indicates quite strong connotations between the factors at both levels; however, it does not indicate their identicalness since this was ruled out by the 1- and 3-factor models comparison test. The models were also analyzed under different estimators to exclude coeffi-

cient inflation problems. The obtained structure seems consistent with the validation analysis of the questionnaire carried out by the authors of the original version of the SWE questionnaire.

### Reliability and validity of the modified version of SWE

The reliability of the questionnaire was estimated using the internal consistency Cronbach's  $\alpha$  coefficient. The analysis showed high reliability for all scales of the modified version of the SWE questionnaire across the days of the measurements  $\alpha_{\text{vigor}} = 0.89$ ,  $\alpha_{\text{absorption}} = 0.86$  and  $\alpha_{\text{dedication}} = 0.89$ . The  $\alpha$  coefficient estimated for each day separately varied between 0.82–0.90 for vigor, 0.78–0.85 for absorption, and 0.88–0.95 for dedication.

To assess the theoretical validity of the modified version of the SWE questionnaire, 3 criteria variables were chosen: the sense of autonomy, the sense of competence, and feedback from others. It was predicted that state engagement in actions that go beyond basic professional duties would positively correlate with the average weekly level of these variables.

Correlation analysis results confirmed all predictions (Table 3). There were statistically significant relations of the average weekly level of autonomy, competence and feedback with the factors of daily engagement in actions that go beyond the basic professional duties. Particularly high correlations of weekly vigor, dedication and absorption with feedback from others were reported ( $r$  values between 0.54 and 0.65).

To determine if there are differences in the dependent variable between the independent variables such as gender, age, study mode and range of working time, a one-way analysis of variance (ANOVA) with repeated measurements was performed separately for 5-day and 4-day measurements.

The results of the study did not show any differences in the daily level of the factors of engagement in actions that go beyond the basic professional duties for people of different ages, different sexes, those studying in different modes, and those working full or part time. Significant differences occurred only in the overall level of engagement in actions that go beyond basic professional duties on particular days of the week,  $F(3,180) = 2.80$ ,  $p = 0.041$ ). Analyses for the 4-day measurement showed that the overall level of engagement in action dropped from Tuesday ( $M = 9.72$ ) to Wednesday ( $M = 8.07$ ); however, it rose on Thursday ( $M = 9.36$ ). It can be seen that engagement in action was at the lowest level on Wednesdays.

**Table 1.** Descriptive statistics for the 9 items of the Polish adaptation and modification of the *State Work Engagement* questionnaire carried out among full-time or part-time working students (N = 62)

Items*	M	SD	Pearson's linear correlation coefficients									
			1	2	3	4	5	6	7	8		
1. Today, I felt bursting with energy while acting (Vi)	2.96	1.41										
2. Today, I felt strong and vigorous while acting (Vi)	2.90	1.39	0.82 (0.96)									
3. When I got up this morning, I felt like taking these actions (Vi)	2.51	1.58	0.49 (0.91)	0.54 (0.86)								
4. Today, I was happy when I was acting intensely (Ab)	3.24	1.62	0.70 (0.92)	0.76 (0.95)	0.45 (0.87)							
5. Today, I was immersed in my actions (Ab)	3.43	1.59	0.62 (0.88)	0.66 (0.81)	0.49 (0.72)	0.67 (0.82)						
6. Today, I got carried away when I was acting (Ab)	2.37	1.68	0.54 (0.54)	0.55 (0.58)	0.34 (0.46)	0.52 (0.47)	0.64 (0.56)					
8. Today, I was enthusiastic about my actions (De)	3.48	1.49	0.67 (0.67)	0.70 (0.80)	0.49 (0.71)	0.70 (0.86)	0.72 (0.96)	0.57 (0.54)				
7. Today, my actions inspired me (De)	2.74	1.48	0.68 (0.68)	0.72 (0.80)	0.45 (0.74)	0.73 (0.79)	0.61 (0.83)	0.50 (0.67)	0.67 (0.93)			
9. Today, I felt proud of the actions that I took (De)	3.17	1.59	0.64 (0.75)	0.71 (0.85)	0.51 (0.76)	0.75 (0.92)	0.75 (0.83)	0.54 (0.53)	0.72 (0.90)	0.68 (0.95)		

\*The original items are in Polish. The English items have not yet been tested empirically.  
Ab – absorption, De – dedication, Vi – vigor.

**Table 2.** Model fit for a priori multilevel models for 1-factor and 3-factor solutions of the Polish adaptation and modification of the *State Work Engagement* questionnaire carried out among full-time or part-time working students (N = 62)

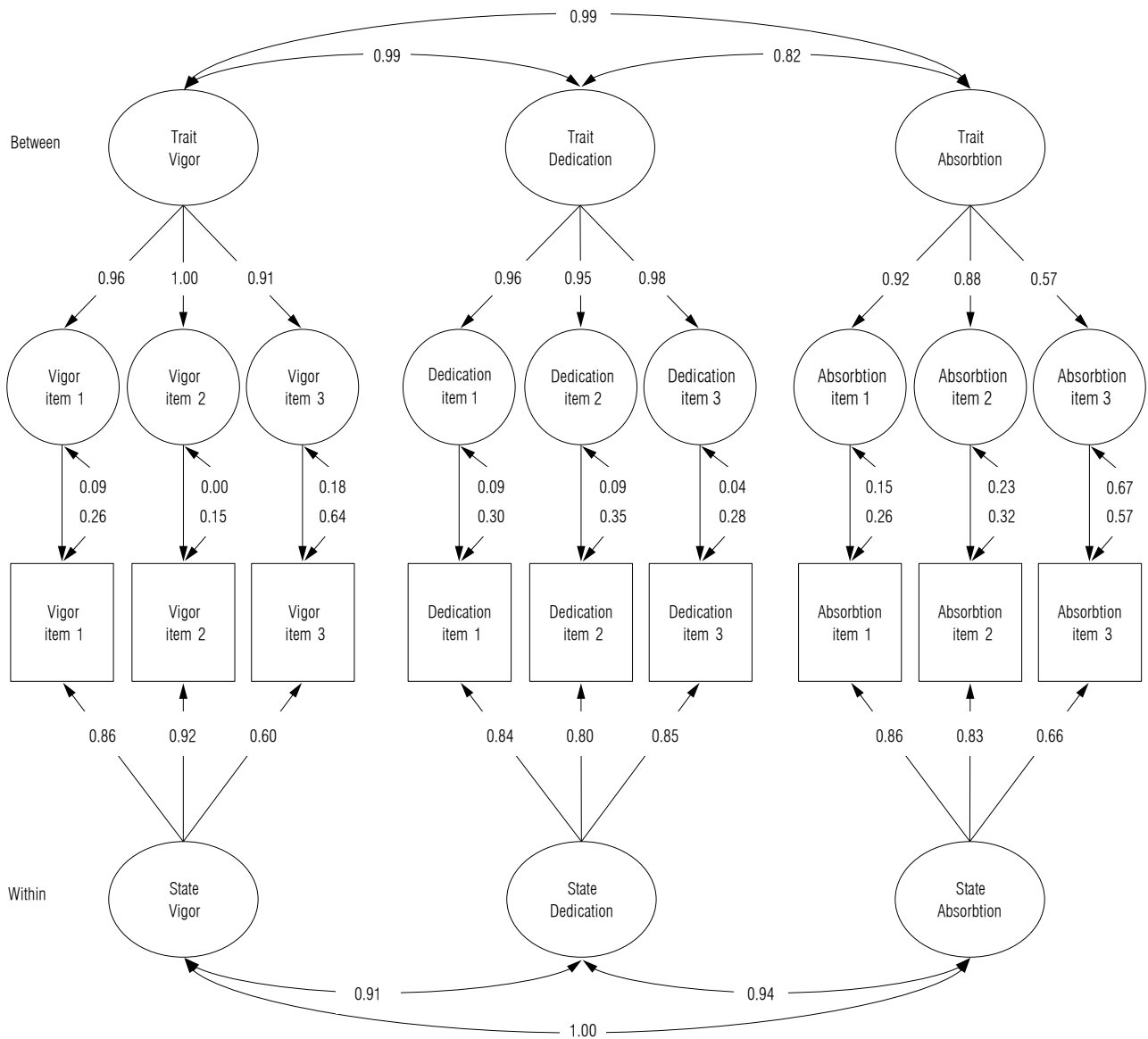
Model	$\chi^2$	df	p	RMSEA	CFI	TLI	SRMR within (between)
1-factor	136.966	54	<0.0001	0.074	0.876	0.834	0.033 (0.067)
3-factor	94.055	48	0.0001	0.058	0.931	0.897	0.028 (0.044)

df – degrees of freedom, CFI – comparative fit index, RMSEA – root means square error of approximation, SRMR – standardized root mean square residual, TLI – Tucker-Lewis coefficient.

**Table 3.** Correlations between daily engagement in activities that go beyond basic job duties and related variables

Variable	Vigor	Dedication	Absorption
Autonomy	0.38*	0.40	0.38*
Competence	0.56	0.49	0.51
Feedback	0.54	0.65	0.60

\*p = 0.002, p < 0.001.



**Figure 1.** Path diagram of the final 3-factor model of the Polish adaptation and modification of the *State Work Engagement* questionnaire

**DISCUSSION**

The main goal of the presented study was:

- 1) to examine both the between-person and within-person factor structure of the modified version of the SWE questionnaire to measure engagement in actions that go beyond professional job duties by using a daily diary study and a multilevel analysis;
- 2) to test the reliability and theoretical validity of the measurement.

The conducted MCFA showed that the 3-factor model fitted the data quite well. This means that the

adapted version of the SWE questionnaire holds both trait and state beyond-duties engagement, and there is no need to prepare a conceptually different measure for the state beyond-duties engagement. As a result, it can be concluded that engagement in actions that go beyond basic professional duties is a construct that should be analyzed at both the between-level (trait engagement in action) and the within-level (state engagement in action).

The relationships between particular items and their corresponding factors seem to replicate the overall structure of the model proposed by Breevaart et al. [30]. The strong correlations between the factors are hard to

explain, yet they are also present in the original model. It is possible that the close relationship between factors indicates the existence of a higher order factor. Unfortunately, it is impossible to reliably test this assumption based on this data.

The results obtained indicate that the 3 engagement factors are closely related on the between-level and the within-level of analysis. Therefore, it may be concluded that there is 1 factor (engagement in actions that go beyond basic professional duties) which is made up of 3 factors that correspond to 3 aspects of engagement: vigorous, affective, and cognitive. Similar to work engagement [23], engagement in actions that go beyond basic professional duties can be measured as an independent construct. Therefore, depending on the researchers' predictions about the differentiation of the 3 factors of beyond-duties engagement in relation to the outcome variables, the total score or individual factors can be calculated.

By analyzing the psychometric properties of the adapted version of the SWE questionnaire to measure beyond-duties engagement, it can be stated that it is a reliable and theoretically valid measurement. The reliability coefficients for all scales were reasonably high for such a short assessment. As predicted, the results showed significant relations between the average weekly level of autonomy, competence and feedback, and all the factors of daily engagement in actions that go beyond the basic professional duties. These results are consistent with those presented by other authors who have studied the relationship between job resources, personal resources and work engagement on the between-level [5] and the within-level [34]. This means that employees are more likely to undertake additional actions and become immersed in them when they believe that they are capable of performing them well, are able to decide how to do them, and will receive feedback from their supervisors, coworkers, partners or clients on how they are performing.

Based on the results of analyses with repeated measurements, no significant differences were found in the scope of the daily level of engagement in actions that go beyond the basic professional duties of working students, regarding personal variables such as age, gender, or hours worked per week. These results can be interpreted in such a way that beyond-duties engagement is a state that can be achieved by any person, and its incidence or intensity depends mostly on personality traits and factors related to the goal or situation of the action; however, certain differences appeared in the lev-

el of beyond-duties engagement on particular days of the week, with the lowest engagement on Wednesdays. This result confirms the thesis that engagement in action is a fluctuating state which may change during the week. Its lowest level on Wednesdays may be a result of the general drop in employee energy in the middle of the working week.

Despite its contribution, the study also has some limitations. First, the research group was not large enough, considering the MCFA. Although no predetermined amount of observation is needed to perform the MCFA [30], some researchers claim that there should be several hundred participants or more [35].

Second, the gender distribution was uneven, with more than 3 times as many women as men. This proportion more or less corresponds to the gender distribution in the humanities and social sciences in Poland, but it does not translate into a proportion of professionally active people. Therefore, in the future, it would be worth repeating the research on a larger group of respondents with more men.

Third, the measurement of state engagement in actions took place only once a day, with only 44% of the respondents completing the daily diary for 4 consecutive days. Therefore, in the future, it would be worth analyzing the factor structure of the modified version of the SWE questionnaire with repeated measurements during the day.

Fourth, the variables used to check the theoretical validity of the questionnaire, such as the sense of autonomy, the sense of competence and feedback from others, were measured only by individual items. However, as Debus et al. [32] have stated, the use of single items demonstrates more favorable psychometric properties than multi-item scales.

Three additional issues related to the validity of the beyond-duties engagement should be resolved in future studies that should:

- 1) examine the correlations of the beyond-duties engagement with measures of work engagement;
- 2) analyze predictive contributions of the new construct beyond what can be predicted from a general construct of work engagement;
- 3) analyze the positive vs. negative nature of engagement in additional actions by studying its relationships with measures of work addiction and indicators of psychosocial functioning (e.g., anxiety, stress, physical health, quality of life, sleep quality, etc.), as well as any potential underlying disorders (particularly ADHD and obsessive-compulsive personality disorder).



## CONCLUSIONS

The value of this paper is that it introduces a new view on employee engagement which includes undertaking actions that go beyond the requirements of the manager or organization. The presented study, using advanced statistical methods such as MCFA, shows that such engagement can be measured as both a trait and a state. It is recommended that the presented measure is used in future daily diary studies on employees' attitudes and behaviors in organizations. Moreover, based on the results of the analysis of the relationship between engagement in actions and positive work factors, it could be concluded that giving employees more autonomy and feedback at work is positively related to their beyond-duties engagement. However, future studies are needed to explore whether encouraging employees to additional work is always beneficial.

## REFERENCES

- Saks AM, Gruman JA. What do we really know about employee engagement. *Hum Resour Dev Quart.* 2014;25(2): 155–82, <https://doi.org/10.1002/hrdq.21187>.
- Shuck B, Wollard K. Employee engagement and HRD: A seminal review of the foundations. *Hum Resour Dev Rev.* 2010; 9(1):89–110, <https://doi.org/10.1177/1534484309353560>.
- Schaufeli WB, Salanova M, González-Romá V, Bakker AB. The measurement of engagement and burnout: A confirmative analytic approach. *J Happiness Stud.* 2002;3:71–92, <https://doi.org/10.1023/A:1015630930326>.
- Schaufeli WB, Bakker AB. Defining and measurement of work engagement. In: Bakker AB, Leiter MP, editors. *Work engagement: A handbook of essential theory and research.* New York: Psychology Press; 2010. p. 10–23.
- Halbesleben JRB. A meta-analysis of work engagement: Relationships with burnout, demands, resources and consequences. In: Bakker AB, Leiter MP, editors. *Work engagement: A handbook of essential theory and research.* New York: Psychology Press; 2010. p. 102–17.
- Xanthopoulou D, Bakker AB. State work engagement: The significance of within-person fluctuations. In: Bakker AB, Daniels K, editors. *A day in the life of a happy worker.* Hove Sussex: Psychology Press; 2014. p. 25–40.
- Kühnel J, Sonnentag S, Bledow R. Resources and time pressure as day-level antecedents of work engagement. *J Occup Organ Psychol.* 2012;85(1):181–98, <https://doi.org/10.1111/j.2044-8325.2011.02022.x>.
- Campbell DJ. The proactive employee: Managing workplace initiative. *Acad Manag Perspect.* 2000;14(3):52–66, <https://doi.org/10.5465/ame.2000.4468066>.
- Bakker AB, Albrecht S. Work engagement: current trends. *Career Devel Interna.* 2018;23(1):4–11, <https://doi.org/10.1108/CDI-11-2017-0207>.
- Sonnentag S. Recovery, work engagement, and proactive behavior: A new look at the interface between nonwork and work. *J Appl Psychol.* 2003;88:518–28, <https://doi.org/10.1037/0021-9010.88.3.518>.
- Odoardi C. The relationship between proactive goal generation and innovative behaviour at work. *J Manage Dev.* 2015;34(5):553–65, <https://doi.org/10.1108/JMD-04-2014-0037>.
- Atroszko PA, Demetrovics Z, Griffiths MD. Beyond the myths about work addiction: Toward a consensus on definition and trajectories for future studies on problematic overworking: A response to the commentaries on: Ten myths about work addiction (Griffiths et al., 2018). *J Behav Addict.* 2019;8(1):7–15, <https://doi.org/10.1556/2006.8.2019.11>.
- Salanova M, Lorente L, Chambel MJ, Martínez IM. Linking transformational leadership to nurses' extra-role performance: the mediating role of self-efficacy and work engagement. *J Adv Nurs.* 2011;67(9):2256–66, <https://doi.org/10.1111/j.1365-2648.2011.05652.x>.
- Reis D, Arndt C, Lischetzke T, Hoppe A. State work engagement and state affect: Similar yet distinct concepts. *J Vocat Behav.* 2016;93:1–10, <https://doi.org/10.1016/j.jvb.2015.12.004>.
- Venz L, Sonnentag S. What matters for work engagement? A diary study on resources and the benefits of selective optimization with compensation for state work engagement. *J Organ Behav.* 2018;39(1):26–38, <https://doi.org/10.1002/job.2207>.
- Parker SK, Williams HM, Turner N. Modeling the antecedents of proactive behavior at work. *J Appl Psychol.* 2006;91(3):636–52, <https://doi.org/10.1037/0021-9010.91.3.636>.
- Grant AM, Ashford SJ. The dynamics of proactivity at work. *Res Organ Behav.* 2008;28:3–34, <https://doi.org/10.1016/j.riob.2008.04.002>.
- Frese M, Fay D, Hilburger T, Leng K, Tag A. The concept of personal initiative: Operationalization, reliability and validity in two German samples. *J Occup Organ Psychol.* 1997;70:139–62, <https://doi.org/10.1111/j.2044-8325.1997.tb00639.x>.
- Borman WC, Motowidlo SJ. Task performance and contextual performance: The meaning for personnel selection research. *Hum Perform.* 1997;10(2):99–109, [https://doi.org/10.1207/s15327043hup1002\\_3](https://doi.org/10.1207/s15327043hup1002_3).
- Bergman ME, Donovan MA, Drasgow F, Overton RC, Henning JB. Test of Motowidlo et al.'s (1997) theory of individual differences in task and contextual performance.

- Hum Perform. 2008;21:227–53, [https://doi.org/10.1207/s15327043hup1002\\_1](https://doi.org/10.1207/s15327043hup1002_1).
21. Latham GP. Work motivation. History, theory, research, and practice. Thousand Oaks: Sage; 2007.
  22. Schaufeli WB, Bakker AB, editors. Utrecht Work Engagement Scale: Preliminary manual [Internet]. Department of Psychology, Utrecht University; 2003 [cited 2019 Feb 4]. Available from: [https://www.wilmarschaufeli.nl/publications/Schaufeli/Test%20Manuals/Test\\_manual\\_UWES\\_English.pdf](https://www.wilmarschaufeli.nl/publications/Schaufeli/Test%20Manuals/Test_manual_UWES_English.pdf).
  23. Schaufeli WB, Bakker AB, Salanova M. The measurement of work engagement with a short questionnaire: A cross-national study. *Educ Psychol Meas*. 2006;66:701–16, <https://doi.org/10.1177/0013164405282471>.
  24. Sonnentag S, Dormann C, Demerouti E. Not all days are created equal: The concept of state work engagement. In: Bakker AB, Leiter MP, editors. *Work engagement: A handbook of essential theory and research*. New York: Psychology Press; 2010. p. 25–38.
  25. Bakker AB. Daily Fluctuations in Work Engagement. An Overview and Current Directions. *Eur Psychol*. 2014;9: 227–36, <https://doi.org/10.1027/1016-9040/a000160>.
  26. Ouweneel E, Le Blanc PM, Schaufeli WB, van Wijhe CI. Good morning, good day: A diary study on positive emotions, hope, and work engagement. *Hum Relat*. 2012;65(9): 1129–54, <https://doi.org/10.1177/0018726711429382>.
  27. Bolger N, DeLongis A, Kessler RC, Shilling EA. Effects of Daily Stress on Negative Mood. *J Pers Soc Psychol*. 1989;57 (5):808–818, <https://doi.org/10.1037/0022-3514.57.5.808>.
  28. Gunthert KC, Wenzel SJ. Daily diary methods. In: Mehl MR, Conner TS, editors. *Handbook of research methods for studying daily life*. New York: Guilford Press; 2012. p. 144–59.
  29. Gunthert KC, Cohen LH, Butler AC, Beck JS. Depression and next-day spillover of negative mood and depressive cognitions following interpersonal stress. *Cognit Ther Res*. 2007;31(4):521–32, <https://doi.org/10.1007/s10608-006-9074-1>.
  30. Breevaart K, Bakker AB, Demerouti E, Hetland J. The measurement of State Work Engagement. A multilevel factor analytic study. *Eur J Psychol Assess*. 2012;28(4):30512, <https://doi.org/10.1027/1015-5759/a000111>.
  31. Survey Monkey [Internet]. San Mateo: The Organization; 2019 [cited 2019 Feb 4]. Available from: <http://www.surveymonkey.com>.
  32. Debus ME, Probst TM, König CJ, Kleinmann M. Catch me if I fall! Enacted uncertainty avoidance and the social safety net as country-level moderators in the job insecurity–job attitudes link. *J Appl Psychol*. 2012;97(3):690–8, <https://doi.org/10.1037/a0027832>.
  33. Sonnentag S. Work, recovery activities, and individual well-being: A diary study. *J Occup Health Psychol*. 2001; 6(3):196–210, <https://doi.org/10.1037/1076-8998.6.3.196>.
  34. Bakker AB, Bal PM. Weekly work engagement and performance: A study among starting teachers. *J Occup Organ Psychol*. 2010;83:189–206, <https://doi.org/10.1348/096317909X402596>.
  35. Mok M. Sample size requirements for 2-level designs in educational research. *Multilevel Model Newsl*. 1995;7:11–5.