Revista de Psicología del Trabajo y de las Organizaciones Journal of Work and Organizational Psychology Revista de Psicología del Trabajo y de las Organizaciones

ISSN: 1576-5962 revistas\_copm@cop.es

Colegio Oficial de Psicólogos de Madrid España

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Revista de Psicología del Trabajo y de las Organizaciones, vol. 32, núm. 1, abril, 2016, pp. 11-16

Colegio Oficial de Psicólogos de Madrid

Madrid, España

Available in: http://www.redalyc.org/articulo.oa?id=231344974002



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# Journal of Work and Organizational Psychology



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# Today's work experience: Precursors of both how I feel and how I think about my job?

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#### ARTICLE INFO

Article history: Received 8 February 2014 Accepted 25 November 2015 Available online 7 January 2016

Keywords: Job satisfaction State affect Work events Affectivity Cognition

Palabras clave: Satisfacción laboral Afecto de estado Acontecimientos laborales Afectividad Cognición

#### ARSTRACT

Antecedents of affective versus cognitive components of daily job satisfaction were compared. According to the affective events theory, the affective component should relate more strongly to state affect and affective work experiences than the cognitive component. In multilevel regression analyses of 280 daily reports from 40 participants, within-person variation was lower in the cognitive component (24%) than in the affective component (54%). Beyond state affect and trait affectivity, positive valence of work experiences had an incremental value only in the prediction of the affective component. The affective component is more reactive to daily work experiences than the cognitive component. Whenever the link between work and daily job satisfaction is reviewed, the components of job satisfaction measures should be considered as a moderator.

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# La experiencia laboral hoy: ¿precursores de cómo me siento y de lo que pienso acerca de mi trabajo?

RESUMEN

Se comparan los antecedentes de los componentes afectivos frente a los cognitivos de la satisfacción laboral cotidiana. Según la teoría de los acontecimientos afectivos, el componente afectivo debería guardar una mayor relación con el afecto de estado y las experiencias laborales que el componente cognitivo. En los análisis de regresión multinivel de 280 informes diarios de 40 participantes, la variación intrasujeto era menor en el componente cognitivo (24%) que en el afectivo (54%). Más allá del afecto de estado y la afectividad de rasgo, la valencia positiva de las experiencias laborales tenía un valor incremental solo en la predicción del componente afectivo. Este es más reactivo a las experiencias laborales diarias que el componente cognitivo. Siempre que se revisa el vínculo entre trabajo y satisfacción laboral cotidiana deberían considerarse las medidas de satisfacción laboral como moderadoras.

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Despite a long history of debate, job satisfaction (JS) is a central construct in work and organizational psychology, both as a consequence of work design and organisational change and as a

precursor of health and work behaviour including work performance and turnover (Elfering, Kälin, & Semmer, 2000; Semmer, Elfering, Baillod, Berset, & Beehr, 2014). Although individual differences have an influence, work conditions and work experiences most strongly relate to JS (Elfering, Semmer, Tschan, Kälin, & Bucher, 2007). Most researchers agree that JS is an attitude, as "job satisfaction . . . can be considered a cluster of attitudes concerning various aspects of a job" (Spector & Wimalasiri, 1986, p. 147). JS attitude includes cognitive, affective, and behavioural

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components (Katz & Stotland, 1959). The cognitive component includes employee's evaluation of work facets with reference to an expected standard. For many years research on job satisfaction focused on the cognitive component of job satisfaction and analysed interindividual differences that were rather stable. The Affective Events Theory (AET; Weiss & Cropanzano, 1996) drove attention to the affective component of job satisfaction and intraindividual variations: "Things happen to people in work settings and people often react emotionally to these events. These affective experiences have direct influences on behaviours and attitudes" (p. 11). In the last two decades AET was tested in various event sampling studies and confirmed with respect to attitudinal and behavioural outcomes (Ilies, Aw, & Pluut, 2015). In AET, personality traits are thought to partially determine reactions to events: stable positive affectivity is expected to increase event-related positive mood induction and stable negative affectivity is expected to increase event-related negative mood induction (Cropanzano & Dasborough, 2015). Hence, [interindividual differences in] personality traits are supposed to influence the intraindividual rhythm of employee's job satisfaction fluctuation over time (Cropanzano & Dasborough, 2015). While AET refers to the affective component of job satisfaction, the ratio of affective versus cognitive component in assessment of JS has not accordingly been addressed: "job satisfaction is generally construed in affective terms, but typically only its cognitive aspects are measured" (Brief & Weiss, 2002, p. 283). There is some research that compares the cognitive and affective component of JS and their respective associations with antecedents and consequences of JS across individuals (Kaplan, Warren, Barsky, & Thoresen, 2009), but investigation of the components based on within-person variation in job satisfaction including experience sampling in real work context is lacking. This current daily event recording study examines current cognitive and affective IS and compares these components with respect to positive and negative state affect at work, work experiences, and dispositional affectivity as antecedents.

# Comparison of Cognitive and Affective Job Satisfaction Components

An intriguing finding is that relations between trait affectivity, state affect, and JS seem to depend on the JS questionnaire that was used, especially if the questionnaire focused more on the cognitive or affective component of JS (Kaplan et al., 2009). Associations were stronger with the use of Kunin Faces Scale (KFS) of JS (1955)-a mono-item measure of overall satisfaction that focuses primarily on the affective component of JS-compared to other scales. One explanation for this moderating effect might be the relation and weight of the affective and cognitive components of JS in questionnaires. Thus, comparing the affective and cognitive JS components of different scales is interesting (Fisher, 2000; Moorman, 1993; Organ & Near, 1985). Brief and Roberson (1989) studied the relation of three different scales of JS with affective experiences. In contrast to the Job Descriptive Index (JDI) and the Minnesota Satisfaction Questionnaire (MSQ) (Weiss, Dawis, England, & Lofquist, 1967), KFS (Kunin, 1955) was correlated with cognitions and retrospectively measured affect at work (state affect during the past week; Job Affect Scale, JAS) (Brief, Burke, George, Robinson, & Webster, 1988). [DI and MSQ were related to cognitions about the job only. Therefore, Brief and Roberson concluded that in terms of affect and cognition, the KFS is "the most balanced of the JS scales" (p. 723). Niklas and Dormann (2005) also showed that state affect had comparably the largest impact on JS measured with KFS. Niklas and Dormann (2005) suggested that state affect influences KFS at the time when it is measured. We expect, therefore, the association between state affectivity and current JS to depend on the

type of JS measure used. Thus, the first study hypothesis postulates that the association between state affectivity and current JS is stronger when the latter is measured by KFS compared to measurement with a more cognitive scale, such as the one by Wegge and Neuhaus (2002) that asks for evaluation facets of JS (hypothesis 1). In addition, the association between positive and negative work experiences and current JS should be stronger when the latter is measured by KFS compared to measurement with a more cognitive scale (hypothesis 2).

# **Controlling for Components of Job Satisfaction**

For a long time, research on IS focussed on the cognitive evaluation of various job conditions, like satisfaction with salary, supervisors, colleagues, and work conditions. It was a central benefit from the Affective Events Theory (AET) (Weiss & Cropanzano, 1996) to shed light on the affective component of JS by demonstrating that affective experiences in the workplace have an impact on global IS and its consequences. Therefore, during the last decade, attention increased on the effects of emotions at work (Weiss, 2002). Job conditions underlying cognitive evaluation and affective experiences triggering affective parts of JS lead to the idea of partly independent processing pathways for affective and cognitive JS. There should be some overlap, because for instance emotional experiences at work correspond to events that elicit emotions, and these are more likely to appear in the background of unfavourable job characteristics, e.g., low autonomy (Weiss & Cropanzano, 1996). According to AET, controlling for the cognitive component of current IS increases the associations of the affective component of IS with state affect and trait affectivity, while controlling for current affective JS component should certainly reduce these associations. This is the second primary focus of this study. The second hypothesis of the study therefore postulates that control of the cognitive component of JS by controlling (Wegge & Neuhaus, 2002) job facets scale in predicting KFS will increase associations between KFS and previous experience, while control of KFS in predicting satisfaction with job facets components will decrease association between satisfaction with job facets and previous experience (hypothesis 3).

### Method

Sample

The authors addressed participants from four small companies. All employees, i.e., fifty-seven individuals, were asked to participate. Ten participants did not fill out the questionnaires (participation rate was 82%). Two individuals did not finish the study because of illness. Thus, the response rate was 79%. Five participants filled out the general questionnaire but no daily booklets. Finally, the sample consisted of 40 participants who filled out the general questionnaires and the booklets. The sample was rather balanced in sex (22 men, 18 women). Mean age was 39 years (SD=8.7). Half of the sample held a university degree. Tenure was between 0.3 and 16 years. All except three participants worked full time. Leadership function was more frequent in men (36%) compared to women (22%). The study was performed in consensus with the requirements concerning participants defined by the Swiss Society of Psychology. Study participants were provided with information about their rights and guarantee of anonymity. Informed consent of participants was obtained.

## Measures

Trait affectivity. Trait affectivity was assessed by the instrument of Warr (1990). Participants were asked how they felt in

general. Questions consisted of 6 positive (e.g., happy) and 6 negative (e.g., worried) items. Items were 5-point Likert scaled (*not at all* [1] to *very much* [5]). Cronbach alpha in the positive affective trait scale was .75 and .78 in the negative trait affectivity scale.

Affective state during work. Affective state was assessed four times on two consecutive workdays starting on Tuesday or Wednesday. At 9 a.m., 12 p.m., 3 p.m., and 5 p.m. participants reported how they felt at the moment. Participants responded to 6 positive (e.g., happy) and 6 negative (e.g., worried) scaled items (Warr, 1990). Again, Cronbach alpha for the affective state measures indicated good internal consistency of the scales (.80 to .92).

Job satisfaction during work. The KFS asked "How satisfied do you currently feel with your work?", with seven faces as response options and verbal labels placed below the faces (very unsatisfied [1] to very satisfied [7]). Wanous, Reichers, and Hudy (1997) reported reliability estimates based on 28 samples with 7,682 individuals that ranged from .45 to .69, with the upper value being concluded as the most reasonable.

The second JS measurement was a more cognitive JS scale by Wegge and Neuhaus (2002), with 5 items that ask for satisfaction with job facets (Cronbach alpha between .51 and .83). Job facets were "work in general", "work with your colleagues", "relation with supervisor ", "team climate in your division", and "work conditions at your workplace". Response format was a 5-point Likert scale, ranging from not satisfied at all [1] to very satisfied [5].

Positive and negative events during work. Participants recorded events at four points in time during two consecutive workdays (9 a.m., 12 p.m., 3 p.m., and 5 p.m.). Participants reported all positive and negative experiences at work they remembered for the time interval between measurements. Participants had to describe the situations briefly, and then rate each situation on a 7-point Likert scale with respect to its valence (very negative [1] to very positive [7]). The sum of positive event ratings and sum of negative event ratings were used as indicators of positive and negative work experience.

# Statistical Analyses

The diary data contain information at individual subject level and at the situation level with situational measurements nested within persons. A multilevel regression analysis was employed that allowed for testing the influence of situation-related variables and person-related measures (see Hox, 2002). The dependent variable in multilevel regression analyses were KFS and facets scale of job satisfaction.

The sample sizes in multilevel regression analysis on the person level (level 2, n = 40) and presentation level (level 1, n = 280) were sufficient (Maas & Hox, 2005). The sample size of level 2 was a little smaller than the recommended size of 50 but given that hypotheses addressed no crosslevel interactions, the estimates of the regression coefficients, the variance components, and the standard errors were likely to be accurate (Maas & Hox, 2005). The 40 participants reported 1,155 events across two workdays, including 204 negative events, 277 neutral events, and 674 events with positive valence. The neutral events were omitted from analysis and the individual sum of positive and sum of negative valence of events during measurement intervals were included in the analysis. From the eight measurement points across two workdays a maximum of 320 JS and affective state scores could be expected. Due to missing values, the number of level one observations was 280. Multilevel regression analyses were done with MLwiN software version 1.10 (Rasbash et al., 2000).

#### Results

Table 1 shows correlations at day-level between study variables. The correlation between both JS scales was .48. Correlations between positive trait affect and negative trait affect were the highest, followed by correlations between positive trait affect and positive state affect. At day-level, the correlation coefficient between positive and negative state affect was also high. Correlations between negative trait affectivity and state affect were moderate to high. Correlations between measures of current IS and positive trait and state affect were high while correlations between measures of current IS and negative trait and state affect were moderate. Correlations coefficients between IS and valence of events were moderate for positive valence while coefficients were small to moderate for negative valence. Both the KFS and the facets scale of IS showed strong correlations with trait and state affectivity and valence, but coefficients were consistently stronger for KFS than for the facets scale of JS. The first hypothesis postulated the correlation between state affect and job satisfaction measured with KFS to be larger than with facets scale. A test of difference in dependent correlation (Steiger, 1980) showed significant differences (z = 1.80, p = .036, one-tailed, for positive state affect; z = 1.95, p = .026, onetailed, for negative state affect). A test of the second hypothesis did not confirm differences between scales (z = 0.19, p = .424, onetailed, for positive work experience; z = -0.43, p = .335, one-tailed, for negative work experience).

# Multilevel Regression Analyses

Multilevel analyses started with the calculation of a variance components model to breakdown the amount of variance in the dependent variable explained by the situation level and the person level (estimation of the intra-class correlation, ICC). The ICC represents the proportion of the variance in the dependent variable explained by the person level (Hox, 2002). The ICC was .76 for the facets scale of JS and .46 for KFS. Thus, 76% of the total variance in the facets JS scale was located at the person-level, while only 46% of the total variance in KFS was located at the person-level (z = 2.59, p < .01, one-tailed). In further accordance with hypotheses 1 and 2, the comparison of ICC showed that the within-person variation of job satisfaction measured with KFS was larger than in the facets scale.

In two separate multilevel regression analyses, both JS scales were regressed on control variables (sex, age, organisation), positive and negative trait affect, positive and negative state affect, and positive and negative work events (see Table 2). Multilevel regression coefficients from group-centred predictor variables, positive and negative state affect, were significant in both JS scales, while positive valence of preceding group-centred work experiences had an additional input only in the prediction of KFS. Only in the prediction of KFS there was a significant unique association with grand-mean-centred positive trait affectivity. Hypothesis 2 postulated that control of the cognitive component of JS by controlling (Wegge & Neuhaus, 2002) job facets scale in predicting KFS would increase associations between KFS and previous experience, while control of KFS in predicting satisfaction with job facets components would decrease association between satisfaction with job facets and previous experience. Hypothesis 2 had to be rejected because mutual control of facet of IS in predicting KFS and control of KFS in predicting the facets of IS did not considerably change the pattern of significant predictors in both regression analyses. In both analyses, mutual control of the other JS scale left the coefficients nearly unchanged compared to the coefficients reported in Table 2 without mutual control. In the prediction of KFS no expected increase in regression coefficients of work experience was observed when the facets scale was controlled. In the prediction of facets scale no

**Lable 1** Mean Values, Standard Deviations, and Correlations between Study Variables

			Curre	Current JS Measure	Trait	Trait Affect	State	State Affect	Daily Work	Daily Work Experience		Contr	Control Variables	S
	Mean	SD	KFS	JS facets scale	Positive trait affect	Negative trait affect	Positive state affect	Negative state affect	Sum positive valence	Sum negative valence	Sex	Age	Org 1	Org 2
KFS	5.23	0.81												
JS facets scale	3.86	0.46	.48***											
Positive trait affect	3.80	0.53	.35***											
Negative trait affect	1.70	0.57	22***		62***									
Positive state affect	3.41	0.72	99		.55***	38***								
Negative state affect	1.39	0.48	29***		21***	.32***	54***							
Sum positive valence	4.42	3.67	.34***		.22***	60	.27***	19**						
Sum Negative valence	0.98	1.34	20**	13*	21***	.18**	33***	.34***	27***					
Sex	n.a.	n.a.	.10		.18**	33***	.04	.01	.11	01				
Age	38.80	8.58	05		03	01	11	.04	60.	.15	.12			
Organization 1	0.33	0.47	02		.05	07	.04	16**	.07	.04	.02	29***		
Organization 2	0.25	0.44	.01		90.	.05	90.	01	.13*	05	.10	.13	41	
Organization 3	0.28	0.45	90'-	12*	20**	80.	12*	60.	16**	05	22***	05	44	36***

Note. N = 280; KFS = Kunin faces scale; JS = job satisfaction; Organization is dummy-coded; n.a. = not applicable p = p < .05; p < .01; p < .01; p < .01; p < .01; wo-tailed.

expected decrease in regression coefficients of work experience was observed when controlled for KFS.

#### Discussion

The measurement of fluctuating IS is crucial in research on occupational health, work motivation, turnover, and work safety (Ilies & Judge, 2004; Klumb, Elfering, & Herre, 2009). To our knowledge this is the first time-based experience sampling study that compared two measures of current JS with respect to previous work experience. Based on AET, the study hypothesised that current state affect and valence of work experiences would be closely associated with KFS, a measure of JS measure that is more focused on the affective component of IS than with the job facets scale, that is more cognitive in nature (Elfering & Grebner, 2010, 2011). The hypothesis was partly confirmed for state affect and by ICC that showed more daily variability in KFS than in the facets measure. The lower ICC value for the KFS measure indicates greater reactivity of the affective component of job satisfaction to work events. However, this interpretation is only valid when the reliability of KFS is not lower than the reliability of the facets measure. Meanwhile, the reported estimate of .69 for the KFS reported by Wanous et al. (1997) is not different from the reliability of the facets measure found in the current study. Thus, the replication seems necessary to include a restest of KSL because the reliability estimate that was reported by Wanous et al. (1997) was based on the correlation of Kunin's (1955) scale with other JS scales and therefore is an estimate of construct validity and not of reliability. Items that were compared were not parallel (i.e., they did not have the same standard error, the same random errors, etc.). In order to estimate the reliability of the KFS, the appropriate reliability coefficient is a test-retest one. Retest coefficient captures random, specific, and transient errors (Salgado, 2015; Schmidt, Le, & Ilies, 2003).

The finding is important both theoretically and practically. First, it shows that the affective component of IS is more reactive to emotional states at work than the cognitive component of JS. However, rejection of the second hypothesis is not in line with AET that affective IS component could be supposed more closely bound in time with work events while the cognitive component of JS is less closely bound to the time when work events occurred. In this study, the valence of work experiences was related equally with both job satisfaction scales. However, in the multilevel regression analysis-beyond state affect-trait affectivity and positive valence of preceding work experiences had an incremental value only in the prediction of KFS, not in the prediction of the facets scale values. A preliminary interpretation of this finding is that the unique influence of specific work-related experience beyond emotional state, e.g., experience of competence, is unlikely to influence directly the cognitive component of JS but the affective component first. In summary, research on AET using experience sampling methods should consider the use of both scales. Whenever the evidence for daily work experience on change in IS is reviewed, the kind of IS measures should be considered as a moderator. If the use of both scales is impossible, KFS is recommended not only for its one item standalone validity (Wanous et al., 1997), but also for its sensitivity to within-person changes of daily job satisfaction.

Work events' influence on current JS seems to differ depending on positive and negative valences (Fisher, 2002; Maybery, Jones-Ellis, Neale, & Arentz, 2006). In the prediction of KFS, negative work experience had no incremental value above negative state affect and negative trait affectivity. This finding is in line with AET that supposed negative state affect mediated the effects of negative work experience on JS (Weiss & Cropanzano, 1996). Positive work experience, however, seems to have an influence on JS that is independent from current positive state affect and positive

**Table 2**Multilevel Regression of Current Job Satisfaction Measurements by KFS or Facets Scale Regressed on State Affect and Trait Affectivity

		KFS				Job Satisfaction Facets Scale			
	В	SE	B (controlled for facets scale)	SE	В	SE	B (controlled for KFS	SE	
Positive trait affect	0.48*	0.20	0.48*	0.20	0.27	0.15	0.27	0.15	
Negative trait affect	0.01	0.20	0.01	0.20	0.11	0.15	0.11	0.15	
Positive state affect	0.25**	0.08	0.18*	0.08	0.12***	0.03	0.10**	0.03	
Negative state affect	$-0.32^{***}$	0.10	$-0.26^{**}$	0.10	-0.11**	0.04	$-0.08^{*}$	0.04	
Sum positive valence	0.05***	0.01	0.05***	0.01	0.00	0.01	0.00	0.01	
Sum negative valence	-0.03	0.03	-0.02	0.03	0.01	0.01	0.01	0.01	
JS facets scale			0.55***	0.15					
KFS							0.09**	0.03	
Sex	0.06	0.18	0.06	0.18	0.17	0.13	0.17	0.13	
Age	-0.01	0.01	-0.01	0.01	0.00	0.01	0.00	0.01	
Organization 1	-0.18	0.27	-0.18	0.27	0.20	0.20	0.20	0.20	
Organization 2	-0.15	0.28	-0.15	0.28	0.06	0.21	0.06	0.21	
Organization 3	-0.13	0.28	-0.13	0.28	0.08	0.21	0.08	0.21	
Constant	5.34***	0.24	5.34***	0.24	3.67***	0.17	3.67***	0.17	
Level 2	0.23	0.06	0.23	0.06	0.14	0.03	0.14	0.03	
Level 1	0.24	0.02	0.23	0.02	0.04	0.00	0.04	0.00	
IGLS	472.20		459.41		24.34		11.58		

*Note.* 280 daily job satisfaction measures from 40 participants; *B* = fixed unstandardized regression coefficient; *SE* = standard error of estimation; IGLS = Iterative Generalised Least Squares; Organization is dummy-coded; codings for sex: 0 = male, 1 = female.

trait affectivity. We consider specific success-related emotions like feelings of competence to be involved. Positive work experiences that are perceived as individual success, including goal-attainment, pro-social success (i.e., preventing others from failure and harm), and positive feedback are linked to feelings of competence and JS (Grebner, Elfering, & Semmer, 2008, 2010). One might point to the empirical redundancy of positive and negative trait affectivity and positive and negative mood that are highly related and ask for the real contribution of these scales to the prediction of JS (Le, Schmidt, Harter, & Lauver, 2010; Schmidt & Harter, 2008). Indeed, Judge, Hulin, and Dalal (2012) make the point that it is difficult to comprehend a person who exhibits high scores on both PA and NA. However, there is also evidence that PA and NA are the affective manifestations of two relatively independent bio-behavioural systems (i.e., an approach system and an avoidance/withdrawal system; Watson, Wiese, Vaidya, & Tellegen, 1999). In addition, the associations of positive and negative affectivity with job satisfaction do not seem to be redundant. In the meta-analysis of Connolly and Viswesvaran (2000), correlations between job satisfaction and positive affectivity, corrected for coefficient alpha in the two measures, were .49 for positive affectivity (N = 3,326, k = 15)and r = .33 for negative affectivity (N = 6,233, k = 27). The pattern is also observed in daily event sampling studies. For instance, Judge and Ilies (2004) reported average state job satisfaction to correlate r=.35 with positive trait affectivity and r=-.16 with negative trait affectivity as rated by significant others. In the current study, the pattern is rather comparable with higher correlations between job satisfaction and positive affectivity and lower correlations between job satisfaction and negative affectivity. Thus, we suggest a real but small unique association of positive and negative affectivity that is related with the affective component of job satisfaction measure.

The second hypothesis suggested different effects of mutual control of affective and cognitive JS component in multilevel regression analyses. Controlling for the cognitive component of current JS should increase the proposed associations of the affective component of JS with state affect and trait affectivity, while controlling the affective JS component should certainly reduce these associations to accentuate the differences. Results did not confirm the second hypothesis, as all associations remained nearly unchanged. The preliminary interpretation is that without mutual control the

unique affective versus cognitive characteristics of both scales are already linked to state affect.

#### Limitations

The diary assessment may have forced participants to reflect on their work experiences, leading thereby to unusual scores for JS. Thus, the reactivity of the sampling method-selfobservation-might have changed attitudes and behaviour towards the job (Klumb et al., 2009). Moreover, we exclusively used self-reports to measure variables. This can lead to inflated stressor-strain associations through correlated measurement errors (common method variance; e.g., Semmer, Grebner, & Elfering, 2004). Replication in a larger sample is necessary. Given the intensity of the data collection efforts, with multiple observations per participant being required daily, it is difficult to collect such data with large numbers of participants. In comparison to other experience sampling studies on the topic, the current sample size (N = 40) is small but not at the lower end (N = 27 in Ilies & Judge, 2002; N=24 in Weiss, Nicholas, & Daus, 1999). The small sample lowers the generalizability of results and we can not exclude variance restriction in JS measurement. Moreover, the Kunin's (1955) scale measured global job satisfaction and the scale of Wegge and Neuhaus (2002) addressed different facets of job satisfaction. A replication should rely on a Kunin's scale that addresses different facets of job satisfaction, too. Finally, we did not test retest reliability of KFS.

One of the advantages of this study, however, is its high participation rate and the combination of data from different JS measures. In the meanwhile, it is important to keep in mind that the separation of cognition and affect in content and measurement is not so easy as separation in theory. Moreover, even if we could clearly separate measures of cognition and affect, given their relationship, causality in both directions have to be supposed.

# Conclusions

Despite much research on JS, construct validation is increasingly necessary. This study has shown the relative weight of affective and cognitive components within JS measure to contribute to the strength of associations with daily work experience and state affect.

<sup>\*</sup> p < .05, \*\*p < .01, \*\*\*p < .001, two-tailed.

Ambulatory assessment in occupational research should rely on both attitude components of IS when AET is in focus.

#### **Conflict of Interest**

The authors of this article declare no conflict of interest.

## **Financial Support**

The Swiss National Science Foundation supported part of this research (SNF 100011-105538 and SNF 100014-144057).

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