

Romanian short version of the Burnout Assessment Tool: Psychometric properties

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Burnout

- is negatively related to job satisfaction, organizational commitment (Alarcon, 2011), task performance, and contextual performance (Swider & Zimmerman, 2010) and positively related to turnover intentions (Alarcon, 2011), absenteeism (Swider & Zimmerman, 2010), decreased quality of care, and decreased safety of patients in healthcare (Salyers et al., 2016).
- crossover from one employee to another (Bakker, Westman, & Schaufeli, 2007), from leaders to followers (Huang, Wang, Wu, & You, 2016), and from employees to their intimate partners (Bakker, 2009).

Burnout

- World Health Organization (2019) added burnout in the International Classification of Diseases as a work-related phenomenon that influences health.
- it is essential that researchers and practitioners in the field have accurate measures of this construct, in order to correctly diagnose burnout and to properly evaluate the effectiveness of interventions to reduce it.

Limitations of instruments

- **conceptual:** Maslach Burnout Inventory (MBI), the most popular burnout measure, includes a personal accomplishment or professional efficacy component, although later data indicate that this is rather an antecedent or a consequence of burnout (Schaufeli & Taris, 2005).
- **conceptual:** the MBI does not include elements of reduced cognitive performance, despite the fact that research supports the inclusion of these as a component of burnout (Deligkaris, Panagopoulos, Montgomery & Masoura, 2014).

Limitations of instruments

- **technical:** very skewed answers, ambiguous response anchors, differently worded items raise questions about its reliability (Bresó, Salanova, & Schaufeli, 2007; Schaufeli et al., 2020a; Wheeler, Vassar, Worley, & Barnes, 2011).
- **practical:** lack of clinically validated cut-off scores (Schaufeli et al., 2020).

Burnout Assessment Tool

- conceptualizes burnout as a syndrome consisting of four interrelated core symptoms (Schaufeli et al., 2020; Schaufeli, Desart, & De Witte, 2020b): exhaustion (a severe loss of physical and mental energy), emotional impairment (overwhelming and intense emotions, such as anger, frustration, sadness, and irritability), cognitive impairment (cognitive deficits of memory, attention, and concentration), and mental distance (detachment from work due to strong reluctance or aversion).
- contains a secondary-symptoms scale with two factors: psychological distress (e.g., sleep problems, anxiety, worrying, and tension) and psychosomatic complaints (e.g., headaches, palpitations, chest and muscle pain).

Burnout Assessment Tool

- the proposed factorial structure of the core and secondary symptoms of burnout was supported on samples from different countries (de Beer et al., 2020; Sakakibara, Shimazu, Toyama, & Schaufeli, 2020; Schaufeli et al., 2020).
- the reliability of the instrument was supported by good internal consistency indicators (i.e., Cronbach's α) and by the test-retest reliability (Schaufeli et al., 2020).
- studies indicated a good convergent validity of the BAT with the MBI and Oldenburg Burnout Inventory (Demerouti, Bakker, Vardakou, & Kantas, 2003; Schaufeli et al., 2020; Sakakibara et al., 2020).

Burnout Assessment Tool

- can be discriminated from other well-being constructs such as work engagement, boredom, and workaholism (Sakakibara et al., 2020; Schaufeli et al., 2020).
- as the Job Demands-Resources model (JD-R; Bakker & Demerouti, 2014) predicts, the BAT scores are positively related with job demands and negative outcomes (e.g., turnover intentions) and negatively related with job resources (e.g., role clarity, engaging leadership), personal resources (e.g., self-efficacy, optimism), and positive outcomes (e.g., organizational commitment, in-role performance)(Sakakibara et al., 2020; Schaufeli et al., 2020).

The Present Study

- We report on the following analyses:
 - confirmatory factor analysis (CFA);
 - descriptive statistics;
 - reliabilities;
 - correlations between the core and secondary burnout symptoms;
 - Item Response Theory analysis;
 - convergent, discriminant, and construct validity .

Participants and Procedure

- The instrument was translated using the committee approach by two Romanian psychologists specialized in occupational health psychology.
- A sample of 648 employees completed only the short version of the BAT and a sub-sample of 117 employees out of these 648 completed all the measurement instruments.
- Participants were recruited through social networks and announcements in various Romanian organizations, therefore forming a convenience sample.

Participants

Table 1. Overview of the Romanian Validation Samples.

Variables	Sample 1 (Only the BAT) (N = 648)	Sample 2 (All Questionnaires) (N = 117)	Variables	Sample 1 (Only the BAT) (N = 648)	Sample 2 (All Questionnaires) (N = 117)
Gender			Industry sector		
Male	22%	21%	Agriculture, forestry, fishery	1%	0%
Female	78%	79%	Manufacturing	8%	13%
Age - Mean (SD)	33.56 (9.96)	34.22 (9.77)	Construction	1%	0%
Education			Retail, wholesale, repair	3%	4%
Primary	1%	0%	Hospitality	1%	0%
Secondary	10%	7%	Banking, real estate, financial services	9%	7%
Higher	89%	93%	Transportation, storage, distribution	3%	2%
			Commercial services (e.g., ICT, consultancy)	40%	43%
			Public administration and governance	5%	4%
			Education	17%	19%
			Health care, social services, law enforcement	10%	8%
			Arts, entertainment, recreation, sport	2%	0%

Table 1. Overview of the Romanian Validation Samples.

Variables	Sample 1 (Only the BAT) (N = 648)	Sample 2 (All Questionnaires) (N = 117)
Occupation		
Elementary occupations (e.g., assembler)	2%	0%
Craft or trades worker (e.g., electrician)	2%	2%
Clerk, services, sales worker (e.g., secretary)	26%	27%
Technician (e.g., ICT specialist)	21%	24%
Professional (e.g., physician)	38%	40%
Manager (e.g., managing director)	11%	7%
Type of job		
Fulltime	94%	96%
Part-time	6%	4%
Work hours/week in contract - Mean (SD)	38.44 (10.66)	38.69 (6.74)
Work hours/week (actual state) - Mean (SD)	42.20 (13.01)	42.42 (11.25)
Job tenure – Mean (SD)	11.23 (9.81)	11.65 (9.88)
Treated for burnout in the past 5 years	7%	4%

Measurement Instruments

- **Burnout** was measured with the short version of the BAT and Maslach Burnout Inventory (Schaufeli, Leiter, Maslach, & Jackson, 1996).
- **Work engagement** was measured with the Utrecht Work Engagement Scale - Short Version (Schaufeli, Bakker, & Salanova, 2006).
- **Workaholism** was measured with the Dutch Work Addiction Scale (Schaufeli, Shimazu, & Taris, 2009).
- **Boredom at work** was measured with the Dutch Boredom Scale (Reijseger et al., 2013).

Measurement Instruments

- **Job demands** were measured with the Job Demands-Resources Questionnaire (Schaufeli, 2015).
- **Job resources** were measured with the Job Demands-Resources Questionnaire (Schaufeli, 2015).
- **Personal resources** were measured with the Big Five Inventory (John & Srivastava, 1999) and with the Job Demands-Resources Questionnaire (Schaufeli, 2015).
- **Organizational outcomes** were measured with the Job Demands-Resources Questionnaire (Schaufeli, 2015).

Confirmatory factor analysis

- The measurements showed good fit indicators for the model with four core symptoms ($\chi^2 = 236.39$, $df = 48$, $CFI = .94$, $TLI = .91$, $RMSEA = .08$) and for the model with two secondary symptoms ($\chi^2 = 165.04$, $df = 33$, $CFI = .95$, $TLI = .94$, $RMSEA = .08$).
- In addition, the model with all six factors showed good fit indicators ($\chi^2 = 720.37$, $df = 189$, $CFI = .92$, $TLI = .90$, $RMSEA = .07$).

Reliabilities and correlations between the core and secondary symptoms

Table 2. Reliabilities and Correlations Between the Core and Secondary Burnout Symptoms for the Short Version of the BAT.

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Exhaustion	2.72	.97	(.83)							
2. Mental distance	2.19	.90	.59***	(.73)						
3. Cognitive impairment	1.91	.77	.39***	.42***	(.77)					
4. Emotional impairment	1.90	.70	.41***	.42***	.52***	(.72)				
5. Total core symptoms	2.18	.64	.81***	.81***	.73***	.73***	(.86)			
6. Psychological distress	2.55	.93	.64***	.47***	.42***	.51***	.67***	(.83)		
7. Psychosomatic complaints	2.16	.84	.61***	.46***	.33***	.41***	.60***	.74***	(.81)	
8. Total secondary symptoms	2.36	.82	.67***	.50***	.40***	.50***	.68***	.94***	.93***	(.89)

Note. *N* = 631. Cronbach's alpha reliabilities are in parentheses on the diagonal.

****p* < .001.

Item Response Theory analysis

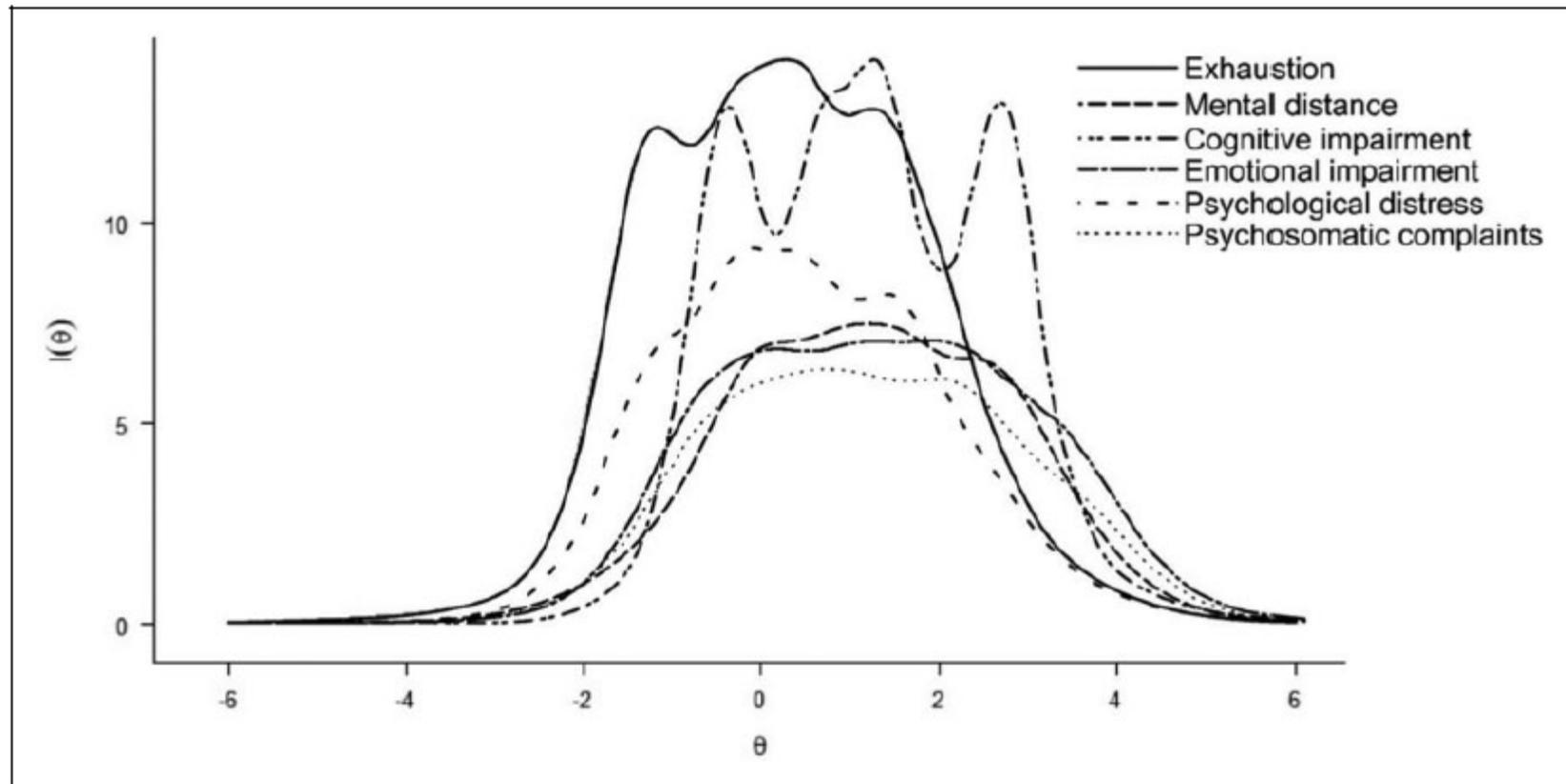


Figure B1. Results of item response theory analysis for the short version of Burnout Assessment Tool ($N = 631$).

Validity

Table 3. Correlations Between Work Engagement (UWES), Work Addiction (DUWAS), Boredom (DUBS), and Burnout (BAT) for the Short Version of the BAT.

Variables	Burnout (MBI)	Work Engagement (UWES)	Work Addiction (DUWAS)	Boredom at Work (DUBS)
Exhaustion	.71***	-.46***	.38***	.34***
Mental distance	.71***	-.69***	.10	.52***
Cognitive impairment	.55***	-.47***	-.02	.52***
Emotional impairment	.49***	-.34***	.01	.36***
Total core symptoms	.80***	-.64***	.17	.55***
Psychological distress	.65***	-.45***	.37***	.22*
Psychosomatic complaints	.52***	-.40***	.28**	.22*
Total secondary symptoms	.63***	-.46***	.35***	.23*

Note. $N = 117$.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Bolded values indicate correlations higher than .50.

Table C1. Correlations Between Burnout and Job Demands for the Short Version of the BAT.

	Exhaustion	Mental Distance	Cognitive Impairment	Emotional Impairment	Core Symptoms	Psychological Distress	Psychosomatic Complaints	Secondary Symptoms
<i>Job demands</i>								
Work overload	.42***	.23*	.10	.24**	.33***	.36***	.31***	.36***
Role conflict	.44***	.39***	.26**	.13	.41***	.40***	.46***	.46***
Interpersonal conflict	.33***	.39***	.27**	.28**	.41***	.34***	.29***	.34***
<i>Job resources</i>								
Role clarity	-.36***	-.25**	-.33***	-.28**	-.39***	-.28**	-.28**	-.30***
Coworker support	-.40***	-.44***	-.16	-.21*	-.40***	-.35***	-.28**	-.34***
Supervisor support	-.40***	-.36***	-.14	-.21*	-.37***	-.37***	-.31***	-.37***
Job control	-.32***	-.33***	-.09	-.22*	-.31***	-.40***	-.33***	-.39***
Performance feedback	-.29**	-.33***	-.19*	-.21*	-.32***	-.36***	-.29**	-.35***
Opportunities for learning	-.31***	-.50***	-.18*	-.21*	-.39***	-.31***	-.36***	-.36***
<i>Personal resources</i>								
Emotional stability	-.51***	-.37***	-.50***	-.53***	-.61***	-.66***	-.59***	-.67***
Conscientiousness	-.30**	-.43***	-.64***	-.34***	-.54***	-.25***	-.18*	-.23*
Self-efficacy	-.29**	-.38***	-.50***	-.42***	-.50***	-.35***	-.27**	-.33***
Optimism	-.47***	-.51***	-.47***	-.39***	-.59***	-.49***	-.49***	-.53***
Resilience	-.20*	-.23*	-.45***	-.30**	-.37***	-.26**	-.20*	-.25**
<i>Organizational outcomes</i>								
In-role performance	-.16	-.25**	-.50***	-.29**	-.38***	-.18*	-.10	-.15
Extra-role performance	-.09	-.24*	-.30**	-.29**	-.28**	-.12	-.01	-.07

Note. $N = 117$.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Discussion

- This study investigated the psychometric properties of the Romanian short version of the BAT.
- According to our findings, there are strong correlations between the four core and two secondary burnout symptoms.
- The Cronbach's alpha values indicate good reliability for all the six scales that measure burnout symptoms.
- Results also support the convergent, discriminant, and construct validities of the BAT for the Romanian sample.

Implications

- This study emphasizes a new conceptualization of burnout, by excluding the personal accomplishment factor and by including both cognitive and emotional impairment as new components.
- The introduction of this new conceptualization of burnout will allow testing of the assumptions and predictions of different models in the occupational health literature, based on this deeper understanding of the construct.
- This new instrument can be used to monitor the effectiveness of individual or organizational interventions to reduce burnout.

Limitations and Future Research

- The analyses were performed on a convenience sample.
- The sample was composed mainly of highly skilled respondents, therefore it is not representative for the population.
- Future studies may use national representative samples, including people with severe levels of burnout, in order to establish appropriate clinical cut-offs for the Romanian version of the BAT.