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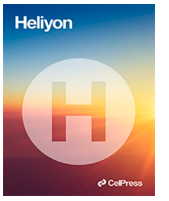

Research article

Work-related well-being in early career: A role of self-compassion

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ABSTRACT

Several studies have demonstrated the positive effects of mindfulness and self-compassion on employee well-being, mental health, and resilience. The objective of this observational study was to explore the mutual relationships among the dimensions of self-compassion and particular characteristics of work-related well-being: work engagement, workaholism (excessive and compulsive work), and job boredom in a population of early career workers. In this quantitative cross-sectional study, 286 master's students with proper working experience were examined; results from 244 respondents were suitable for further data analysis. The Self-compassion Scale, Utrecht Work Engagement Scale, Dutch Work Addiction Scale, and Dutch Boredom Scale were administered. Spearman's rank correlation analysis found a positive relationship between work engagement and excessive work and a negative relationship between work engagement and job boredom. Furthermore, a positive correlation was identified between compulsive work and negative subscales of the Self-compassion Scale. Structural equation modeling indicated that workaholism was a mediator between the negative scales of self-compassion and work engagement with job boredom. In conclusion, the negative aspects of self-compassion (isolation, self-judgment, and over-identification) are related to the symptoms of workaholism in young workers. Self-compassion-based interventions could help prevent the negative effects of compulsive and excessive work. Possible age-related explanations for the positive relationship between work engagement and workaholism (i.e., excessive work) are discussed. Future longitudinal research could identify the dynamics of the connection between self-compassion and work-related well-being from a long-term perspective.

1. Introduction

Maintaining employee well-being and engagement is a crucial challenge in occupational health psychology, especially since the COVID-19 pandemic, which caused radical changes in work behavior [1]. In addition to decreased well-being [2], mental health problems result in lower work productivity [3]. As a possible countermeasure, mindfulness-based interventions provide a beneficial method for escaping this vicious circle by supporting self-compassionate attitudes and inner discipline [4].

Several researchers have reported that self-compassion (SC) positively affects mental health [5–9]. In occupational health psychology, studies have shown the beneficial effects of SC in supporting resilience [10] and preventing emotional exhaustion [11] and

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burnout syndrome [12] among employees. Further research has shown positive associations between SC and both self-efficacy [13] and job satisfaction [9]. Similarly, SC was found to have a protective effect against emotional exhaustion and depression in university students [14]. SC has been demonstrated to be a significant predictor of a successful transition to college, which is considered a demanding period from a mental health perspective [15]. Medlicott et al. [16] highlighted the beneficial effects of mindfulness-based interventions in increasing the well-being and mental health of university students.

Although the idea of being kinder to oneself can evoke employee resignation in work productivity, a systematic review by Kotera and Van Gordon [17] identified SC training as beneficial to work-related well-being. In correspondence with the new analytical human resource management framework, supporting well-being can increase employee performance and reduce organizational costs [18]. A greater level of well-being and personal accomplishment has been identified among work-engaged employees [19]. Therefore, the relationship between well-being and work engagement is bidirectional.

Recent studies support the direct promoting effects of mindfulness-based and SC-focused methods on work-related well-being and work efficiency [5,10,12,20,21]. An association between SC and job satisfaction was assumed and empirically supported [9]. In this research direction, a high level of SC was assigned to predict increased quality of life and decreased professional burnout, defined as negative job-related attitudes and a lack of energy and concern [12,21]. Apart from emotional exhaustion, SC decreases turnover intention and is positively related to job performance [22]. This is significant in comparison with the results of previous studies and indicates that more self-compassionate employees not only feel better but also work more productively.

2. Literature review

2.1. Mindfulness, self-compassion, and mental health

SC is described as a specific type of self-concept that reflects attitudes towards one's own imperfections: "Self-compassion simply represents compassion turned inward and refers to how we relate to ourselves in instances of perceived failure, inadequacy, or personal suffering" [23]. It represents a new concept in Western psychology; therefore, a differential analysis of the terminology is necessary. First, SC does not refer to the opposite of compassion, but rather the two concepts are related [24]. Thus, no positive connection exists between SC and selfishness or self-centeredness. From an occupational psychology perspective, SC does not indicate a lack of concern or motivation. SC attitudes involve gentleness and patience but not passivity: "Rather, it is the lack of self-compassion that is more likely to lead to passivity" [4].

A more specific definition refers to three components of SC expressed in the polarities of self-kindness versus self-judgment (positive, self-caring attitude towards oneself when facing one's own failures and imperfections), a sense of common humanity versus isolation (seeing one's own problems as an inherent part of life experience), and mindfulness versus overidentification (being able to maintain distance from one's own troubles and not be overwhelmed by them) [4,23]. According to the research, negative SC subscales (self-judgment, isolation, overidentification) are more strongly related to depressive and anxious symptoms in young respondents compared with the positive SD dimensions [25].

SC is perceived not only as a psychological trait but also as a process [26,27] that is positively related to agreeableness and conscientiousness [27] and can be enhanced by SC-centered and mindfulness-based interventions [16,17,28]. The main effects of these interventions include activating self-soothing mechanisms at the emotional regulation level and supporting positive self-concept at the cognitive level [27]. Sometimes, the SC-centered training can be initially accompanied by negative "backdraft" feelings that were recognized as a part of recovering processes [29]. The level of SC can also be supported by the forrest therapy approach, namely in dimensions of mindfulness and common humanity [30].

Compared to emotional regulation, SC does not stimulate avoidance mechanisms, as it leads to the constructive acceptance of negative emotions [4,22] and better consideration in conflict resolution [29]. Therefore, the effects of SC-related training on working behaviors may be unique in comparison with other mental health promotion techniques. This contextual frame corresponds with the second wave of positive psychology, which is "mainly characterized by the recognition that the positive and negative facets of life are intertwined, that well-being facets may simultaneously have positive and negative connotations" [31]. The second wave considers critical reactions to the tendency to overlook or underestimate the significance of negative emotions and their potential to stimulate personality development and resiliency [32]. SC fits precisely into the framework of the second wave of positive psychology as it recognizes difficulties and negative emotions as part of being human that should not be suppressed or ignored [17,33]. The connotations of SC are clearly expressed in the dimensions of common humanity [4].

2.2. Work-related well-being and its components

Employee well-being is a dynamic quality that varies with age and job changes [34] etc) [35]. Work engagement is essential for determining personal accomplishments and preventing emotional exhaustion and depersonalization [19]. "Engagement is defined as a positive, fulfilling, work-related state of mind characterized by vigor, dedication, and absorption" [36]. Similar to the mindfulness dimension of SC, work engagement is anchored in the present moment as the perception of energy efficiently invested in work tasks [36]. Contrary to some expectations, work engagement is predicted by positive work-related emotions and leisure-time recovery strategies [37] and has positive long-term effects on job performance and mental health [38].

Work engagement involves three elements: vigor (energetic aspects, resilience, and persistence at work), dedication (personal commitment, meaning, and significance), and absorption (deep immersion in work activities) [36,39]. Absorption is close to flow motivation, a satisfactory, harmonical state of deep concentration on thoughts, feelings, and sensations focused toward a specific goal

[40]. The flow concept is a particular state or experience that is very complex but short-term, whereas work engagement refers to a more persistent affective-cognitive state without the necessary connections to any event, entity, or behavior [36]. Similarly, work engagement differs from work motivation, which becomes unstable over time [5,36]. However, the persistence of internal motivation can be increased by a supportive work environment based on social exchange theory [41]. In this connection, social support was identified as a mediator between work engagement and work alienation, described as feelings of disconnection and dissatisfaction at the workplace [42].

Despite the long-term characteristic of high energy investment in work activities, work engagement differs from workaholism [38,43]. Besides behavioral patterns such as excessive time and energy invested in work, some specific forms of motivation are typical for this phenomenon [44]. Although workaholism relates to working hard, an obsessive focus on work and performance exceeding external expectations and requirements is typical of work addiction [45]. Despite the weak positive correlation, research has identified a long-term connection between work engagement and future well-being and between workaholism and unwell-being [43]. In individuals with a high group conformity, the negative relationship between workaholism and well-being is mediated by a lack of self-care [46].

A meta-analysis of personality-based predictors of work addiction [47] identified perfectionism, global and performance-based self-esteem, and negative affect as crucial factors. Nevertheless, personality determinants were found to explain only a small proportion of work addiction development. Therefore, environmental factors, such as job crafting techniques, have also been considered. From this viewpoint, workaholism is negatively associated with decreased job demands. In contrast, a positive association has been observed between work engagement and increased structural job resources [48]. Workaholism in leaders results in higher psychological distress in employees, especially in teams with low perceived procedural and interactional justice [49].

The construct of workaholism is perceived as having two components: excessive (over-limit energy invested in working activities) and compulsive (obsessive attitudes towards work) [45,47]. A combination of excessive and compulsive working attitudes has been identified as a predictor of sleep and cardiovascular problems [50]. From the work motivation perspective, excessive work and vigor relate to autonomous motivation among employees who perceive their work as exciting and essential. In contrast, compulsive work is associated with perfectionism and neuroticism [44] and with controlled motivation, which results from both internal and external perceived pressure [51]. Further studies reported a positive relationship between excessive work, self-reported innovation, and contextual performance; however, the second relationship was observed only among self-employed respondents. Conversely, a negative connection was found between compulsive work and innovativeness (in the case of self-employed respondents) and between compulsive work and contextual performance [52].

Work-related boredom, a deeply unsatisfactory passivity with a lack of interest and concentration [53] is defined as low arousal and displeasure compared with other work-related concepts in our study [54]. Although some studies refer to personality dispositions for perceiving job boredom [20,55], the concept is highly related to an environment that is unsupportive of autonomy and self-realization [56,57]. It is not identical to a lack of internal motivation [50], a lack of interest or cause is emotionally neutral, whereas boredom entails emotional suffering that promotes avoidance rather than insufficient motivation alone [58]. From the organizational viewpoint, job boredom may result in counterproductive work behaviors. Personality-related connections to this phenomenon were researched by Szostek et al. in the Central European region [59].

Attitudes towards job boredom can be prevented by engaging in leadership and job crafting [39,56] but also by mindfulness training. Stepping out from the modus of "automatic pilot" and mindful awareness of the present moment increases performance quality (but not quantity) and decreases job boredom in monotonous working activities [20]. Furthermore, mindfulness can support efficient self-control and minimize mind-wandering. This may prevent unhelpful methods of coping with job boredom, especially distractive behavior that leads to depressed mood, even more intensive job boredom, and decreased job satisfaction [60]. Self-compassion attitudes support inner motivation, taking responsibility, and decrease fear of failure, which is undesirable for positive motivation [61].

2.3. Literature gap and contribution of the research

Despite a variety of studies in the area of working engagement, workaholism, and job boredom, the relationships between these indicators with self-compassion and mindfulness are still under-researched. Based on the described theoretical framework, our objective was to identify mutual relationships between SC and the characteristics of work-related well-being: work engagement, workaholism, and job boredom. A structural equation modeling (SEM) approach enables the observation of these relationships more precisely and with greater complexity. The SEM model was created in the theoretical context of recent studies that supported the effects of mindfulness-based and SC-focused methods on work-related well-being and work efficiency [5,10,12,20,21] and brought systematical analysis of differences between work engagement, workaholism, and their impact on well-being [38,43]. The relationship between work engagement and job boredom is based on the definition of job boredom as low arousal and displeasure. From the same perspective, work engagement can be characterized as high arousal and pleasure [54]. Further, research revealed a negative correlation of job boredom with job resources and its positive correlation with turnover intentions; vice versa, job engagement was positively related to job resources and negatively to turnover intentions [62].

The results contribute to the discussion on the significance of using SC-focused methods in supporting work-related well-being and productivity. We intended to examine these characteristics in young adults at the beginning of their careers because research has shown more instability in well-being during this period [34]. The respondents were students at the Czech University of Life Sciences in Prague (CZU) students. Only master's degree students from the Department of Economics and Management were included in the research sample, as they already had working experiences and were more prepared to reflect on the characteristics of their working

behavior. We can draw conclusions from our findings to evaluate the appropriateness of using SC-focused techniques in education and counseling centers at CZU. Upon careful consideration of the differences between the specific characteristics of university students, our conclusions may be beneficial for other institutions of higher education.

3. Materials and methods

3.1. Research context and design

Our research problem reacts to the current level of the mental health of Czech university students [63]. However, an increase in psychological problems (namely anxiety disorders and depression) was also detected in international research [14,64,65]. Although this tendency probably appeared over a decade ago [57], it was escalated by the COVID-19 pandemic [65,66]. SC was repeatedly assigned as a protective factor of university students' mental health [67,68]. A systematic review supported a presumption of the positive influence of SC on work-related well-being and invited to shift the research attention to the non-caring professions [17], which is fully in line with the specifications of our respondents. Further, the relevance of research on the work-related well-being of university students with proper work experience (and possibilities of its support by SC-focused interventions) follows the results of studies that identified financial stability as a significant predictor of students' mental health [69,70].

In line with the character and design of our research problem, we chose the quantitative research strategy in the form of a survey. The objective of our analysis was to identify specific relationships between components of self-compassion and work-related well-being. The level of self-compassion and its components was measured by the standardized Self-compassion scale (SCS) [71]. Work-related well-being was assessed in the following dimensions: work engagement, work addiction, and work-related boredom, measured by the Utrecht Work Engagement Scale (UWES), Dutch Work Addiction Scale (DUWAS), and Dutch Boredom Scale (DUBS). This combination of standardized questionnaires covers the employees' state of cognitive-affective well-being, comprising work engagement, workaholism, burnout, and job satisfaction [34]. Our study measured job satisfaction using the opposite indicator: job boredom [20]. Burnout assessment was irrelevant to our research population, given that most respondents were at the beginning of their work experience. Further, it is implicitly present in our model because research identified job burnout as a pure opposite of work engagement [72].

Considering the limited target population of our respondents, we used a non-probabilistic sampling technique of convenience choice. The data analysis was conducted in the following steps: preliminary analysis (descriptive statistics), primary analysis (testing of the normality of the data distribution by Shapiro-Wilk test, measuring the strength of the associations between variables using a non-parametric Spearman's rank correlational coefficient), structural analysis (measuring the consistency of the theoretical model with our data using a structural equation modeling approach.

This study was approved by the Ethics Committee of the Czech University of Life Sciences, Prague. The research was conducted in accordance with the ethical principles of the Declaration of Helsinki. All respondents were adequately instructed and free to opt out of participation in the research in the event they felt uncomfortable. They also provided their written consent to participate and consent to publish all clinical and other data included in the manuscript. Data were analyzed anonymously in accordance with the ethical standards of the American Psychological Association. The article follows Sex and Gender Equity in Research (SAGER) guidelines for reporting sex and gender information in scientific research [73].

3.2. Measures

Participants' SC levels were evaluated with the Self-compassion Scale (SCS), which is a widely used questionnaire [23,74,75]. The SCS has 26 items across six subscales: self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification. The dimensions of self-kindness versus self-judgment refer to feelings of understanding towards oneself in difficult times versus being overly self-critical. Common humanity versus isolation relates to the perception of one's own problems as a part of the human experience. Mindfulness versus over-identification indicates acceptance of negative emotions versus feeling consumed by them [4]. Our study used a Czech adaptation of the SCS based on a full-length version of the measure [76].

The SCS is an instrument with good internal reliability of single subscales (Cronbach's α ranging from .75 to .81) and the total score (Cronbach's $\alpha = 0.92$) [74], which was also supported by a study with international samples [77]. The standardization of SCS in the Czech Republic also refers to good internal reliability (Cronbach's $\alpha = 0.89$) [76]. The convergent, discriminant, predictive, and known-groups validity is satisfactory [23]. Because of the ongoing discussion about construct validity and factor structure [78], we use the total score and also scores from all subscales as variables in our research.The items of the SCS were assessed on a 5-point scale ranging from 1 = "almost never" to 5 = "almost always." For our purposes, the negative subscales (self-judgment, isolation, and over-identification) were reverse-coded. The total score of the questionnaire was not assessed because its relevance to the factor structure was in doubt [78]. Some researchers have suggested alternative conceptualizations based on the correlated six-factor model [76,79] or the two-factor model of self-compassionate and self-uncompassionate responding [80,81]. Nevertheless, the SCS remains a widely used method with verified internal and test-retest reliability and discriminative validity [23].

Working behavior characteristics were evaluated using the Utrecht Work Engagement Scale (UWES), Dutch Work Addiction Scale (DUWAS), and Dutch Boredom Scale (DUBS) [36,53,54,82]. A short version of the UWES was used as the official Czech translation. The DUWAS and DUBS were administered in English without an official Czech translation; however, comprehension was verified for all respondents. On the DUWAS, the separate scores for the "working excessively" (WE) and "working compulsively" (WC) scales were analyzed.

The internal reliability of the UWES questionnaire was assessed as good in the international research [82]. The value was more satisfactory in the case of the long version. However, the short version still meets the criteria of Cronbach's $\alpha \geq 0.70$; therefore, we chose it for our research to decrease the mental load of our battery of questionnaires on respondents. The validity of the three-factor concept of UWES was highly supported by research [82]. Therefore, we use a total score in our structural model as a part of the work-related well-being concept. The DUWAS questionnaires also demonstrated good internal reliability (Cronbach's α ranging from .8 to .86) in international research; however, its authors recommend further examination of the instrument's construct validity [83]. Therefore, we decided to take both subscales as separate variables in our analysis, considering the differences between excessive and compulsive work related to well-being [51,52]. In the case of the DUBS questionnaire, internal consistency is also satisfactory (Cronbach's α exceeding .8), and its construct validity analysis proved this instrument's distinctiveness from other work-related well-being dimensions [53].

3.3. Procedure and analytical plan

Our research sample comprised 286 master's degree students from the Faculty of Economics and Management at CZU Prague. In the preliminary analysis, we excluded 42 respondents because they answered the questionnaires incorrectly or incompletely. The definitive sample size was 244 respondents. A total of 181 respondents identified themselves as female, whereas the remaining 63 respondents were male. Any respondents identified themselves as "non-binary" or "others." The age ranged between 19 and 28 years (M = 21.62, SD = 1.27). All respondents were from the study program Business and Administration. The recruitment period for this study began in February 2022 and ended in April 2023.

IBM SPSS 27 was used for data processing. The strength of the associations between variables was measured using a non-parametric Spearman's rank correlational coefficient. The normality of the data distribution was verified using the Shapiro-Wilk test. To obtain more complex insight into the relationships between the observed variables, we used SEM (IBM SPSS, Amos 28). The consistency of the theoretical model with the data was statistically analyzed [84]. Model fit was assessed using the comparative fit index (CFI), Tucker–Lewis index (TLI), root mean square error of approximation (RMSEA), and Akaike information criterion (AIC). RMSEA is an absolute measure of the distance between the hypothesized and perfect models, and the CFI and TLI are incremental indices that compare the hypothesized and baseline models. For the interpretation, we followed the widely used cutoffs: CFI and TLI with values close to .95, indicating superior fit and RMSEA <.05, indicating good fit; <.08, indicating reasonable errors of approximation in the population; .08–.10, indicating mediocre fit, and >.10 indicating poor fit [84].

4. Results

4.1. Preliminary analysis

Descriptive statistics provided information on the levels of SC scales and selected characteristics of work-related well-being among our participants. Compared with the official norms, the mean value of the UWES total score was assessed as an average within the range of 3.26–4.80 [82] (Table 1). Official norms are not available for DUWAS or DUBS. According to the author of the method, mean SCS scores can be indicatively assessed as follows: a mean score of 1–2.5 is low, 2.5–3.5 is moderate, and 3.5–5 is high [85].

Table 1
Descriptive statistics (mean values and standard deviations) and Shapiro-Wilk test of normality of distribution for the UWES, DUWAS (WE and WC), DUBS, and SCS subscales.

	Mean	SD	Statistic	df	Sig.
UWES	3.66	1.09	.992	244	.229
WE	2.45	.59	.985	244	.011
WC	2.31	.56	.971	244	<.001
DUBS	2.44	.81	.981	244	.002
Self-kindness	3.10	.84	.990	244	.083
Self-judgment	2.90	.73	.988	244	.045
Common Humanity	3.09	.80	.985	244	.013
Isolation	3.04	.88	.982	244	.003
Mindfulness	3.16	.71	.985	244	.012
Over-identification	3.26	.72	.983	244	.005

UWES = Utrecht Work Engagement Scale; WE = Working Excessively; WC = Working Compulsively; DUBS = Dutch Boredom Scale.

4.2. Primary analysis

In the next step, we tested the strength of the associations between variables. The Shapiro-Wilk test was used to verify the normality of the distribution. In all cases, most variables were non-normally distributed (Table 1). Therefore, the hypothesis of normal data distribution was rejected ($p < 0.05$) except in the cases of the UWES and the self-kindness subscale.

Considering the data distribution, non-parametric Spearman's rank correlation was used to test the strength of the association between variables [86]. As Table 2 shows, the power of the correlations varied between minor and moderate values [87]. Correlation analysis revealed positive associations between work engagement and both excessive work and compulsive work; however, the second relationship was weaker. Furthermore, a negative association was observed between work engagement and job boredom. For the SC subscales, differences in consistency were found between the positive and negative scales. The analysis did not reveal any specific relationships between the polar scales.

From the viewpoint of relationships between general work-related well-being and SC, the most apparent is that between compulsive work and the negative SCS subscales of isolation and self-judgment. Furthermore, we found small positive correlations between excessive work and the negative SCS subscales of overidentification and isolation. No association was found between job boredom or work engagement and SC subscale scores. Nevertheless, some indirect effects of SCS on these work-related well-being characteristics were expected because of their correlations with workaholism scales. Therefore, further multivariate analysis of the structural relationships is appropriate.

4.3. Structural analysis of the SCS and work-related well-being

4.3.1. Conceptual hypothesized model

Based on the above-mentioned theoretical research, we created and tested a theoretical model using SEM to provide a more complex output from our data than descriptive and correlational analysis allows. Considering the relationships among the variables, our general intention was to test for a direct path from the negative SC subscales to workaholism. The positive SCS subscales were not included in the model because of their weak correlations with characteristics of work-related well-being. The second part of the model represented the links between work engagement, job boredom, and workaholism. Based on the correlation analysis results, a direct path from workaholism to work engagement and its subsequent effects on job boredom were tested using confirmatory factor and path analyses (Fig. 1).

4.3.2. Analysis of latent constructs

Although the factor analysis in our model follows a standardized instrument SCS, we decided to check the internal consistency and conduct the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity to evaluate the sampling adequacy. As a measure of internal consistency, we used McDonald's omega (ω), a more preferred indicator in the current research compared with Cronbach's α [88]. As in the standardization processes, the internal consistency values were over the level of acceptability ($\omega = .71$-$.75$). Based on the item-total correlational analysis, no item should be excluded to increase the internal consistency. The KMO is in the rank of good acceptability (.723) [89] Bartlett's Test of Sphericity with an approx. $\chi^2 = 313{,}909$, df $= 15$, $p = < .001$ indicates that our data are suitable for factor analysis [90]. Further, we assessed the discriminative validity to test mutual differences in our concepts. In all cases, the square roots of the average variance extracted (AVE) were higher than our inter-construct correlation. The level of discriminative validity is satisfactory following the Fornell–Larcker criterion [91].

4.3.3. Validation of the model fit

Considering the values of the indicators commonly evaluated in SEM analyses, the model fits our data well (Table 3). Incremental indices typically measuring data fit (CFI, TLI) demonstrated perfect fit as they exceeded the level of .95. The absolute fit index, RMSEA, reached a reasonable level below the critical value of .05. The AIC demonstrated the best comparability between the saturated and tested models. The level of χ^2 and the more used criterion of CMIN/DF were satisfactory; therefore, the model could not be rejected based on our data [84,92].

Corresponding to the correlation analysis, negative SCS subscales showed good consistency. A positive direct path from the general factor to workaholism was evident. Furthermore, the connection between workaholism and work engagement was positive. However, we observed a weak but negative direct path from isolation to work engagement. The possible causes and relationships between these findings are discussed. Furthermore, a significantly negative path from work engagement to job boredom was evident.

5. Discussion

5.1. Descriptive findings in the context of current research

Considering the outputs from the SEM and preliminary correlation analysis, our research revealed a significant association between workaholism and the negative SCS subscales. A lack of a direct relationship between SC and work engagement or job boredom was expected. Whereas SC is defined as a specific type of self-concept that reflects attitudes towards one's own imperfections and failures [4,23], its connection with workaholism is much more evident in comparison with that of work engagement or job boredom, which do not imply feelings of self-doubt or personal inadequacy.

From the viewpoint of descriptive statistics, the general levels of all SC scales were within the range of average values based on a

Table 2
Correlation matrix of the UWES, DUWAS (WE and WC), DUBS, and SCS subscales (Spearman's ρ two-tailed significance).

		UWES	WE	WC	DUBS	Self-kindness	Self-judgment	Common humanity	Isolation	Mindfulness	Over-identification
UWES	**CC**	1.000	.224[a]	.157[b]	−.324[a]	.105	.066	.095	−.041	.070	−.086
	Sig. (2-t)	.	<.001	.014	<.001	.103	.306	.143	.521	.275	.181
	N	242	242	242	242	242	242	242	242	242	242
WE	**CC**	.224[a]	1.000	.485[a]	−.081	.006	.125	.005	.156[b]	.085	.161[b]
	Sig. (2-t)	<.001	.	<.001	.212	.923	.053	.937	.015	.185	.012
	N	242	242	242	242	242	242	242	242	242	242
WC	**CC**	.157[b]	.485[a]	1.000	−.015	−.017	.222[a]	−.009	.255[a]	.042	.158[b]
	Sig. (2-t)	.014	<.001	.	.813	.795	<.001	.892	<.001	.513	.014
	N	242	242	242	242	242	242	242	242	242	242
DUBS	**CC**	−.324[a]	−.081	−.015	1.000	−.001	−.048	.084	.040	−.058	−.014
	Sig. (2-t)	<.001	.212	.813	.	.987	.455	.194	.537	.369	.830
	N	242	242	242	242	242	242	242	242	242	242
Self-compassion	**CC**	.105	.006	−.017	−.001	1.000	−.295[a]	.457[a]	−.357[a]	.469[a]	−.252[a]
	Sig. (2-t)	.103	.923	.795	.987	.	<.001	<.001	<.001	<.001	<.001
	N	242	242	242	242	242	242	242	242	242	242
Self-judgment	**CC**	.066	.125	.222[a]	−.048	−.295[a]	1.000	−.025	.355[a]	−.252[a]	.349[a]
	Sig. (2-t)	.306	.053	<.001	.455	<.001	.	.699	<.001	<.001	<.001
	N	242	242	242	242	242	242	242	242	242	242
Common humanity	**CC**	.095	.005	−.009	.084	.457[a]	−.025	1.000	−.097	.364[a]	−.230[a]
	Sig. (2-t)	.143	.937	.892	.194	<,.001	.699	.	.131	<.001	<.001
	N	242	242	242	242	242	242	242	242	242	242
Isolation	**CC**	−.041	.156[b]	.255[a]	.040	−.357[a]	.355[a]	−.097	1.000	−.323[a]	.441[a]
	Sig. (2-t)	.521	.015	<.001	.537	<.001	<.001	.131	.	<.001	<.001
	N	242	242	242	242	242	242	242	242	242	242
Mindfulness	**CC**	.070	.085	.042	−.058	.469[a]	−.252[a]	.364[a]	−.323[a]	1.000	−.289[a]
	Sig. (2-t)	.275	.185	.513	.369	<.001	<.001	<.001	<.001	.	<.001
	N	242	242	242	242	242	242	242	242	242	242
Over-identification	**CC**	−.086	.161[b]	.158[b]	−.014	−.252[a]	.349[a]	−.230[a]	.441[a]	−.289[a]	1.000
	Sig. (2-t)	.181	.012	.014	.830	<.001	<.001	<.001	<.001	<.001	.
	N	242	242	242	242	242	242	242	242	242	242

UWES = Utrecht Work Engagement Scale; WE = Working Wxcessively; WC = Working Compulsively; DUBS = Dutch Boredom Scale.
[a] Correlation is significant at the .01 level (2-tailed).
[b] Correlation is significant at the .05 level (2-tailed).

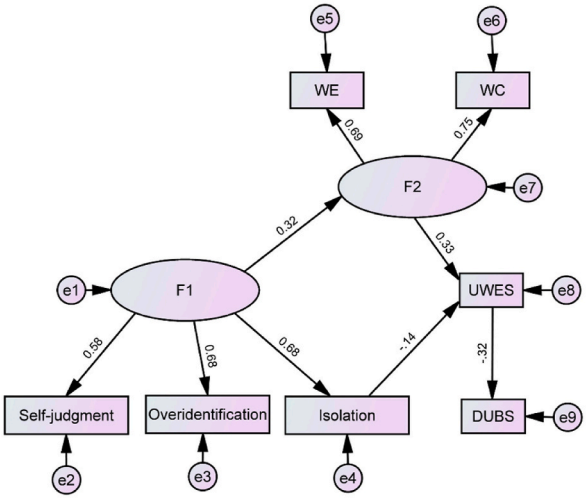

Fig. 1. Results for the theoretical model of self-judgment, overidentification, isolation (F1) with excessive (WE), and compulsive work (WC) as dimensions of workaholism (F2), work engagement (UWES), and job boredom (DUBS). Source: IBM SPSS AMOS.

Table 3
Fit indices of SEM model.

Fit Indices								AIC	
	χ^2	*df*	*p*	χ^2/df	CFI	TLI	RMSEA	Our model	Saturated model
Model	12.51	12	.406	1.043	.998	.996	.013	58.51	70.00

CFI = comparative fit index; TLI = Tucker–Lewis index; RMSEA = root mean square error of approximation; AIC = Akaike's information criterion.

rough classification by the author of the SCS [85]. For correct interpretation, it should be noted that our research did not use the total score owing to methodological ambiguity [76,78–81]. Therefore, reverse coding of the negative subscales was not applied in our data analysis.

The work engagement level (UWES) in our sample (mean = 3.66) was slightly above the lower limit for average values (3.26–4.80) [82]. Norms are unavailable for the questionnaires used to assess workaholism (DUWAS) and job boredom (DUBS); however, the mean value of WE in our sample (2.45) was between the mean values for the Dutch (2.44) and Spanish populations (2.64). The mean WC score of our participants (2.31) was considerably higher than has been reported in both Dutch (2.01) and Spanish (2.07) samples [83]. The standard deviations (SDs) of both the UWES and DUWAS were comparable with the described studies: 1.09 for the UWES compared with 1.17 in norms [82], .59 for WE compared with .59 in the Dutch sample and .75 in the Spanish sample, and .56 for the WC compared with .64 in the Dutch sample and .73 in the Spanish sample [83].

The mean score for the DUBS (2.44) was slightly higher than that reported in a South African sample, which varied between 1.77 and 2.95; the total mean was 2.27 [93]. The contrast was more notable between the mean value in our sample and that reported in a Japanese study of 1.84 [94]. The SD of our sample was comparable to that of both described studies. Considering the size of our research sample and its further specifics (mainly age and short length of work experience), this comparison with other studies has no significance for intercultural comparison. However, it provides information about the relative position of our research sample on select scales of work-related well-being, which was found to be average in terms of work engagement and higher than the results of foreign studies on both workaholism and job boredom.

5.2. Work related well-being in interactions and its support

The preliminary analysis results indicated a negative relationship between work engagement and job boredom, which aligns with the definitions of work engagement as high arousal and pleasure and job boredom as low arousal and displeasure [54]. This finding aligns with a study that revealed a weaker but existing negative correlation between both job-related attitudes [60]. [62] Much less expected was a positive relationship between work engagement and workaholism. However, extensive studies with 1196–1900 respondents also revealed weaker but positive associations between work engagement and workaholism, as measured using the UWES and DUWAS [43]. This observation might be explained by the fact that "engaged employees have high levels of energy and are enthusiastic about their work; they also often work voluntarily more hours than required by their organizations" [95]. Therefore, work engagement and excessive work may coincide. Because engagement could be described as high arousal and pleasure and workaholism as high arousal and displeasure [54], the component of high activation builds connections. Younger employees, as the respondents of our study, might perceive this "brighter" side of workaholism as they have not yet experienced the "displeasure" dimension, which is a

consequence of long-term excessive work.

This assumption is supported by our data, which indicated a connection between work engagement and excessive work, and the correlation with compulsive work was positive but weak. This observation might mirror certain inconsistencies in workaholism as measured by the DUWAS. Excessive work is related to autonomous motivation and the vigor dimension of work engagement. In contrast, compulsive work is associated with a controlled, high-pressure form of stimulation [51]. This observation explains the positive relationship between innovativeness and excessive work, in contrast to compulsive work [52].

A positive path from the negative SC subscales to workaholism was evident from the SEM analysis. Contrary to our expectations, we found a positive relationship between workaholism and work engagement. Considering the weak but negative direct path from the isolation subscale to work engagement, this connection is even more unclear. This ambiguity might be explained by the "double-edged" nature of the workaholism (as measured by the DUWAS) that is discussed above. Considering SCS negative subscales, both a positive indirect effect on work engagement (mediated via workaholism) and a direct negative effect of isolation were observed.

In conclusion, using SC-focused and mindfulness-based may be beneficial for inhibiting feelings of isolation, over-identification, and self-judgment, which can stimulate workaholism [34]. Thus, our findings align with those of previous studies supporting the use of mindfulness-based and SC-focused interventions to promote job satisfaction and work-related quality of life [5,9,10,12,20,21].

5.3. Gender, culture, occupation, and age-related specifics

The findings of our study are limited by cultural, age-related, and gender-based relativity. Levels of SC and work-related well-being vary across nationalities. Kotera, Mayer, and Vanderheiden [5] identified fewer mental health problems and perceived stigmatization and more SC in a German sample than in a South African sample. However, a negative association was observed between mental health problems, work engagement, and intrinsic motivation in both samples [5]. A sample from Japan differed from respondents from the Netherlands and Finland, with less work engagement but a positive correlation between compulsive work and work engagement [54]. The different perceptions of workaholism in the observed countries may explain this finding. For example, hard work and extreme loyalty are more appreciated in Japan than in the Netherlands [45]. Although these studies do not provide a complete international comparison, they refer to the cultural relativity of work-related well-being. Therefore, the interpretation of our findings should reflect cultural specifics.

Considering age-related characteristics, an international study of 10 European countries revealed a weak but positive relationship between age and work engagement [95]. Moreover, the general stability of work-related well-being was relatively low at young ages [34]. Although our respondents already had work experience, their experience was mostly short. Therefore, our findings mirror the initial state of their job attitudes, and further dynamic changes are expected. Insight into the initial level of work-related well-being allowed us to stimulate positive changes using SC-focused and mindfulness-based interventions. Considering age-related preferences, mobile applications supporting self-compassion can bring significant results [96]. Further, the well-being characteristics of students are expected to be consistent with their future job-related well-being. Research revealed that study addiction may lead to work addiction [97].

Gender relations in work engagement have been noted in previous studies. International studies have reported higher engagement in women, although it varies across countries [95]. A meta-analysis revealed slightly higher SC levels in men [98]. This finding is observable across countries [99] and corresponds to a higher vulnerability to stress and incidence of anxiety and depression in women [100,101]. Lower SC in women was observed among young [102], adult [29,98], and elderly respondents [103]. Nevertheless, these gender differences do not manifest in SC and well-being links [29,104]. According to previous research, mindfulness-based interventions are generally more beneficial for women than men [105]. Under these circumstances, our results should be interpreted with caution because of the gender imbalance in the sample.

Possible occupational differences should also be considered. In a cross-sectional study of 1700 healthcare workers, SC mediated the relationship between stress and burnout symptoms only in nurses and in unexpected directions: SC strengthened the correlation. The authors explained this finding as nurses having less control over stressors than doctors and medical students [21]. Considering work engagement, the study described workers in the healthcare, social work, education, and agriculture sectors as more engaged than those in manufacturing, transport, storage, and communications. Generally, more work engagement has been observed in the public sector and smaller companies (500 or fewer employees) [95]. These issues should be addressed in future studies.

6. Conclusion

Support for work-related well-being is crucial for both productivity and occupational health. Mindfulness-based and SC-focused interventions are beneficial considering the current trends in mental health care and positive psychology. Their advantages consist, inter alia, in supporting resilience through self-acceptance, even with one's own failures and inadequacies, and promoting self-regulation and inner discipline via training in aimful concentration in the present moment.

According to our findings, the negative aspects of SC (isolation, self-judgment, and overidentification) are related to symptoms of workaholism in young workers. Therefore, the inclusion of theoretical aspects of work-related well-being and SC-oriented interventions in their curriculum, as well as the possibility of participating in mindfulness-based programs provided by university counseling centers, could help prevent the negative effects of excessive and compulsive work in this population. Analogically, mindfulness interventions would be beneficial in companies employing early-career workers.

7. Limitation and implication

The generalizability of results is limited by decreased variability of respondents studying at the same institution, the Faculty of Economics and Management (FEM) at CZU Prague. On the other hand, the findings are highly relevant for employers in the Czech Republic because FEM is the faculty of economics with the highest number of students in this country.

Further, our findings are affected by the reduction of the research sample. Forty-two respondents were excluded because they answered the questionnaires incorrectly or incompletely. Moreover, we could not involve younger students in the sample to extend it because the research design required respondents with proper working experiences who were able to reflect on the characteristics of their working behavior.

A strong coherence of the sample regarding age and culture gives other limitations to our results. Moreover, the respondents were not gender-balanced. No respondents were identified in the „nonbinary“ or „other gender“ category, which could also affect the generalizability of our findings. Possible influences of gender, culture, and age-related factors are specified in the Discussion.

Our research is based on the cross-sectional strategy that corresponds to our research questions. Future research could implement a longitudinal design that reflects the dynamic changes in work-related well-being with increasing work experience. This would enable the efficient care of employees' mental health across various stages of their careers.

CRediT authorship contribution statement

Kristýna Krejčová: Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Software, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Igor Krejčí:** Writing – review & editing, Validation, Supervision, Software, Methodology, Formal analysis, Conceptualization. **Hana Chýlová:** Writing – review & editing, Validation, Methodology, Data curation. **Pavla Rymešová:** Writing – review & editing, Validation, Resources, Funding acquisition. **Pavel Michálek:** Writing – review & editing, Validation, Project administration.

Ethics and consent

The presented research was approved by the Ethics Committee of the Czech University of Life Sciences in Prague with ethics approval reference 15/2023. It was conducted in accordance with the ethical principles stated in the Declaration of Helsinki. All respondents were adequately instructed and free to opt out of participation in the research in case they felt uncomfortable. They indicated their written consent to participate and consent to publish all clinical and other data included in the manuscript. Data were analyzed anonymously in correspondence with the ethical standards of the American Psychological Association.

Data availability statement

Data associated with this study has been deposited at Mendeley Data under the accession number https://doi.org/10.17632/jtrmbd8j75.1.

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Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Kristyna Krejcova reports article publishing charges was provided by Czech University of Life Sciences Prague. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.heliyon.2024.e41377.

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