Excessive Internet Use in the Organizational Context: A Proposition of the New Instrument to Measure Cyberloafing at Work

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Abstract. Cyberloafing considered as non-work-related excessive Internet use at work is embedded in everyday's work across organizations. Despite growing concerns about the waste of energy, time, money, and corporate data security caused by cyberloafing, there is still debate about the impact of cyberloafing on key work-related factors of job demands, work performance, satisfaction, and stress. The existing measures of cyberloafing in organizations seem obsolete, so the need to create a tool tailored to changing repertoire of cyberactivities has become warranted. Therefore, we developed and empirically verified a new Cyberloafing Scale, the CBLS-15, to measure four dimensions and a total score of this phenomenon. The CBLS-15 scale includes 15 items grouped into four dimensions 1) *Information browsing* (IB), 2) *Social networking* (SN), 3) *Personal matters* (PM), and 4) *Gambling/Adult content* (GA). In support of the external validity of the CBS-15, we found positive associations of cyberloafing with workload, cognitive demands, role conflict, and stress, and negative relationship with work satisfaction and work performance. The CBLS-15 can be useful for researchers and practitioners as a diagnostic tool. Our results are a valuable contribution to the literature on cyberloafing in modern organizations, providing important insights into how work-related factors may influence non-work Internet use at work.

Keywords: Cyberloafing, Excessive Internet Use, Job Demands, Work Performance, Work Satisfaction, Stress

1 Introduction

The use of Information and Technology (ICT) for processing data and communicating is currently widespread among employees of any organization in highly digitized workplaces. Computer-human interaction is an everyday experience in most personal and social functions. In some cases, cyber-activity or presence in virtual reality is necessary due to the type of performed work. While organizations have a general expectation that their employees are proficient in the use of modern technology, employees may also be using it for non-work purposes. This behavior, called cyberloafing, may be understood as employees' use of ICT technologies, including advanced devices (e.g., computers, smartphones, nowadays also smartwatches), and the

Internet to access various websites, including social media, during work hours for personal or non-work reasons [1, 2].

Cyberloafing, interchangeably called cyberslacking is said to have a dual or even complex nature [3, 4]. It can contribute to negative effects, such as frequent distractions at work [5], poorer performance [6], and time-wasting [7, 8]. However, other evidence suggests that cyberloafing, by providing a little breather from everyday work pressure, has a positive impact on employee well-being in terms of relief from work stress [9]. Differences in research findings may stem from various sources that influence employees' coping behavior, which nowadays often has a form of cyberloafing [10].

1.1   Dimensionality of Cyberloafing

Without deciding on the positive or negative impact of cyberloafing for organizations or employees, one of the key issues is the ability to assess cyberloafing with an up-to-date tool, adapted to current organizational conditions. There has been a considerable scientific effort to develop tools to measure some of the non-work-related online activities including the use of e-mail for personal purposes, surfing information websites, participating in social media platforms, blogging, watching online videos, gambling, and others. These activities were generally reflected in subdimensions of the self-reported questionnaires [1, 5, 11–22] (see Table 1). However, there were few, if any, replication studies that supported the validity of existing scales, thus rendering their current usefulness limited.

Table 1. Dimensions used in cyberloafing measures.

Authors	Scale dimensions
Lim [1], Lim, Teo [11]	1) browsing activities; 2) emailing activities
Mahatanankoon et al. [12]	1) e-commerce; 2) information research; 3) interpersonal communication
Anandarajan et al. [13]	1) disruptive; 2) recreational; 3) personal learning; 4) ambiguous
Blau et al. [14]	1) non-work-related e-mail; 2) browsing-related; 3) interactive
Mastrangelo et al. [5]	1) non-productive; 2) counterproductive
Blanchard, Henle [15]	1) major activities; 2) minor activities
Coker [16]	1) workplace Internet leisure
Anandarajan et al. [17]	1) hedonic; 2) self-development; 3) citizenship; 4) work/family behavior
Vitak et al. [18]	1) cyberslacking variety; 2) cyberslacking communication frequency
Aghaz, Sheikh [19]	1) activities: social, informational, leisure virtual; 2) behaviors: learning, recovery, deviant, addiction
Akbulut et al. [20], Koay[21], Şahin [22]	1) sharing; 2) shopping; 3) real-time updating; 4) accessing online content; 5) gambling

The existing tools have some noticeable limitations. One of the early scales developed by Lim [1] measures general Internet browsing and e-mailing but omitted other diversified Internet activities. Subsequently developed a 9-item scale by Vitak et al. [18] is quite short and does not capture important categories of Internet activities, such as online auctions, booking vacations, or visiting adult websites. Similar shortcomings apply to a questionnaire developed by Mahatanankoon et al. [12] where

recent trends in cyberbehavior, such as social media usage, blogging, etc., were lacking. Other questionnaires [12, 15, 16, 19] are relatively long and quite onerous to complete. For example, Akbulut et al. [20], Anandarajan et al. [17, 19], and Mastrangelo et al. [5], created comprehensive albeit extra-long instruments containing 30 to 41 items. Cocker [16] developed a 17-item unidimensional scale, which measures the frequency and duration of key areas of cyberloafing. However, this study was conducted in a relatively small sample (n=268), in which 74% of the participants were women. A study by Blau et al. [14] was also conducted on a rather small sample size and it relied on an older Lim's scale with 6 new items developed by authors. As many scholars noted, older cyberloafing scales are obsolete and do not correspond to modern online activities and cyberloafing behavior [3, 23]. Thus, it seems justified to construct a new up-to date cyberloafing measurement tool, accounting for currently dominating types of online activity. Therefore, we proposed a new Cyberloafing Scale-15 (CBLS-15), usefull for researchers to measure cyberloafing in different organizational context.

1.2   Antecedents and Consequences of Cyberloafing

There is a great deal of research on what motivates employees to engage in cyberloafing. Some of the key organizational predictors include employee workload [24–26], role conflict, or role ambiguity [24, 26, 27]. According to job demands-resources theory [28], employee workload (i.e., one's perceived volume of work), cognitive demands (i.e., work difficulty and complexity; intellectual strain), and role conflict (incompatibility in terms of responsibility) are considered major organizational stressors that can hinder performance. In this context, studies revealed that workload and cognitive demands [4] are significant predictors of high levels of stress at work and excessive Internet use [26, 29]. On the contrary other findings have shown that high job demands can reduce cyberloafing [30] or that low levels of workload encourage cyberloafing [10, 31]. Some researchers suggest that harmful job demands contribute to employees' experience of stress and emotional exhaustion at work and can lead to cyberloafing. Employees may choose to cyberloaf as a way to calm down, de-stress, recover and replenish personal resources. According to Hobfoll's Conservation of Resources theory [32], when employees cannot cope with demands at work due to limited resources, such as energy, concentration, and time, then they experience stress. Consequently, they are more likely to engage in cyberloafing to escape the strain, find relief and maintain respite and positive affect. In this way, they prevent further loss of resources and possibly regain the ones lost [33–35]. So, cyberloafing can be considered a stress-reducing mechanism when workload becomes distressing [4]. However, this strategy may prove to be short-lived [36]. Cyberloafing itself can become a source of stress and frustration due to work distraction, loss of attentional resources, and untimely completion of tasks [7, 36]. This can create a downward spiral of further resource loss. It is still not clear if cyberloafing is a resource gain or is it rather a drain of resources. Latest reviews of studies showed that among external antecedents of cyberloafing were work-related, supervision-related, and organization-related factors [3, 37] (e.g., tenure, organizational position, income, leadership, meaningfulness of work, autonomy, Internet control policy, organizational norms).

It has become clear that cyberloafing is an expensive problem. It can cost organizations as much as $85 billion a year [38]. This is most likely due to the disturbed use of the company's resources e.g., time, computers, and smartphones, as well individual resources, e.g., focus, concentration, or emotions. There are other negative consequences of cyberloafing that organizations already recognized, such as online gambling or increasing the risk of disclosing insight data to third parties [4]. Cyberloafing thus appears as one of counterproductive work behaviors [1, 2, 11, 20], related to withdrawing behaviors [2, 37]. Recent meta-analysis supported positive relationship between cyberloafing and counterproductive work behavior [39].

Some scholars observed a negative relationship between cyberloafing and work performance [30, 40], productivity [41], and effectiveness [12, 42]. Other findings however suggest a positive effect of cyberloafing on work performance as well as employee creativity, acquisition of new skills, employee interest in work, regain of attention span, feeling of enthusiasm and satisfaction, and in consequence higher productivity at work [16, 43–45]. Coker [16] found that work productivity is positively related to leisure Internet browsing at work when it does not exceed around 12 percent of work time. Furthermore, the relationship between cyberloafing and work performance can take on an inverted U-shaped relationship [46], especially when cyberloafing occurs in less frequent and shorter episodes [16]. As research shows, cyberloafing can produce both detrimental or beneficial outcomes [3, 23]. The relationship between cyberloafing and work performance requires further investigation.

 No less intriguing is the relationship between employee work satisfaction and cyberloafing. Satisfied employees are most of the time motivated and their performance is high [47]. But when it comes to cyberloafing as a work behavior, the picture is not that clear anymore [3, 37]. Cyberloafing can act as a moderator in the relationship between physical workplace aggression and satisfaction [9] and serve as a stress coping against workplace strain, thereby increasing work satisfaction. Mohammad et al. [43] revealed that cyberloafing positively predicts work satisfaction which subsequently leads to higher work productivity. Similarly, other authors emphasized a positive relationship between cyberloafing and work satisfaction [43, 48–50], or non-significant relationships between cyberloafing and work satisfaction [5, 10, 12, 18, 39, 51]. There may be many reasons why cyberloafing enhances work satisfaction, but one thing is clear; people like to spend time on the Internet while at work. Still fairly few findings revealed a negative association between cyberloafing and work satisfaction [52, 53]. Presumably, dissatisfied employees use the Internet to distract themselves from negative work-related emotions. In this situation, cyberloafing acts as a substitute for working, filling up time that should be spent on completing organizational tasks.

To summarise, there is no consensus among researchers and practitioners about the detrimental or beneficial impact that cyberloafing may have on employees' well-being and performance at work [54]. It is therefore very important to investigate the relationship between cyberloafing and basic work-related factors that may either contribute to or result from cyberloafing. In this study, we therefore seek to gain a deeper understanding on the dimensionality of cyberloafing and the relationship between cyberloafing and work-related characteristics.

Based on the evaluation of a wide range of contemporary cyberloafing behaviors in the workplace, our main goal was to develop a valid and reliable scale to measure cyberloafing (CBLS-15) and investigate its psychometric properties. To test the external validity of the CBLS-15, we have also examined the relationship between cyberloafing and work-related factors categorized as predictors, such as workload, cognitive demands, role conflict, and consequences, such as work satisfaction, stress, and work performance.

2 Method

2.1 Participants and Procedure

Data were collected from three independent samples via online survey using the snowball procedure. The total sample consisted of 1824 participants from Poland (846 males), working in various industries and professions, such as salespersons, IT professionals, educators, medical staff, lawyers, administrative, service workers, etc.). Working with open access to the Internet was an inclusion criterion. Sample 1 consisted of 853 participants (385 males), aged from 18 to 79 years ($M = 35.0$, $SD = 11.4$). Sample 2 comprised 703 employees (334 males), aged between 19 and 77 years ($M = 35.2$, $SD = 11.3$). An average work tenure was 12.3 ($SD = 10.0$) years in sample 1 and 12.4 ($SD = 9.8$) years in sample 2. In sample 3 there took part 268 employees (127 males), aged from 18 to 74 years ($M = 34.0$, $SD = 12.1$), and with average work tenure of 12.2 years ($SD = 11.5$). Participation in the study was anonymous and voluntary. Respondents provided informed consent before they completed all self-reported measures. All study procedures have been approved by the Ethics Committee of Scientific Research at Wrocław University of Science and Technology.

2.2 Measures

Cyberloafing. To measure cyberloafing behavior we used *Cyberloafing Scale* (CBLS-15), which we developed and empirically verified. The final version of the instrument consisted of four dimensions representing various non-work-related online activities, in which employees engage at work: (1) *Information browsing* (IB) reflecting browsing content related to information and interests; (2) *Social networking* (SN) – active participation in social media; (3) *Personal matters* (PM) – handling e-mails and personal matters; (4) *Gambling/Adult content* (GA) – visiting adult or gambling sites. The cyberloafing level was also considered as a total score (CBL). All 15 items were rated on a 5-point scale (1 – never; 5 – very often).

Job Demands. We measured three workplace characteristics: (1) workload, (2) cognitive demands, and (3) role conflict, using three 4-item subscales (quantitative demands, cognitive demands, role conflict) of the Copenhagen Psychosocial Questionnaire (COPSOQ II) [55]. Workload (measured by the quantitative demands subscale) relates to a high volume of work and demands; cognitive demands relate to feeling overwhelmed and cognitively loaded, and role conflict refers to the degree of

incompatibility between the requirements and objectives set by management and the employee's feeling that certain work activities are performed unnecessarily. Workload and cognitive demands were rated on a 5-point scale (1 – never; 5 – always). Role conflict was rated on a 5-point scale (1 – to a very small extent; 5 – to a very large extent). The reliability of the measures in this study was satisfactory (Cronbach α = .70 - .81).

Stress at Work. Stress at work was measured using 4 items of the *stress* subscale of the COPSOQ II [55], rated on the scale (1 – at all to 5 - all the times). Cronbach's α of this measure was at the level of .77.

Work Performance and Work Satisfaction. We measured work performance and work satisfaction, using one item per each variable, i.e. "How satisfied are you with your work?", "How effective are you at your work?". Participants responded on a 5-point scale (1 - to a very small extent; 5 - to a very large extent).

3   Results

In our study, we verified the factorial validity and reliability of a new CBLS-15 instrument to measure cyberloafing, individual differences, and relationships of cyberloafing dimensions with work-related characteristics. All statistical analyses were performed using the IBM SPSS-22 and IBM AMOS-22 software.

3.1   Factor Structure and Reliability of the CBLS-15 Measure

First, in sample 1, we performed the exploratory factor analysis on the initial set of 27 items (see Table 2). Based on the principal component method, Cattell criterion extraction, and Promax rotation, a 4-factor solution was obtained, which explained 60% of the variance. All factor loadings ranged between .41 and .87. However, for the sake of parsimony, we included 4 items with the highest loadings in each factor for further analysis (above .50) (see Table 2).

The first factor explained a relatively high level of variance (39%), indicating the potential unidimensionality of the cyberloafing. We thus decided to test the 1-factor model. Therefore, in the confirmatory factor analysis (using the AMOS 27.0 software) we verified both, 1-factor, and 4-factor models in samples 1 and 2 (Table 3). Following Byrne's recommendations [56], all goodness of fit indices indicated a very good fit of the measurement models; χ^2/df index was lower than 5, the root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR) did not exceed .08; the adjusted goodness of fit index (AGFI), comparative fit index (CFI), and Tucker-Lewis fit index (TLI) values were higher than .90.

Table 2. Factor loadings of the CBLS-15 items in the four-factor model.

Item content	Sample1 N=853				Sample 2 N = 703			
	1	2	3	4	1	2	3	4
1. I browse pages with offers for purchases, even if I'm not looking for anything specific.	.87				.63			
7. I search for various sales or deals online.	.86				.74			
6. I check the latest news.	.79				.55			
13. I browse sites of interest, e.g., health, culinary, travel.	.75				.84			
15. I spend time on social media (Facebook, Instagram, TikTok, etc.) without specific intent.		.82				.88		
11. I chat with my family and friends using various chat apps (e.g., Messenger, Snapchat, Instagram).		.73				.64		
2. I respond (e.g., "like") to posts or tweets, immediately after receiving a notification.		.70				.72		
3. I listen to music/podcasts/streams/lives on the Internet.		.50				.56		
4. I shop online.			.87				.62	
12. I handle various matters via the Internet (e.g., online banking, medical appointments, making reservations, etc.).			.74				.73	
10. I send and receive personal e-mails.			.68				.56	
14. I download programs and apps for my use.			.55				.67	
9. I visit betting sites (e.g., sports, lotteries, casinos).				.77				.53
5. I play games online.				.63				.63
8. I view adult content online.				.62				.52

Table 3. Confirmatory factor analysis of the CBLS-15 measurement models.

Model	χ^2/df	RMSEA	SRMR	AGFI	TLI	CFI	ΔCFI	ΔRMSEA
Sample 1 (N = 853)								
1-factor model	4.00	.059	.036	.92	.96	.97		
4-factor model	3.02	.049	.037	.95	.96	.98	.013	.010
Sample 2 (N = 703)								
1-factor model	3.23	.056	.036	.93	.96	.97		
4-factor model	2.34	.044	.028	.95	.97	.98	.010	.013

The results of these analyses showed that 4-factor, as well as 1-factor solutions, were well fitted to the data (Table 3). There were no substantive changes in the model's goodness of fit indices between samples 1 and 2 (ΔCFI < 0.010 and ΔRMSEA < 0.015), indicating the invariance of the tested factor solutions. This may suggest that the same factor model could be applied across groups, and that the same item parameters (i.e., factor loadings and intercepts) could be constrained to the same value between samples (Table 3). However, because both, 1- and 4-factor models had an acceptable fit [56], we included the four subscales of the CBLS-15 and a total score in further analyses.

Next, we calculated the reliability indicators for the CBLS-15 in terms of internal consistency, discriminatory power, and temporal stability (Table 4). In samples 1 and 2, the internal consistency (Cronbach's α) was at an excellent or high level, except for the GA subscale (a moderate level). The discriminatory power was represented by three coefficients (mean inter-item correlation, item-total correlation, and intra-class

correlation) and achieved also satisfactory level. The mean inter-item correlations ranged from .35 to .60, the intra-class correlation (ICC) values ranged from .84 to .93, whereas the item-total correlations were between .30 and .74.

Table 4. Reliability parameters of the CBLS-15 dimensions.

Cyberloafing dimension		Sample 1[a]				Sample 2[b]			Sample 3[c]
		α	Mean IIC	ICC	Item-total	α	Mean IIC	ICC	Item-total	r_{tt}
1. Information browsing	IB	.86	.60	.86	.61-.74	.82	.52	.82	.56-.72	.63**
2. Social networking	SN	.73	.42	.73	.33-.63	.75	.44	.74	.37-.69	.67**
3. Personal matters	PM	.81	.51	.81	.50-.72	.79	.47	.81	.51-.63	.66**
4. Gambling/Adult content	GA	.68	.44	.65	.46-.58	.64	.40	.64	41-.50	.69**
5. Cyberloafing total	CBL	.90	.36	.90	.30-.72	.89	.35	.89	.32-.72	.66**

Note. [a]$N = 853$, [b]$N = 703$, [c]$N = 268$. α – Cronbach's reliability coefficient, mean IIC – mean inter-item correlations; ICC – intra-class correlation, ITC – item-total correlation, r_{tt} - test-retest correlation.

To verify the temporal stability of the CBLS-15 measure, the test-retest procedure was performed. In sample 3 ($n = 268$), a double-measures of cyberloafing were administered at a 4-week interval. The correlations between the first and second measure of cyberloafing subscales and total scores were significant and high (see Table 4), indicating a satisfactory level of stability of the cyberloafing measure over time. As depicted in Table 5, moderate to high correlations of the four CBLS-15 factors with cyberloafing total score were revealed in samples 1 and 2. The intercorrelations among CBLS-15 subscales were small to moderate in samples 1 and 2.

Table 5. Means, standard deviations, and correlations between CBLS-15 subscales.

Cyberloafing dimension		Sample 1[a]		Sample 2[b]						
		M	SD	M	SD	1	2	3	4	5
1. Information browsing	IB	2.59	1.20	2.42	.97	1	.59**	.74**	.39**	.88**
2. Social networking	SN	2.94	1.21	2.74	.13	.60**	1	.61**	.31**	.84**
3. Personal matters	PM	2.36	1.07	2.38	.91	.70**	.63**	1	.36**	.87**
4. Gambling/Adult content	GA	1.25	.60	1.36	.64	.38**	.34**	.37**	1	.54**
5. Cyberloafing total	CBL	2.35	.86	2.28	.76	.88**	.85**	.87**	.52**	1

*$p < .05$, **$p < .01$. Correlations below the diagonal refer to sample 1 and above the diagonal to sample 2

3.2   Cyberloafing and Work-Related Characteristics

A one-way analysis of variance (ANOVA) revealed no significant differences between women and men (Table 6) on the IB, SN, and PM dimensions, but significant on the GA subscale and for the CBLS total score. This means that men displayed higher level of general cyberloafing and gambling than women did.

Additionally, there were significant differences between cyberloafing dimensions and the total score in dependence on Internet access restrictions (Table 6). Employees with low restrictions on accessing the Internet were more likely to cyberloaf (specifically, concerning the activities of: IB, SN, PM, and CBL total score) than employees with high restrictions on accessing the Internet. Only the GA subscale was independent of restricted Internet access in the organization.

Table 6. Anova results for CBLS-15 dimensions according to gender and restricted Internet access.

Cyberloafing dimension	Women		Men		F	Partial η²	Internet not restricted		Internet restricted		F	Partial η²
	M	SD	M	SD			M	SD	M	SD		
1. Information browsing	2.39	1.02	2.46	.92	.80	.001	2.43	.88	2.25	.91	5.47*	.008
2. Social networking	2.70	1.17	2.78	1.09	.84	.001	2.73	.95	2.39	.99	17.46***	.024
3. Personal matters	2.33	.93	2.44	.88	2.81	.004	2.39	.82	2.21	.82	6.27*	.009
4. Gambling/Adult content	1.22	.52	1.51	.71	40.52***	.055	1.33	.56	1.37	.67	.49*	.001
5. Cyberloafing total	2.22	.79	2.35	.73	5.01*	.007	2.28	.66	2.10	.73	9.36**	.013

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

Table 7. Means, standard deviations, intercorrelations between study variables.

Cyberloafing dimension	Age	Work tenure	Work load	Cognitive demands	Role conflict	Stress	Work satisfaction	Work performance
1. Information browsing (IB)	-.20**	-.14**	.16**	.14**	.15**	.14**	-.18**	-.10**
2. Social networking (SN)	-.44**	-.40**	.17**	.09**	.16**	.11*	-.17**	-.10**
3. Personal matters (PM)	-.19**	-.14**	.19**	.07*	.12**	.12**	-.15**	-.03
4. Gambling/Adult content (GA)	-.18**	-.19**	.09**	.12**	.15**	.09**	-.13**	-.14**
5. Cyberloafing total (CBL)	-.32**	-.32**	.17**	.13**	.17**	.14**	-.20**	-.11**

$N = 703$. *$p < .05$, **$p < .01$. IB - Information searching and browsing, SN - Social Networking Site, PM - Personal matters, GA - Gambling/Adult content, CBL - Cyberloafing total.

Having inspected the intercorrelation matrix among cyberloafing we noticed that except for the PM dimension, all other dimensions of cyberloafing (as a total score and the four factors) correlated significantly with sociodemographic factors. As presented in Table 7, the level of correlations ranges from low to moderate. Three cyberloafing dimensions (IB, PM, GA) correlated significantly but weakly with age and job tenure but SN dimension and total score correlated negatively and moderately, highlighting that younger employees and employees with less work experience use the Internet extensively (especially in terms of SN). All dimensions and the total score of cyberloafing correlated significantly and weakly with high workload, high cognitive demands, and high role conflict. Cyberloafing as a total score was significantly negatively related to work-related outcomes i.e., work satisfaction, stress, and slightly to work performance. All CBLS-15 dimensions and the total score were weakly negatively correlated with work performance, except for PM dimension. Slightly higher correlation values were between cyberloafing dimensions and the total score and work satisfaction.

4 Discussion

In this paper we developed a new Cyberloafing Scale (CBLS-15) that complements previous questionnaires [1, 12–18, 20]. We have identified and validated a one-factor and a four-factor structure of the CBLS-15. The four factors reflect multidimensional nature of cyberloafing and represent specific online activity, such as information browsing, social networking, personal matters, and gambling/adult content. The one-

factor model denotes a general cyberloafing measure as an aggregate score. Our findings also revealed significant positive relationships between cyberloafing (i.e., total score and the four dimensions) and workload, cognitive demands at work, role conflict, as well as stress, supporting the external validity of the CBLS-15 measure. These results are consistent with previous studies showing that excessive workload [24–26], cognitive difficulty at work [26, 29], and experiencing role conflict [24, 26, 27] can predict cyberloafing. Work demands can be stressful and can lead to behaviors associated with withdrawal or escape from work threats and engaging in more pleasant activities, such as cyberloafing. Similarly to previous studies [24, 26, 29], we have found that cyberloafing was related to high work stress. Probably, employees who experience stress at work may intensively engage in non-work Internet use to avoid or reduce negative emotions and facilitate mental recovery in the workplace [9, 19, 24, 26, 36].

Our findings indicated that all dimensions and a total score of CBLS-15 were negatively related to work outcomes such as work satisfaction and performance. This is consistent with previous studies on the link between low satisfaction and non-work use of the Internet [52, 53]. However, it does not correspond with other findings that showed positive associations between these variables [43, 48–50], or non-significant relationships between cyberloafing and work satisfaction [5, 10, 12, 18, 39, 51]. Still, our results suggest that employees are more likely to use the Internet for various purposes such as mindless browsing, online shopping, engaging in communication on social media, or even gambling, when work satisfaction is low.

Employees' work performance, an important work outcome, was negatively related to cyberloafing total score and IB, SN, and GA dimensions. This effect corroborates other results showing that cyberloafing negatively relates to work performance [6, 12, 40–42]. So, cyberloafing appears to be a modern manifestation of counterproductive withdrawal behavior at work [1, 2, 11, 20]. This can be a potentially worrying issue, as the availability of Internet access is virtually unlimited if employees are not supervised or if they do not adhere to social norms of civic behavior at work. However, the relationship between cyberloafing and work performance is not fully understood as yet [3, 23, 46, 57]; it is probably moderated by different conditions such as cognitive load, level of arousal, timing, and frequency of cyberloafing [57]. Although some scientific work has emphasized the benefits of cyberloafing for the well-being of employees, such as relaxation, a pleasant break, and a stress-reducing technique [9, 24, 35] it can still drain personal resources and reduce task performance [23, 34, 36].

Our results also showed that in the absence of restrictions on the Internet use, cyberloafing behavior is significantly higher than when restrictions are imposed. The greatest difference related to the use of social media. This is a sign of the times, as social networking can be considered one of the most favorite activity for 95.2% of Internet users [58]. Finally, similar to previous studies [3, 37], both age and job tenure positively related to cyberloafing. This result indicated that the younger generation of employees is accustomed to using technology much more often than older people and they are highly computer-savvy. This is a great human potential that should be managed with equal skill.

4.1 Practical Implications

The following practical implications refer to work-related factors that have been found significantly related to cyberloafing in this study. This research provides useful insights for managers to better understand cyberloafing and its relationship with some performance criteria. When confronted with excessive work demands employees may become distressed and resort to cyberloafing as a coping mechanism. Conversely, when their job demands are balanced, they tend to feel more satisfied and calmer. Therefore, it is essential that managers recognize their employees' abilities, assign tasks appropriately, and monitor their progress regularly. Sometimes employees' cyberloaf because of their habit of regularly checking the Internet for various purposes. At the same time, they may be unaware that such uncontrolled distractions extend time to complete tasks, which potentially produces frustration [34]. Providing specific training to help employees understand that cyberloafing can have detrimental effect on their level of effectiveness and productivity could prove to be resourceful. A major cause of stress and frustration, often unrecognized by management, is role conflict, or a situation where an employee cannot figure out what is expected of them. Managers shall ensure that tasks are clearly communicated, do not overlap, and that employees understand their responsibilities [3]. After all, work performance is a function of well-designed, appropriately delegated, and well-understood tasks, all of which impact work satisfaction. Additionally, managers shall demonstrate responsible Internet use themselves and set the standard for fairness and appropriate workplace conduct. Internet use cannot be avoided or fully prohibited, but company policy shall make it explicit to what extent Internet use is or is not acceptable. Communicating expectations in this regard will help employees follow company regulations. Lastly, implementing and using monitoring tools (e.g., dedicated software that tracks Internet usage and marks inappropriate activities) may be needed. This could enable management to identify problem areas that shall be addressed.

4.2 Limitations and Future Directions

Our study has some limitations that can be resolved in future work. First, this study is cross-sectional and all data were self-reported. Thus, we cannot draw any conclusions on a causative effect between variables. To reduce the bias of false responses and social desirability or memory recall issues, future research on the CBLS-15 validity shall include objective measures, like computer usage logs or supervisor evaluations. Second, this study was conducted in Poland, thus the CBLS-15 shall be tested in other countries to increase the generalizability of the findings or to identify specific cyberloafing behaviors in other cultural contexts. Finally, future studies can extend our findings by verifying the validity of the CBLS-15 and using other individual predictors of cyberloafing, such as temperament, personality, personal values, ethics, psychological detachment, the need for recovery, and trust in management. In addition, a longitudinal design and a more advanced analytical approach could establish more complex or causal relationships between variables.

5   Conclusions

To conclude, in this study we proposed a new Cyberloafing Scale-15 (CBLS-15) to measure currently prevailing aspects of cyberloafing in the organizational context. The CBLS-15 can be useful for researchers and for practitioners as a diagnostic tool. Our findings provide important insights into how work-related factors can affect non-work-related Internet use in the workplace, making valuable contribution to the literature on cyberloafing in modern organizations. The strength of our study also lies in its diverse participant pool and gender balance, increasing the external validity of the findings. The study highlights the importance of assessing and monitoring various cyberloafing behaviors in the organization to better cope and prevent problematic cyberbehaviors at work. Our study is an initial step in the empirical verification of a new measure CBCS-15, which will be continued in the further studies.

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